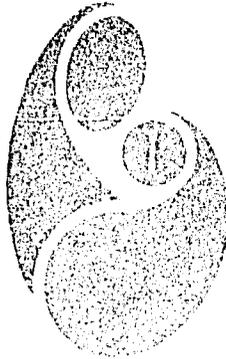


MIDTERM EVALUATION

of



MotherCare™

Prepared by:

Elizabeth Preble
Barbara Parker
Linda Sanei
Beatrice Selwyn
Godfrey Walker

Submitted to:

The
Office of Health
Bureau for Research and Development
Agency for International Development

February 1992

**Report edited by
Christian W. Hougen**

**Cover produced by
Pragma Vision Technology**

***Midterm Evaluation of MotherCare* was produced by Project ASSIST of the Pragma Corporation and submitted to Health Services Division of the Office of Health, Bureau for Research and Development, Agency for International Development under Project Number 936-5939.05, Contract Number DPE-5939-C-00-7003.**

THE PRAGMA CORPORATION • 116 EAST BROAD STREET • FALLS CHURCH, VA 22046

**Midterm Evaluation
of
MotherCare
Project 936-5966.01**

Prepared by

Elizabeth A. Preble
Barbara Parker
Linda C. Sanei
Beatrice J. Selwyn
Godfrey J. A. Walker

July 1992

Prepared for

**The Office of Health
Bureau for Research and Development
Agency for International Development**

Acknowledgments

THE MOTHERCARE EVALUATION team is indebted to a number of individuals for providing background information about the evolving safe motherhood approach to programming in general, as well as about activities sponsored and undertaken specifically by MotherCare. The team would like to thank officers of A.I.D. Washington and the USAID missions in Bolivia, Guatemala, and Indonesia; and the staff of MotherCare in Washington and in field offices. The team would also like to thank the staff of Project ASSIST, The Pragma Corporation, for providing logistical support.

The team is particularly grateful for the assistance of Marjorie Koblinsky and Colleen Conroy of MotherCare in Washington, D.C.; Dr. Alisjhabana, Dr. Budi Utomo, and Dr. Hansell from MotherCare in Indonesia; and Dr. Schieber, Mary McInerney, and Lisa Howard-Grabman from MotherCare in Latin America. They generously gave their time in the midst of extremely demanding work schedules.

The team appreciated the strong support it received from Dr. Mary Ann Anderson, the A.I.D. Cognizant Technical Officer for MotherCare in Washington, D.C. This support was consistent with her extremely competent, professional, and dedicated management of the MotherCare project itself.

The team also thanks a long list of government officials, health professionals, health workers, traditional birth attendants, midwives, and others interviewed for this evaluation and involved with MotherCare for their generous contribution.

This midterm evaluation of the MotherCare Contract DPE-5966-2-00-8083-00 was conducted for the Office of Health, Bureau for Research and Development, Agency for International Development. The evaluation was conducted by Project ASSIST of The Pragma Corporation and the report was submitted to A.I.D. under Project Number 936-5939.05, Contract Number DPE-5939-C-00-7003.

Team Members

Elizabeth A. Preble, MPH
Team Leader
Consultant in health policy and programs
North Oaks, Minnesota

Linda Sanei, MA
Project Manager/Program Analyst
Advisory Services Support for
Infant Survival Technology
(ASSIST) Project
The Pragma Corporation

Godfrey J.A. Walker, MD, MBBS, MScHyg
Medical Officer
Maternal Health and Safe
Motherhood Research Program
World Health Organization

Barbara Parker, PhD
Health and Child Survival Fellow
Johns Hopkins University
detailed to A.I.D./Washington

Beatrice J. Selwyn, ScD, MScHyg
Associate Professor of Epidemiology
University of Texas School of Public Health, Houston

Acronyms

ACNM	American College of Nurse Midwives
ADB	Asian Development Bank
A.I.D.	Agency for International Development
A.I.D./W	Agency for International Development/Washington
A.I.D./ROCAP	A.I.D. Regional Office for Central America and Panama
AIDS	acquired immunodeficiency syndrome
APROFAM	Asociacion Pro Bienestar de la Familia de Guatemala (Association for the Well-Being of the Guatemalan Family)
ASSIST	Advisory Services Support for Infant Survival Technology Project
BAPPENAS	National Development Planning Board, Indonesia
CDD	control of diarrheal diseases
CEDPA	Center for Development and Population Activity
CIAES	Centro de Investigacion, Asesoria y Educacion en Salud (Center of Investigation, Assessment and Education in Health)
COMBASE	Comision Boliviano para el Accion Social Evanjelico (Bolivian Commission for Evangelical Social Action)
COTALMA	Comite Tecnico de Apoyo a la Lactancia Materna (Technical Committee in Support of Breastfeeding)
CPCCM	Centro para la Prevencion de Cancer de la Mujer (Center for the Prevention of Cancer in Women)
CTO	cognizant technical officer
EPI	expanded program on immunization
GOBI-FFF	growth monitoring, oral rehydration therapy, breastfeeding, immunization - family planning, food supplementation, and female literacy
GOI	Government of Indonesia
IEC	information, education, and communication
INCAP	Instituto de Nutricion de Centro America y Panama (Institute of Nutrition for Central America and Panama)
JSI	John Snow, Inc.
MEDICO	Medicina Dirigida a la Comunidad (Community Medicine)
MOH	ministry of health

NCIH	National Council for International Health
NGO	non-governmental organization
ODC	other direct costs
OYB	operational year budget
PAHO	Pan American Health Organization
PATH	Program for the Adaptation of Technology for Health
PROMEFA	Programa Medico Familiar (Program in Family Medicine)
PACD	project assistance completion date
PVO	private voluntary organization
REACH	Resources for Child Health Project
R&D	Research and Development Bureau, A.I.D./Washington
RI	Republic of Indonesia
SCF	Save the Children Federation
SOMARC	Social Marketing for Change Project
SOPACOF	Sociedad Privada de Ayuda a la Comunidad y Familia (The Private Society to Aid Families and The Community)
STD	sexually transmitted disease
TAG	technical advisory group
TBA	traditional birth attendant
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development overseas mission
WHO	World Health Organization

Contents

Acknowledgments i

Team Members ii

Acronyms iii

Executive Summary 1

I. Introduction 9

 A. Purpose, Scope, and
 Methodology of The Evaluation 9

 B. Evolution of The Safe Motherhood Concept 11

 C. MotherCare's Project
 Goals, Objectives, and Scope 12

II. General Questions and Cross-Cutting Themes 15

 A. Progress in Reaching Goals 15

 B. Sustainability, Replication,
 Standardization 17

 C. Selection of Projects and Overall Vision 20

 D. Recommendations for Follow-on Activity 22

III. Technical Questions	26
A. Advocacy, Policy, and Information Dissemination	26
B. Maternal and Neonatal Health and Nutrition Services	33
C. Behavioral Research, Communication, and Outreach to Women	38
D. Applied Research and Assessment Methodologies	45
E. Training	54
F. Evaluation	56
IV. Project Management and Staffing	59
A. A.I.D. Management	59
B. JSI/MotherCare Staffing and Support	60
V. Project Financial Status and Financial Management	62
A. Analysis of Project Expenditures	62
B. Financial Management and Reporting	74
C. Level of Effort	76
D. MotherCare Contract Deliverables	77

VI. Composite Recommendations 79

Tables and Figures

Tables

1. Expenditures By Line Item (Planned Versus Actual) 64

2. Pipeline Analysis 69

3. Average Monthly Expenditure Rate by Fiscal Year 70

4. Level of Effort Analysis 76

5. MotherCare Deliverables 78

Figures

1. Current Buy-ins 71

2. Projected Buy-ins 72

Annexes

- Annex 1: Midterm Evaluation Scope of Work**
- Annex 2: People Interviewed**
- Annex 3: Highlights of MotherCare Accomplishments**
- Annex 4: Criteria for Selection of Countries, Sites,
and Implementing Organizations**
- Annex 5: Background Documents Reviewed**
- Annex 6: MotherCare's Applied Research Projects**

Executive Summary

General Comments

The evaluation team's report is based on a five-week investigation of programmatic and technical documents, interviews with individuals familiar with maternal and neonatal health and nutrition problems and MotherCare's work, and visits to MotherCare's major field sites.

The team is impressed with MotherCare's progress in the overall areas of:

- raising awareness of the problems and magnitude of maternal and neonatal health and nutrition;
- filling in gaps in the state-of-the-art, particularly regarding specific interventions;
- acting as a catalyst for the formulation of maternal and neonatal health and nutrition policy worldwide;
- linking maternal health with perinatal and neonatal health;
- examining all levels of care and their linkages;
- linking qualitative and quantitative research to services; and
- appreciating the importance of behavioral determinants of pregnancy outcomes, and of communication and social marketing as a necessary program component for behavior change.

Specific products and accomplishments noted by the team are detailed in Section II.A. The selection of countries and program activities within countries has been compatible with the project's goals, objectives, and overall technical vision despite pressures (a 40 percent buy-in requirement) to serve at times merely as a funding mechanism for USAID or A.I.D./Washington priorities that may conflict with MotherCare's own priorities and contractual limitations. MotherCare's work with the Technical Advisory Group (TAG), and

its establishment of effective and appropriate criteria have contributed to the country and program activity selection process.

Efforts to ensure sustainability and replication have been adequate.

MotherCare's work with organizations outside A.I.D., such as the World Bank, UNICEF, and WHO, will extend the reach of A.I.D.'s health policy influence in the field of maternal and neonatal health and nutrition.

The team recognizes the long time frame required for a project like MotherCare, which: (a) is a demonstration in nature, and (b) relies on buy-in funds for its financial viability.¹ Given these constraints, and the team's concern that project objectives are achieved in the remaining one and-a-half years, the team encourages A.I.D. to ensure that MotherCare is adequately staffed and funded. The team suggests that A.I.D. consider extending the contract and its funding until the level of effort and funding ceiling is reached, or ensure that a follow-on activity overlaps with the existing contract.

The team recommends that A.I.D. avoid a lapse between MotherCare and a follow-on activity. Such a gap could interrupt the important momentum that MotherCare has established in encouraging USAID missions both to recognize the importance of maternal and neonatal health and nutrition, and to buy into centrally funded maternal and neonatal health services.

The team encourages MotherCare to avoid embarking on new, technical-, staff-, and management-intensive projects for the remainder of the contract. When considering the feasibility of accepting new project activities that are considered essential to reaching MotherCare's goals within the remaining contract period, or that are necessary for reaching the buy-in ceiling, the impact of these proposed activities on staff time and existing activities should be carefully assessed.

We believe that during the remaining contract period, MotherCare's highest priority should be to analyze, document, and disseminate project findings and associated cost information. The team considers this analysis as a necessary step for converting MotherCare activities from

¹ Buy-in funds are USAID mission monies obligated to a centrally-managed A.I.D. project to subscribe to the services of that project.

small to large scale; the analyses' outcomes will determine which activities are replicable on a larger scale.

Regarding a follow-on activity, prevention of maternal mortality and morbidity should continue to be emphasized, along with the prevention of perinatal and neonatal mortality. MotherCare should continue testing and improving the impact-effectiveness of community-based intervention strategies that address maternal and neonatal health. These strategies should be "brought to scale" where possible.

Technical Issues

Advocacy, Policy, and Information Dissemination

MotherCare has advocated the project's goals through negotiations by staff, well-designed field projects, and numerous high quality publications. Documents have been widely, if not always systematically, distributed.

While MotherCare has set the stage for gaining the attention of policymakers, there still remain a number of key individuals in-country who are not aware of MotherCare project activities. For example, in Indonesia where MotherCare has three ongoing projects, some staff members of other donor organizations were not aware of MotherCare's activities.

Maternal and Neonatal Health and Nutrition Services

MotherCare works with the local health care delivery system, adapting to its structure while introducing a broad range of services for the care of mothers and newborns. MotherCare's adaptability has led to improved local service provision and is expected to improve prospects for sustainability. MotherCare may therefore need to add staff in some countries to strengthen its visibility.

MotherCare offers an appropriate mix of services and regards referral of women with complications to be key. MotherCare has worked with all levels of care, from the primary to

the tertiary. Services are being made more culturally appropriate through the activities of MotherCare.

By the time the project ends, MotherCare will be in a position to accumulate and document very practical and useful information about intervention impact. MotherCare took the lead in preparing a very useful document called *Programming for Safe Motherhood* (draft, February 1992) that addresses issues in building a useful service system. *Programming for Safe Motherhood*, together with the valuable intervention data to be acquired, could form the basis of a practical guidebook that lays out the framework of the system of maternity care. This guidebook should also discuss the minimum health care service infrastructure needed to detect, treat, and prevent maternal and neonatal mortality.

MotherCare should continue providing a broad range of service components, including family planning and nutrition, training and norm building.

Behavioral Research, Communication, and Outreach to Women

From the beginning MotherCare has recognized the impact of behavior on pregnancy outcomes and has demonstrated a commitment to improving both the "demand" and the "supply" aspects of the health consumer-provider interface. However, its projects have varied considerably in terms of the level of time and resources that have been allocated to behavioral research and social marketing. As a result, some communication initiatives are now beginning to achieve positive results, while others are behind schedule and will need additional inputs.

The Tanjungsari Project in Indonesia is behind others on the introduction of communication and social marketing. Technical assistance will be required if behavioral research and social marketing are to be adequately carried out.

The Bolivia projects, on the other hand, are contributing to the state-of-the-art. Bolivia project advancements should be documented in one or more working papers that identify the elements of success, lessons learned, and offer suggestions for replication elsewhere.

It is clear from assessment reports and from a brainstorming session hosted by MotherCare that reaching women through women's groups and organizations is a promising approach. Except in Bolivia's Inquisivi Project and Bangladesh's Save the Children Project, where

women's groups are the primary channels for information flowing to and from the project, the potential of this approach has not been realized. We hope that planned MotherCare activities in Africa will feature women's groups as focal points of empowerment for improving maternal and neonatal health and nutrition.

Applied Research and Assessment Methodologies

The applied research being supported by the project *is* exploring and analyzing issues that are critical if substantial reductions are to be achieved in maternal and neonatal mortality in the next decade. The interventions necessary for effectively reducing maternal mortality to low levels are complex and diverse. It is particularly notable that MotherCare has, in a short time, established an applied research component of technically sound projects focusing on relatively few high-priority issues of global significance. This is especially laudable in view of A.I.D.'s procedural requirements for the approval of funding for subcontracts. These research topics have been selected according to the broad framework outlined in the 1990 TAG meeting. MotherCare project management has also demonstrated the ability to recognize competent researchers; the project has taken advantage of opportunities to encourage relevant research.

The team believes that MotherCare's highest priority for the remaining one and-a-half years is to complete current studies already receiving project support. No additional major research activities should be started during the remaining MotherCare contract period. Planning should begin for dissemination of the results of the applied research.

The team recommends that A.I.D.'s future priorities in maternal and neonatal health and nutrition research should build upon the experience and comparative advantage that MotherCare has established in certain research areas. The highest priority should continue to be the evaluation of innovative techniques for providing adequate and appropriate care during pregnancy and labor to reduce maternal and neonatal mortality and morbidity.

Evaluation support should be considered as part of the important transition of MotherCare activities from small to large scale. Similarly, there are advantages to pursuing further research on the prevention and improved management of pregnancy-related anemia.

Training

Training in essential midwifery and obstetric skills is an important activity in several of the projects supported by MotherCare. Most of these training activities use modern training techniques. However, efforts should be made to further facilitate the use of these techniques in the Tanjungsari and Surabaya projects.

The *Life-Saving Skills Manual for Midwives* is an excellent document deserving broad promotion and dissemination. In the Nigeria and Uganda projects, every opportunity should be taken to encourage the incorporation of life-saving skills into the basic midwives training curriculum. The protocols and norms for obstetrical care developed in the Quetzaltenango, Guatemala, project will probably be appropriate for use in other Latin America maternal health programs.

Evaluation

MotherCare has designed technically sound evaluation studies for most of its projects. These studies should provide the kind of data about intervention impact that is needed in the field of public health. Multiple impact indicators and measures of change are included.

MotherCare's projects are under time constraints. They must have their interventions in place now, so that at least one year can pass before the post-intervention data collection occurs.

MotherCare needs to monitor the evaluation components of each project carefully so that there is sufficient time to analyze findings properly before the project ends.

MotherCare is encouraged to "hold a steady hand on the wheel" and maintain a quality research approach to the intervention evaluations during the life of the contract.

Project Management

Many aspects of MotherCare's contract cause strains at many levels, including the five-year project duration, which the team feels is too short for a project of this nature.

The A.I.D. cognizant technical officer's (CTO) strong personal commitment to the MotherCare project, combined with the CTO's technical expertise, academic credentials, experience, and professional stature in the fields of maternal health and nutrition have been very valuable to MotherCare. The CTO has been an effective advocate for MotherCare, both within A.I.D. and in other professional circles. However, the team found administrative oversight to be too close, particularly with respect to the editing of internal A.I.D.-MotherCare documentation.

Reporting mechanisms were generally adhered to and were usually useful.

Project Financial Status and Financial Management

Spending shortfalls have occurred, in large part, as a result of the need for time-consuming field advocacy to secure buy-ins. However, there are indications that implementation, and hence project spending, is accelerating.

The team recommends that an amendment be issued to the existing budget to accommodate expected overruns in the salary line item. A new budget for remaining central resources should be drawn up by MotherCare, and MotherCare's workplans for the second and third years of the project should be endorsed by A.I.D.

The buy-in mechanism has facilitated some MotherCare project activities, but has also proved cumbersome. The team recommends that A.I.D. reconsider the core/buy-in funding ratio in the follow-on activity.

The team recommends that MotherCare keep subcontractor budgets up-to-date, increase financial planning and monitoring capacity with additional staff, monitor other direct costs

more closely, maintain Washington office rent at a stable level, and resolve the existing dispute between A.I.D./Washington and JSI on monthly administrative staff disallowances. The team suggests that A.I.D. reexamine and investigate the feasibility of a monthly advance system (with A.I.D.'s Offices of Procurement and Financial Management) to host country subcontractors.

I. Introduction

A. Purposes, Scope, and Methodology of the Evaluation

Purpose

This midterm evaluation of MotherCare fulfills A.I.D.'s requirement for a major external evaluation half-way through the five-year project cycle. A second evaluation is mandated at the end of the contract. This evaluation was specifically intended to:

- assess MotherCare's performance and progress to date;
- advise A.I.D. on any need to reorient priorities and strategies during the remainder of the contract through September 1993, especially regarding replicability and sustainability; and
- provide guidance to A.I.D. on the content of follow-on maternal and neonatal health and nutrition activities.

Scope

A detailed scope of work, found as Annex A, was prepared by A.I.D. to assist the evaluation process, and ensure appropriate depth, breadth, and consistency of information sought. The scope of work contains a set of general questions based on cross-cutting themes central to all of A.I.D.'s work, such as institutionalization, sustainability, and women in development. Technical and managerial questions more specifically related to MotherCare's goals and objectives are also contained within the scope of work.

Methodology

A five-person evaluation team was assembled by Project ASSIST of The Pragma Corporation. Technical skills represented on the team included expertise in maternal and child health; obstetrics; applied research on maternal morbidity and mortality; epidemiology; anthropology and behavioral research; information, education and communication and social marketing; training; health program planning, implementation and evaluation; and administration and management.

An extensive range of maternal and neonatal health and nutrition documentation, as well as documents relating specifically to MotherCare's activities, were reviewed by the team prior to its investigations. Three evaluation team members attended a World Bank meeting in November 1991, which was facilitated by MotherCare and was convened to develop safe motherhood guidelines for World Bank programs. An evaluation planning meeting was held in early December 1991. A second planning meeting was held in early January 1992, followed by a week in Washington during which four team members interviewed MotherCare staff, A.I.D. staff, and professionals in other related organizations to collect data about MotherCare's activities.

The team then separated, with one team member visiting project sites in Bolivia and Guatemala, three team members visiting project sites in Indonesia, and one team member remaining in Washington to analyze financial and contractual elements of the MotherCare project. The countries visited host three of the five long-term projects that have been underway for at least one year, and represent the greatest level of project involvement. In late January, the team reconvened in Washington to compare field experience, to reach consensus on major findings, and to begin drafting the evaluation report.

See Annex 2 for a list of persons interviewed during the course of this MotherCare evaluation.

B. Evolution of the Safe Motherhood Concept

Until the early 1980s, maternal and neonatal mortality and morbidity problems were generally not a priority health policy issue in developing countries. Women's problems have traditionally received little attention, in part because of the difficulty in collecting maternal mortality data.

By the mid-1980s, an increasing number of studies had identified the magnitude and causes of maternal mortality. These maternal mortality studies coincided with increased attention to issues of the rights and status of women in general. In 1985, WHO convened the first major Interregional Meeting on the Prevention of Maternal Mortality. In addition to increasing concerns about women's health, a strong focus on child survival continued to dominate many donor agency priorities. Studies on child survival were beginning to demonstrate that a large proportion of child deaths occurred in the first month of life, before interventions such as GOBI-FFF² were effective, and that new strategies would have to be developed to reach children less than one month of age (neonates).

In 1987, the Safe Motherhood Conference, jointly sponsored by the World Bank, WHO, UNDP, and UNFPA, was held in Nairobi, Kenya. Through presentations of experiences from a number of countries, this conference raised awareness of the magnitude of maternal mortality and morbidity problems among the attending representatives of donor organizations and developing country service providers. Agreement was reached on key issues, and a call to action was issued.

Translating this new commitment into program action proved difficult because there were few—if any—models of effective, affordable and replicable maternal mortality and morbidity prevention programs in developing countries. Large gaps in the state-of-the-art of this field emerged, including the lack of a "prescription" for a precise mix of prenatal services that would address the health problems of women and neonates in varied socioeconomic and health service settings.

² A UNICEF acronym: growth monitoring, oral rehydration, breastfeeding, immunization, family spacing, female education and food supplementation.

It was against this background that A.I.D. moved into the field of maternal and neonatal health and nutrition. As described in the MotherCare Project Paper,³ A.I.D. recognized the need to extend the Agency's child survival initiative beyond immunizations and oral rehydration therapy to include pregnancy, birth, and the neonatal period. A.I.D. also saw this project as essential to achieving broader objectives related to health, nutrition, population, and women in development. In addition to recognizing the importance of maternal health to child survival, A.I.D. recognized that women's health is important in its own right. A.I.D. felt that in addition to the "safe motherhood" focus on family planning and improved management of "obstetrical" emergencies to reduce maternal mortality, attention should be given to the major problems of maternal malnutrition and morbidities, and the prevention of factors that lead to obstetrical emergencies.

Centrally funded A.I.D. projects already existed in the fields of family planning and child survival. This new project was seen as a complementary reinforcement of existing A.I.D. projects, and was a way to link maternal health with infant outcomes. By improving maternal health and nutrition services, especially prenatal care, A.I.D. could help reduce the relative risk of mortality, malnutrition, and morbidities for pregnant women and their infants. John Snow, Incorporated (JSI), was awarded the contract for MotherCare on September 30, 1988. However, due to a formal protest on the award of the contract to JSI, a stop work order was issued; hence work did not commence until May 1989.

C. MotherCare's Project Goals, Objectives, and Scope

The goal of the project, as stated in the MotherCare contract between John Snow, Inc., and A.I.D.,⁴ was to "improve the health, nutritional status and survival of women of reproductive age and their children in developing countries." The purpose was to

³ Office of Health, Bureau for Science and Technology (now the Bureau for Research and Development) "Project Paper - Maternal and Neonatal Health and Nutrition" 936-5966. March 21, 1988.

⁴ Contract DPE-5966-Z-00-8083-00, effective September 30, 1988.

"demonstrate the feasibility of providing a package of effective, appropriate maternal and neonatal care services and education to women and their infants in selected developing country settings."

Three implementation modes were outlined,⁵ including:

1. short-term technical and training assistance to USAID missions, ministries of health, private voluntary organizations, and other organizations promoting maternal and neonatal health and nutrition;
2. intensive efforts in up to five countries to develop demonstration projects in maternal health; and
3. applied research in a minimum of three countries.

Thirty-nine percent of contract resources were to be devoted to short-term technical and training assistance, 45 percent to long-term interventions, and 16 percent to applied research.

Over the course of the contract, MotherCare, in close collaboration with the project's A.I.D. cognizant technical officer, has further refined—through TAGS, working papers, etc.—the contract's objectives from those originally envisioned in the A.I.D. Project Paper. Comprehensive contract objectives now include:

1. Promote awareness of maternal and neonatal health and nutritional problems and the options to address them, including advocating for policy and program change;
2. Improve maternal and newborn health through increased practice of health-promoting behaviors during the reproductive and neonatal periods and by developing strategies to reach women with health-promoting messages;

⁵ In the original Project Paper, a fourth implementation mode was listed, "support to other activities of a worldwide nature that will further maternal and neonatal health." This fourth mode was not included in the MotherCare contract.

3. Clarify issues and identify useful methods and tools for assessing maternal and neonatal health and nutrition problems and their determinants; and
4. Improve the recognition, response, practices and required skills as related to the major causes of morbidity and mortality among women and neonates at each level of service from the community to the hospital level.

(For a discussion of the evolution of MotherCare's strategies, which address the purpose, and implementation mode discussed above, see Section II.A.)

II. General Questions and Cross-Cutting Themes

A. Progress in Reaching Goals

Through interviews and field visits, the evaluation team became familiar with a number of MotherCare's accomplishments. These include:

- raising awareness of the magnitude of maternal and neonatal health and nutrition problems;
- beginning to fill in gaps in the state-of-the-art, particularly regarding specific interventions;
- acting as a catalyst for the formulation of maternal and neonatal health and nutrition health policy worldwide;
- linking maternal health with perinatal and neonatal health;
- examining all levels of care and the linkages between them;
- linking qualitative and quantitative research to services; and
- appreciating the importance of behavioral determinants of pregnancy outcomes, and communication and social marketing as a necessary program component for behavior change.

It is too early in most of the projects to expect definitive findings regarding the standardization and generalization of lessons learned. However, some lessons, which are

generalizable *within* (although perhaps not *across*) settings,⁶ are emerging in the following areas:

- the importance of establishing referral links, i.e., communities' knowledge about when and where to refer the difficult high-risk and emergency cases, including appropriate communication with and transportation to the next level of care.
- assessing attitudes toward pregnancy and its associated morbidity and mortality-related risks;
- training as an essential element in recognizing and treating high-risk conditions of pregnancy; and
- the importance of service availability at three service levels: at the traditional birth attendants (TBA) level, the community health center, and the hospital.

MotherCare can be proud of an extraordinary number of specific products and accomplishments, particularly given the project's staffing and funding limitations. These products include—

- long-term activities initiated in five countries (Bolivia, Guatemala, Indonesia, Nigeria and Uganda);
- short-term technical assistance missions to numerous countries;
- developing assessment tools;
- participating in, organizing and sponsoring workshops and meetings; and

⁶ MotherCare has developed a useful matrix of settings that represent the level of services available, sophistication in making referrals, etc.

- developing policy guidelines, training manuals for midwives, and numerous other publications.

For a complete list of project accomplishments by substantive area, see Annex 3.

Social marketing is one area that the team feels has received a lesser priority or lags behind other accomplishments. Maternal undernutrition is another area that has not received the expected emphasis. With the exception of anemia, in fact, this area has been largely ignored.

MotherCare is perhaps unique in having also selectively undertaken assignments with, and maintained close professional contact with, organizations outside A.I.D., such as the World Bank, UNICEF, PAHO, and WHO. For the Bank, MotherCare facilitated the internal review and development of World Bank Safe Motherhood programming guidelines. With PAHO and WHO, MotherCare co-sponsored a workshop and publication on maternal anthropometry.⁷ For UNICEF in the Middle East and North Africa region, MotherCare assisted with regional safe motherhood programming. The team feels strongly that this collaboration will help A.I.D. play a pivotal role in global maternal and neonatal health and nutrition policy development for both donors and service providers in the developing world. The A.I.D. cognizant technical officer played an important role in endorsing these MotherCare activities.

B. Sustainability, Replication, and Standardization

Replicability will actually be tested more intensively in A.I.D.'s follow-on activity to MotherCare. However, MotherCare has already taken steps to ensure that its project inputs are sustainable over time and replicable within similar settings. It has, for example, focused

⁷ "During pregnancy, anthropometric measures such as maternal weight gain, weight-for-height as a percent of standard, or arm circumference have been shown to be good predictors of infant outcomes such as birth weight and survival." From Krasovec, and Anderson, *Maternal Nutrition and Pregnancy Outcomes: Anthropometric Assessment*, Scientific Pub. No. 529, Pan American Health Organization, Washington, D.C. 1990.

on interventions to improve *existing* care services, rather than introducing new modalities. MotherCare has insisted on counterpart contributions from government and the private sector. MotherCare has shared information with government and other donor agencies, and involved project staff in national maternal and neonatal health and nutrition commissions and subcommittees. Further, it has formed project committees that involve policymakers in planning and implementation. The project has established a critical mass of activity, where possible, and has promoted its work through presentations at national and international conferences.

In the long-term activities in Indonesia, sustainability and replication are likely, given recent expressions of interest by the World Bank, Asian Development Bank, and the Japanese in providing major funding. In addition, MotherCare's projects are consistent with Indonesian health policy, as expressed in the national Safe Motherhood planning process. MotherCare's efforts to introduce communication into the health curricula of relevant faculties in Indonesia will help to ensure this element over the long-term.

In Bolivia—and Latin America generally—sustainability appears more fragile because the organizational structures of the institutions MotherCare collaborates with are less stable. In most cases, MotherCare attempts to work jointly with ministries of health and non-governmental organizations (NGOs), even when this delays project activities. In Bolivia, MotherCare works through the NGO Save the Children, which functions largely outside the government system, and the traveling, train-based Sociedad Privada de Ayuda a La Comunidad y La Familia (SOPACOF)⁸ health project. SOPACOF receives funding through MotherCare, but has experienced repeated gaps in funding. However, these funding gaps are outside the control of MotherCare. MotherCare's support to Bolivian NGOs occasionally includes provision of recurrent costs, and this perhaps compromises the projects' potential for sustainability and replication. In Guatemala, MotherCare is working with professional medical groups in hopes of creating a sustained (and replicable) interest group that can advise the ever-changing ministry of health in maternal health issues.

In Africa, the Life-Saving Skills Manual developed by the American College of Nurse Midwives (ACNM) and MotherCare should be replicable. The team was aware of concerns that the relatively high budget (due in part to expatriate trainers) for the Uganda and Nigeria midwives training activities may make its replication too costly. However, the team did not have sufficient exposure to these projects to thoroughly assess this issue.

⁸ The Private Society to Aid Families and The Community

The team agrees with Thomas Bossert's analysis of sustainability in Africa. Bossert concludes that broader development issues, such as economic strength and adequate governmental infrastructure, must be addressed before donors can expect significant sustainability, and that institution building must be a part of sustainable development assistance programs. That said, the team did determine that MotherCare is fostering key program elements that Bossert equates with sustainability.⁹

The team felt MotherCare's inputs have real potential to be sustainable and replicable, *if* the following conditions are met over the next one and-a-half years:

- articulation of project findings is clear (and not overly technical) and timely;
- government officials continue to be involved and informed throughout the project; and
- cost implications of the services and research are clearly stated, and deemed to be affordable.

⁹ Bossert, Thomas J., "Can they get along without us? Sustainability of donor-supported health projects in Central America and Africa", *Social Science and Medicine*, Vol. 30, No. 9, pp. 1015-1023. 1990. Bossert recommends the following elements to encourage sustainability of development projects:

- demonstration of effectiveness
 - integration into existing administrative structures
 - reliance on national funding sources
 - support to training components
 - mutually-respectful negotiation
 - inclusion of elements of community participation
-

C. Selection of Projects and Overall Vision

The evaluation team feels both MotherCare's choice of projects and geographical sites have been appropriate, and that they do fit into a larger conceptual vision.

As with many projects that are highly innovative in nature, and for which there is not a clear precedent through A.I.D., MotherCare's vision evolved over the first two years in response to the changing state-of-the-art, and changes in services being offered by other A.I.D. health projects.

MotherCare's overall conceptual approach has followed the path of a comprehensive package of integrated maternal care rather than concentrating on individual, vertical interventions, such as anemia. While this approach is more difficult to deliver, most health professionals now agree that this is the orientation of choice.

The team observed that the majority of the priority areas outlined in MotherCare's contract have been thoroughly addressed.¹⁰ Neonatal tetanus, breastfeeding, and family planning have been—for the most part—technical areas appropriately left to other A.I.D. health projects better placed for action. In the case of neonatal tetanus, an early workshop was run jointly by the Resources for Child Health (REACH) and MotherCare projects. There it was determined that MotherCare's comparative advantage lay in focusing on the mother, instituting techniques of clean and safe delivery, and ensuring education about tetanus toxoid as part of antenatal care.

¹⁰ The following areas were outlined in MotherCare's contract in order of general priority: (1) prevention of neonatal tetanus and other infections (including malaria prophylaxis and (STDs); (2) prevention and treatment of maternal malnutrition and anemia; (3) improvement of existing prenatal and perinatal care services; (4) coordination, (5) moving beyond the public health services system; (6) community education regarding the major problems of maternal health and resources available to help solve them; and (7) applied research in a minimum of three countries.

REACH's advantage lay in strengthening logistic systems through which tetanus toxoid immunization is actually delivered. In the case of breastfeeding, with the initiation of an A.I.D. cooperative agreement dedicated entirely to breastfeeding with Wellstart, it was felt that MotherCare did not have to expand its efforts beyond initial assessment work. In all long-term MotherCare sites, the project has ensured that family planning is a component of integrated care. The actual delivery of family planning services, however, has been undertaken by other "expert" organizations.

The team found the choice of MotherCare activities appropriate (however, the team cannot comment on projects that were proposed but *not* accepted by MotherCare, as it did not have an opportunity to review those). The first Technical Advisory Group (TAG) meeting, held in 1990, provided expert guidance and helped narrow a somewhat amorphous field of potential activities to a rational set of priorities.

MotherCare's seven present and projected activities in Indonesia correspond very closely to the new maternal and neonatal health and nutrition components selected for action by the recently-completed Government of Indonesia/UNDP/WHO Recommended Plan of Action (1992-1996) for Safe Motherhood.¹¹

The only area that the evaluation team found conspicuously absent from MotherCare's repertoire is that of unsafe abortion. The very important role that unsafe abortions play in maternal mortality, especially in Africa and Latin America, is well known. In addition to abortion-related deaths, many women who survive unsafe abortion suffer chronic, abortion-related complications. As a recent World Bank paper points out, there is much valuable work that *can* be done to accurately assess the magnitude of these abortion-related complications; and to ensure appropriate treatment for women who suffer unsafe abortion-related consequences. It is unfortunate that MotherCare is not able to address this problem with appropriate research and program interventions because abortions are a major cause of pregnancy-related mortality (see also Section III.B. on Services).

MotherCare's long-term projects are well distributed within three major developing country regions (Africa, Asia, and Latin America). The countries do fit within the primary

¹¹ Components of the Government of Indonesia's plan include increased political commitment; community involvement and awareness; use of the risk approach to pregnancy; attention to problems of anemia; support during childbirth; and initiation, support and coordination of appropriate research.

considerations outlined in the MotherCare contract. In addition, MotherCare has developed its own more detailed set of criteria for selection of countries and implementing organization partners (see Annex 4).

Funding is an important factor influencing MotherCare's choice of project activities and geographical sites. A large percentage of MotherCare's funding must come from buy-ins. In the best-case scenario, this means MotherCare must continually negotiate between USAID mission and Office of Health priorities and MotherCare's own priorities and contractual limitations. In the worst-case scenario, this has meant that MotherCare has been pressured to serve as merely a funding mechanism for projects that are mission priorities, not MotherCare priorities, and for which missions do not necessarily even rely on MotherCare's technical expertise. Given these funding process constraints, MotherCare appears to have professionally negotiated its project activity selection, resulting in an impressive array of activities.

D. Recommendations for Follow-on Activity

The team recommends that the emphasis in a follow-on MotherCare activity should remain on the prevention of maternal mortality and morbidity along with the prevention of perinatal and neonatal mortality. Many interventions being tested now through MotherCare could be "brought to scale" in the next five-year period if thoroughly documented and proven to be appropriate for replication. The team also believes that work on testing and proving the impact-effectiveness of community-based, integrated maternal and neonatal health and nutrition intervention strategies should continue.

The team's reasons for our recommendations are that—

- maternal mortality continues to be high in many developing countries;
- women's health issues must continue to be emphasized and a worthy target is the reduction of maternal mortality and morbidity;

- many morbidities women suffer relate directly to childbearing and the care received (conditions like vesico-vaginal fistula, uterine prolapse, and stress incontinence);
- the majority of perinatal and early neonatal deaths are linked to events occurring in pregnancy and childbirth, thus affecting two lives;
- the neonatal (first month) period of life has been largely ignored, yet this is when simple preventive measures such as exclusive breastfeeding could have a large impact on saving lives;
- prevention of maternal and neonatal mortality requires linking the entire health care delivery system from family to district hospital (and we still need to know what works the best and is most cost-effective); and
- pregnancy and childbirth provide a focus to address women's and infants' health and nutrition as well as a chance to affect the inter-pregnancy interval (which will require the integration of services).

With regard to family planning, the team recognizes its central role in the reduction of maternal mortality, and thinks that family planning services must be part of the maternal health care package. However, much information already exists about family planning services and other departments and agencies already specialize in delivering family planning services. Family planning groups should be encouraged to join MotherCare in the maternal and neonatal health and nutrition initiative, but the new MotherCare follow-on activity should concentrate efforts on neglected aspects of, and new developments in, maternal and neonatal health and nutrition.

Other departments and agencies specializing in nutrition studies and services should also be encouraged to collaborate in the initiative. However, the team recognized that the specific area of maternal nutrition and service delivery would require additional attention and study as part of the follow-on activity. Neonatal nutrition (breastfeeding) should also be a part of this activity. Those involved with the new MotherCare activity should seek to integrate services with existing nutrition programs to augment maternal nutritional status. The new MotherCare

activity should also advocate program design to improve nutrition of young girls and to equalize food distribution within families to girls and women.

The team believes that attention to sexually transmitted diseases (STD) should be part of a maternal care package. Diseases such as syphilis and gonorrhea have high incidence, have a dual impact on the health of women and their newborn babies, and are amenable to prevention and treatment.

During the team's consultations for this evaluation, we heard suggestions that the future MotherCare activity might broaden its area of concern to include women's health in general, rather than limit its scope to maternal health issues. Broader coverage of women's health could include the general nutritional status of young girls, sexually transmitted diseases, chronic gynecological conditions, and cervical cancer. Others suggested that the neonatal period be extended to include the first two or three months of life rather than just the first month. While the team acknowledges the importance of these points, we believe that focusing on maternal and neonatal morbidity and mortality are warranted for now.

The team recommends that the follow-on activity include the establishment and/or support of communication about maternal and neonatal health and services issues. The best format is a peer review journal, or a publication similar to *Studies in Family Planning*, where program administrators and researchers can publish findings from projects such as those in the current breastfeeding activity.

Regarding future research, we recommend that A.I.D.'s future priorities in maternal and neonatal health should build upon the experience and comparative advantage that MotherCare has established in certain research areas. Support should be considered for the evaluation portion of the important transition of the project from small to large scale. In a similar way, we consider there are advantages to pursuing further research on the prevention and improved management of pregnancy-related anemia.

As mentioned in other sections of this report, the team recommends that A.I.D.—

- provide MotherCare with the funds and level of effort necessary to enable it to complete ongoing research and arrive at critical research findings;
- widely disseminate these findings; and

- avoid creating a gap between MotherCare and the follow on activity that could interrupt the new momentum and interest of USAID missions in maternal and neonatal health and nutrition.

III. Technical Questions

THIS SECTION CONTAINS discussions of five technical areas that correspond to the evaluation's scope of work. Each discussion section is followed by major conclusions and recommendations.

A. Advocacy, Policy, and Information Dissemination

Advocacy by MotherCare Staff and Consultants

The team agrees that MotherCare has been particularly effective, in the relatively short period of time since the project began, in advocating the importance of maternal and neonatal health and nutrition care on behalf of developing countries. MotherCare has advocated increasing awareness of:

- the importance and severity of maternal and neonatal health and nutrition problems;
- the necessity for research to fill gaps in applied knowledge and in the state-of-the-art; and
- the need to develop appropriate services for women and newborns;
- the value of coordination between different health sectors; and
- the utilization of MotherCare's services to meet these needs.

MotherCare has advocated these concepts, in part, through numerous and intensive staff and consultant visits to developing countries. MotherCare staff have made personal contact with

USAID missions, government counterparts, researchers, and other non-governmental and international organizations.

Interviews with representatives from several of these groups indicated that MotherCare's technical capacity, approach, and negotiation skills were extremely effective. MotherCare has also participated actively in workshops (organized by MotherCare and others), which have been an effective form of advocacy. Finally, MotherCare's numerous publications have further promoted its goals.

MotherCare's short-term visits and assessments in developing countries were ultimately successful in encouraging USAID missions to buy-in to the project. This is impressive considering that A.I.D. funds are increasingly limited; that maternal health problems have only recently been appreciated; and the fact that MotherCare at times emphasizes research more than operational activities. MotherCare staff will continue to make maternal health services, which often appear to policymakers as too complex, more attainable.

Through its skillful presentation of issues and advocacy, MotherCare has succeeded in promoting coordination between A.I.D./Washington and USAID mission offices of Health, Population and Nutrition (including AIDS). MotherCare serves as a unique and effective bridge between often disparate organizations. For example, in Guatemala the evaluation team was told that it is due to MotherCare that the Instituto de Nutricion en Centro America y Panama (INCAP),¹² the Ministry of Health, the Obstetrics and Gynecology Association, breastfeeding professionals, and the Social Security system have come together. In Bolivia, MotherCare effectively coordinated important non-governmental organizations. People interviewed noted that MotherCare's successes in the Latin American countries were attributable to the public health planning and management skills of the MotherCare staff members assigned to cover this region.

For a discussion of MotherCare's advocacy role and its relationship to MotherCare's spending shortfall, refer to Section V.A.

¹² Institute of Nutrition for Central America and Panama

Influence on Policymaking Process

While it is too early for definitive conclusions, the team felt that lessons learned from MotherCare projects have a good chance of being integrated into policymaking processes at the country level, particularly where long-term projects are being undertaken. In some cases, MotherCare's mark may not be obvious in the policymaking process, because it has tried hard to foster "ownership" of the projects by local counterparts and their governments.

In Indonesia, a senior health official indicated he was awaiting results of MotherCare's work with great interest. This official intends to integrate them into government health planning. (He is on the steering committee for one of MotherCare's projects.) Low birth weight data from the MotherCare Regionalization project have already fed into a new definition of low birth weight in Indonesia. The recent assessment of Safe Motherhood in Indonesia, and the resulting program plans, relied on inputs from one of MotherCare's principle investigators.

In Guatemala, MotherCare assisted the Government in conducting its own maternal mortality study. The Ministry of Health is now setting norms, goals and priorities based upon this work. MotherCare has assisted the local professional obstetrical organizations in developing norms and standards for care and training.

In Nigeria, Ministry of Health officials participated in MotherCare's health assessment, which will provide the incentive to integrate results of the assessment into policy. The Government of Nigeria reacted positively to MotherCare's philosophy of integrating health and family planning. MotherCare staff fostered unusual collaboration between its staff, the Ministry of Health, and the USAID missions.

Despite agreement that MotherCare has set the stage for policy consideration, the evaluation team also felt that the time has come for a more systematic strategy to integrate MotherCare's findings into the policymaking process. In Indonesia, for example, this strategy might include production of one-page policy-related abstracts of each project, and/or a one-day seminar for all Indonesia MotherCare project investigators, government officials, and donor representatives.

Cost considerations must be a part of any dialogue on future government policy and program implementation. Evaluation of project intervention costs must be included immediately in MotherCare projects, where not already underway. (The team noted, for example, that in Indonesia the Western Consortium costing components of two projects are lagging behind.)

The team felt that the policy issue could not be entirely separated from discussions of sustainability and replication. For further discussion of these issues, refer to Section II.B.

The team also feels MotherCare will influence maternal and neonatal health and nutrition policy worldwide through its close collaboration with other international organizations (see also Section II.A.).

Quality and Reach of Publications

Dissemination of information about maternal health issues has been accomplished through several professional publications, including monthly and semi-annual project reports, the newsletter *MotherCare Matters*, staff and consultant trip reports, the Working Paper series and various workshop proceedings. For a partial list of background documents reviewed by the evaluation team, see Annex 5.

The technical quality of these documents—particularly the working paper series—is high. Individuals interviewed, both inside and outside A.I.D., commended *MotherCare Matters* for its valuable literature reviews, synopses of critical issues, and readable format. They appreciated the high technical quality and innovative topics covered by the Working Papers. Workshop reports were also appreciated. The joint REACH/MotherCare Neonatal Tetanus Workshop report, for example, demonstrated the importance of pursuing the dual strategies of immunization and clean delivery to eliminate neonatal tetanus.

The routine distribution list for MotherCare publications differs depending on the specific publication. Distribution has been fairly wide, if not always systematic, and generally includes A.I.D./Washington staff and technical officers, MotherCare staff in Washington and overseas, MotherCare subcontractors, selected staff from other organizations, and, as appropriate, A.I.D. mission staff and counterparts in-country. In many cases, reports are distributed widely "for comment" as well as "for information." While this makes a wide group of people feel involved, it has also, on occasion, excessively slowed down the document clearance process and increased photocopying costs. Substantial staff time has been consumed by the need to filter, and respond to, technical comments from non-technical readers.

The amount of documentation generated by MotherCare has far exceeded that specified by contractual requirements. The production, editing, and distribution of these documents has put a heavy burden on MotherCare's limited professional, administrative and secretarial staff.

The evaluation team felt wider distribution to non-governmental organizations, schools of public health, international organizations, and others would be desirable. The team also recognized, however, that wider distribution would have implications for MotherCare's limited staffing and budget.

Budget permitting, translation of selected MotherCare documents into Spanish for audiences in Latin America should be a priority.

Communication of Research Findings

We were very concerned about the communication of research findings. We observed that a five-year time frame for the organization of MotherCare, and the development, funding, and initiation of research projects and formulation of research findings was extremely short. The team agrees that determination and dissemination of findings (including cost implications where appropriate) should be made the highest priority of MotherCare between now and the end of its contract in September 1993. If sufficient staff time and funds are not preserved for articulation and dissemination of research findings, MotherCare will not meet a major objective. The team suggests MotherCare approach foundations and other donors for additional funds to maximize the dissemination of its research findings, if A.I.D. funds are insufficient.

The team recommends that, in addition to academic presentations of research project findings (through reports, journal articles, etc.), MotherCare fund workshops that can attract a larger audience of policymakers, program planners and donors. Workshops also facilitate dialogue among participants about the findings. This would be best undertaken on a regional basis for Bolivia and Guatemala, and on a country basis for Indonesia.

The use of video was also suggested as an inexpensive and attractive means to reach a large audience. This could involve videotaping interviews with MotherCare researchers, selected presentations at workshops and conferences, etc.

Promotion of MotherCare

The team found advocacy of MotherCare itself relatively weak, particularly at the country level. In Indonesia, for example, MotherCare supports seven activities, some of which are

complex and involve multiple project sites. Several individuals interviewed in Indonesia were unaware that these operate under the auspices of MotherCare. While national "ownership" of the projects is, of course, ideal, we also felt that MotherCare would benefit from a higher profile.

The team agreed that how effectively MotherCare's research findings are ultimately disseminated will depend, to a certain extent, on its "public relations" profile. Even before the research findings are final, MotherCare should begin to ensure that research topics are covered in local and national press and television.

The team recommends placement of a full-time staff member in Indonesia to serve, among other functions, as coordinator of all the projects. A full-time staff member would present a coherent profile of MotherCare, and serve a public relations function (refer also to section IV.B. on staffing).

Establishing MotherCare as a recognized presence and dissemination of research findings will be crucial to ensuring the sustainability and replication of lessons learned.

Collaboration with Other Groups and Donors

MotherCare has established a new precedent in the A.I.D. environment by accepting short-term assignments with (and sometimes funding from) other organizations working in the field of maternal and neonatal health. Examples include MotherCare staff providing technical support for:

- a World Bank Meeting to develop program guidelines for safe motherhood;
 - a UNICEF Safe Motherhood Meeting for the Middle East and North Africa region;
 - a joint workshop with REACH on neonatal tetanus; and
 - technical discussions on women, health, and development at the 1992 World Health Assembly.
-

As a consequence of these successful activities, demand for MotherCare's expertise is growing outside—and inside—A.I.D.

These relationships outside A.I.D. have facilitated donor coordination, helped give the project external credibility, contributed to the development of the global state-of-the-art and policy development, and have strengthened MotherCare's financial viability. The support and broad thinking of the A.I.D. cognizant technical officer has helped make this possible.

The team cautions, however, that because the project is now past midpoint, and because much work is required to complete existing obligations, that additional outside activities only be accepted on a highly selective basis.

Conclusions

- **MotherCare has successfully employed several advocacy mechanisms. Staff and consultant field visits have effectively negotiated project development.**
- **While it is too soon to evaluate MotherCare's influence on policy development, the team feels MotherCare has set the stage for progressive maternal and neonatal health and nutrition policies.**
- **MotherCare's collaboration with agencies outside the A.I.D. network is highly impressive, and will indirectly expand the impact of A.I.D.'s efforts in this field.**

Recommendations

- **MotherCare's publications are high quality but, if resources permit, would benefit from wider and more systematic dissemination, including translation into Spanish where appropriate.**
 - **Timely inclusion of cost components in service delivery research findings will be critical to the integration of these findings into the policymaking process.**
-

- The team recommends that the project develop a more systematic strategy for disseminating research findings to policymakers, program planners, and academics. MotherCare may seek outside funds to maximize research dissemination. We also encourage the use of workshops and videos in addition to scientific publications.
- Creating a stronger image for MotherCare, through more "public relations activities," would be appropriate. This would include placing a full-time staff member in Indonesia to coordinate and promote MotherCare activities.

B. Maternal and Neonatal Health and Nutrition Services

In long-term MotherCare activities, where services are part of the plan, the MotherCare "package" includes technical assistance in prenatal care, labor and delivery care, postpartum care (including family planning counseling), and newborn care. In order to prevent maternal and perinatal mortality, program emphasis is usually placed on strengthening the referral system and on improving the services available at each service site. This technical assistance package and programmatic emphasis is appropriate given the framework of the MotherCare project.

Providing appropriate case management of complications appears to be a higher priority now than providing preventive care, such as prenatal services. Training, the setting of norms and standards of care, modification of the facilities, and buying equipment have been effective in improving case management.

The current state of knowledge in obstetric care, however, is such that we do not know how to prevent many complications of pregnancy, e.g., pregnancy induced hypertension. MotherCare has therefore focused on how to detect the early signs of complications and on how to avert deaths that might occur from this condition. This is an appropriate focus. The maternal and neonatal health and nutrition services community needs the information that MotherCare activities can provide about the effectiveness of these basic obstetric functions in different service settings. Many of the settings where MotherCare is working are very

resource poor, and we hope to learn from MotherCare about the basic necessities required for an effective maternal health care system.

There are gaps in the health systems that MotherCare works with, some of which are inherent in the country system that is in place. In some cases, there is really only the community level and a health center (a sort of mini-hospital) level with almost no link to the regional hospital. In other countries, the full range of care levels exists but clinical knowledge is low, or the linking mechanisms between levels do not function well. MotherCare has adapted their approach to these various settings quite well.

A strength in MotherCare's in-country approach has been its willingness to work with the existing service system, rather than trying to impose a system from outside. Hence, much of MotherCare's work is "development work." This is more complex to do, but fits in better with the local situation. Working with the existing service structure requires more time, but has better potential for sustainability and is more acceptable to the community (also see section II.B.).

There are some problems in dealing with the existing service structure, such as private voluntary organizations (PVOs) in-country that do not work closely with the local government, e.g., the Save the Children Federation project in Inquisivi, Bolivia. PVOs of this size and type are usually unable to provide hospital care in case of serious obstetrical emergency. Maternal and perinatal mortality cannot be lowered very much unless obstetric emergencies receive proper care, and that means medical care. There must be interaction with the existing system for the referral links to function.

Induced abortion plays a major role in maternal mortality. Induced abortion has been found to cause from 15 to 28 percent of deaths in Latin American countries where valid maternal mortality studies have been done. For example, in Bolivia, where induced abortion is illegal, it is against the law to care for women who are suffering complications of induced abortion. Providers in Latin America have found that women and families are very receptive to the availability of family planning services, especially once they have three children.

The balance of attention devoted to maternal health care versus neonatal health care varies among MotherCare's activities and countries, but all activities have elements of both. Some interviewees think that MotherCare is the only group that is linking maternal health care with neonatal health care, which is seen as a major contribution, since either the mother or the newborn is left out of many other programs.

Immunization of women against tetanus is a focus in the MotherCare service "package." However, the evaluation team found that several primary health care organizations participating in MotherCare did not have the supplies they needed for tetanus immunizations. The difficulty lies in using existing service systems in countries where medical supplies do not reach rural or isolated communities. Providers are aware of the need for immunization of women against tetanus and clients will be similarly educated. MotherCare and REACH have agreed to work on the issue of tetanus together, with MotherCare taking the clean and safe delivery component—both to prevent maternal deaths from tetanus and to prevent neonatal tetanus. The agreement seems appropriate (also see Section II.C.).

Maternal anthropometry (measures of nutritional status such as weight gain, weight-for-height, and arm circumference) is not a major focus of MotherCare. However, it is included in the services promoted by MotherCare as part of an effective package of antenatal care services. Most clinics visited had acquired scales for weighing mothers, some had arm circumference measuring tapes, and many were using weight-gain curves in pregnancy. Anemia detection and iron supplements are also part of the antenatal care package. In some clinics visited by the team in Bolivia, however, iron tablet availability was a problem. In general, supplies can be scarce when the service depends on a ministry of health for restock.

Screening for sexually transmitted diseases (STDs) is expected as part of the prenatal services, but it is often culturally inhibited. Also, tests presently available for syphilis are costly and require revisit by the mother, which frequently does not occur. In some of the Latin American cultures women will not allow vaginal exams or visualization unless they have signs of a problem. Hence, the team found that most providers believe that gonorrhea is much more prevalent than syphilis. When a cheap and quick test for syphilis is widely available, such as the Rapid Plasma Reagin test, the ratio may change.

The team was pleased to see that MotherCare's approach is community-based, and that the response from the community has been favorable. For example, people (men, women, and families) are now more aware of maternal health issues and of things to be done to save lives than they were earlier. Examples include Indonesia, where men are demanding more birthing huts, and Bolivia, where women's groups are generating funds to assist families when women need transfer to the government medical services.

Referral is a key part of a functioning obstetric care system that intends to prevent maternal mortality. The systems that MotherCare has influenced are varied, but MotherCare has addressed the whole system from community/family levels to the regional hospitals. This activity has involved setting norms, training staff and traditional birth attendants, changing

attitudes about referral, and so on. The time and effort involved are considerable. Since most work is done by subcontract to existing indigenous groups, the planning process has often moved very slowly. In some projects, MotherCare activities are targeted at specific causes of death or complications and their impact is being measured. The knowledge gained from these intervention studies will be very useful, both to the countries and to the maternal care community.

Very little information exists yet about the impact of service change instigated through MotherCare projects on the coverage of the population. Determining the impact of service change is part of the evaluation strategy in MotherCare projects where general service systems are involved in the intervention. Since most interventions have yet to get started, or have just recently started, it is too early to be able to make a judgment about coverage. Coverage has been clearly targeted by MotherCare. In some cases, such as Bolivia, it is simply to get services to the women since they do not have them or would not use the previous ones. In other cases, the goal is to get the women with complications to the more sophisticated services, and to direct those without complications elsewhere for attention.

MotherCare is attempting to improve the type of care provided to women and neonates. Using qualitative assessments that identify what women want and expect in the childbirth system, practices are being changed to better accommodate mothers. In some instances, for example, husbands are now allowed to accompany their wives during childbirth, the mothers are kept warm in labor, or infants are warmed immediately after birth. Thus, attempts are being made in MotherCare projects to transform services and providers into a more "mother friendly" system. Clinical skills are upgraded at the same time professionals are sensitized to their clients; and women and families are receiving education about their roles. These approaches are very good. But because of this, services in most projects are only just getting started now.

These often necessary slow starts will shorten the amount of time available to run the interventions, which may affect the amount of impact that is detected. However, this gradual approach should lead to more sustainable changes.

Conclusions

- **MotherCare works with the local health care delivery system and adapts to its structure while introducing a broad range of services for care of mothers and newborns. This activity has led to improved local service provision and is expected to lead to better prospects of sustainability.**
- **The mix of services offered by MotherCare projects is appropriate; MotherCare regards referral of complications as a key area. The project has worked with all levels of care from the community to the hospital.**
- **MotherCare is working to make services more culturally appropriate.**
- **MotherCare will be in a position to obtain very practical and useful information about the impact of maternal and neonatal health and nutrition interventions when the projects activities end. MotherCare took the lead in preparation of a very useful document called "Programming for Safe Motherhood" that addresses issues in building a useful service system.**

Recommendations

- **The "Programming for Safe Motherhood" document, together with the valuable intervention data to be acquired, could form the basis of a practical guide that lays out the framework of the system of maternity care, which specifies the minimum service system needed to detect, treat, and prevent maternal and neonatal mortality.¹³ This guide would be associated with the assessment guide that is recommended in the research section.**

¹³ The system would consist of a "warm chain" of referral links with all the service needs detailed from the community level to the level of the "Mother Saving Hospital." (Very similar to the cold chain laid out for the EPI program, and the "Baby Friendly" Hospital laid out by UNICEF for breastfeeding.) It would include the basics needed to protect a normal delivery from becoming complicated, as well as what training, skills, supplies and equipment are needed at each link in the referral pathway. The guide should explain how to coordinate the levels into agreement about the referrals.

- MotherCare should continue providing a broad range of service components that include family planning and nutrition, training and norm building.

C. Behavioral Research, Communication, and Outreach to Women

From its inception, the MotherCare project has recognized the impact of behavior on pregnancy outcomes. The MotherCare Project Paper observes that, for some maternal and perinatal health problems, development and broad dissemination of appropriate maternal health messages, and networking with women's organizations, school health education programs, adult literacy programs, and other community development groups are among the appropriate interventions. The Manoff Group was chosen to design and implement the project's communication strategy. The Manoff strategy follows a comprehensive, multi-staged approach that includes formative research, IEC (information, education, and communication), and social marketing components.

Consistent with MotherCare's community-level orientation, the Manoff staff has attempted to explore the woman's perspective through the formative research component of its strategy. This component examines health beliefs and practices that influence critical family decisions with respect to nutrition and service utilization, as well as material constraints (cost, accessibility, etc.) that may limit the ability to carry out those decisions. Based in part on this information, and in part on assessments of the available "supply" of health benefits (services, facilities, etc.), a social marketing plan is developed to improve both the "demand" and "supply" aspects of the health consumer-provider interface.

Although health communication factors into a number of MotherCare's activities, the projects that include significant behavioral research and social marketing components are—

- Improved Iron-Folate Distribution in Indramayu Indonesia
- Perinatal Regionalization Project, Tanjungsari, Indonesia
- Cochabamba Reproductive Health Project, Bolivia
- Inquisivi "Warmi" Project, Bolivia
- MotherCare/Save the Children Project, Bangladesh

The Inquisivi "Warmi" Project in Bolivia, working in collaboration with Save the Children, is most active in reaching women in their communities through women's groups and organizations.

Currently, at midpoint in the life of the project, the social marketing process is not ready for final evaluation in any of the projects that include a communication component. There is substantial variation in the progress of these projects toward completion. For example, in Cochabamba and in Indramayu, formative research is complete, analysis has been performed, and social marketing plans and materials are ready for deployment (pending final approvals from Washington). In Bangladesh, qualitative research has been carried out, and the next phase (drafting IEC messages) is underway. In Tanjungsari, research instruments for the formative research are only now in the process of finalization, although portions of the intervention have already begun to be implemented. The following is a summary of progress to date and constraining factors associated with the various projects at each stage of development.

Behavioral Research

Progress differentials among the various communication and social marketing projects is a product of several factors, including varying start points and unexpected delays. Differing inputs of effort and resources in the initial research phase have been a significant determinant of progress toward completion. In some cases, sufficient funds and personnel inputs existed for adequate design of the research strategy and instruments, appropriate training of data collectors and interviewers, and in-depth analysis of results. In other cases, staff and other resources were committed to other activities, leaving insufficient time for appropriate performance of one or more of these activities.

The best example of comprehensive and well-developed behavioral research has been the Reproductive Health Project in Cochabamba, Bolivia. There, a Manoff consultant used an "ethnophysiological model," which is a method of exploring local concepts of reproductive processes and representing them in a manner that is comprehensible and useful for the design of interventions. Subsequent use of this model in a strategic planning workshop for service providers demonstrated that it was an effective means of revealing critical local concerns to workshop participants and enlisting their cooperation in trying to address these concerns.

In Bangladesh, the Save the Children Federation (SCF) project has also executed a well-developed behavioral research program with MotherCare and Ford Foundation support. The

original consultant was a trained anthropologist who is familiar with Bangladesh, its family and social organization, and cultural concepts related to reproductive health. Nevertheless, information gaps remained after this consultancy. Specifically, the views and beliefs of men had not been explored, nor had the impact of recent socioeconomic changes resulting from development inputs been assessed. Subsequently, Manoff sent two staff members to gather the missing information, and all research results were disseminated at a workshop for SCF staff and senior-level researchers, government officials, and donors active in the fields of maternal health and child survival.

By contrast, the behavioral research and communication components of the Indonesia projects have not been as central to the overall plan, and comparable human resources and expertise have not been devoted to formative research. In Indramayu, for example, the consultant responsible for the research noted that "The qualitative research was somewhat compromised by the limited time available for adequate interviewer training...."¹⁴ Consequently, the responses collected from informants are brief, telegraphic, and consistent with the methods of interviewers who have previous experience in questionnaire administration but inadequate training in probing and other qualitative research techniques.

In Tanjungsari, a third round of research instruments are in the final approval process. Pretesting had revealed problems (of length and comprehensibility) in the set of question guides for focus groups and in-depth interviews developed by the initial consultant. A second consultant was dispatched to revise the instruments on the basis of lessons learned from the pretest. Manoff/Washington then revised them again to add a section on costing constraints and to focus them more closely on the chosen intervention (birthing huts). Although these revisions were warranted and appropriate, some project staff members in-country revealed bewilderment about the purpose and direction of this series of changes. It was revealed that explanations of the reasons for these changes had been lost somewhere in the chain of communication between Washington and the staff members. Improvements in communication between Washington and local staff, and among local staff members themselves, appear to be needed if a sense of full participation and commitment among the latter are to be maintained.

¹⁴ Mona Moore, Trip Report, April 22-May 18.

Communication and Social Marketing

Results of the formative research are now being used to develop a variety of interventions. In Cochabamba, as noted above, the consultant's model of local beliefs about reproduction was presented to a mixed group of physicians and other service providers, who were invited to use the model to identify strategies for improving the acceptability of their facilities to consumers. Because of their broad-based composition and participatory structure, these workshops were successful in creating an advocacy group and promoting willingness, even among initially reluctant health service providers, to solve problems of incompatibility between health services and the expectations of pregnant women and their families. A repetition of this approach in Guatemala is under consideration, and would be a useful test of the replicability of the format.

The Cochabamba staff is also planning to use results of the formative research in physician training and in educating communities about pregnancy complications that require use of services. A new staff member with substantial social communication skills is now being added. He is knowledgeable about communication channels that are now in common use, and plans to utilize them to stimulate use of services. He will also draft the materials that will be used to train health professionals. Overall, in terms of its social marketing and communication component, the Cochabamba project can be said to be on target, to have made demonstrated progress toward its goals, and to have contributed to the state-of-the-art.

The Inquisivi project has also made a significant contribution with its use of women's groups to identify local reproductive and perinatal health problems through the *autodiagnostico* (self-diagnostic) method. Overlapping quantitative and epidemiological research has demonstrated that women are able to identify locally prevalent health problems with a considerable degree of success. The *autodiagnostico* method promotes "ownership" of the resulting interventions on the part of the community and the women's groups that participated in the self-diagnosis.

In the area of communication and social marketing, the team feels that the contributions of the Bolivia projects to the state-of-the-art should be documented in one or more working papers, identifying elements of success, lessons learned, and suggestions for replication elsewhere. The local group that conducted the work, Centro de Investigacion, Asesoría y Educación en Salud (CIAES)¹⁵, would like to see the communication and social marketing results published as a book.

¹⁵ Center of Investigation, Assessment, and Education in Health

The Save the Children's Federation (SCF) Project in Bangladesh is now developing plans for its communication component with the assistance of a MotherCare/Manoff consultant. It is expected that the primary communication channels will be SCF's community contacts. These include both SCF's-trained voluntary workers and women's savings groups, although emphasis is shifting to the latter as SCF is planning to phase out its volunteers in order to concentrate on building stronger and more multi-purpose women's savings groups.

The social marketing materials for Indramayu have been pretested a second time and results indicate that the target audience now judges them to be appropriate, attractive and persuasive. Difficulties in the production process, however, have delayed implementation. The production firm is understaffed and has lost the only artist who had demonstrated skills and an understanding of the purpose of the materials. As a result, materials were not produced correctly, and the only remaining artist has been unable to respond appropriately or on time to requests for changes. The project staff hopes that all materials will be ready for use, and that social marketing can begin in late February.

Given this history of production trouble, MotherCare should explore other production options when the time comes to produce social marketing materials for Tanjungsari. An independent artist working closely with project staff might be preferable.

Evaluation and Capacity Building

Evaluation of social marketing activities in Cochabamba, Indramayu, and Tanjungsari will utilize pre-test/post-test designs. In Cochabamba, service delivery will also be monitored, but, reflecting a primary goal of the project, changes in utilization rates in facilities will be a key evaluation indicator. The Indramayu and Tanjungsari projects will examine changes in service recipients' attitudes through follow-up qualitative research performed at the completion of the intervention. In addition, Indramayu will use the Sample Registration System's (SRS) Module D¹⁶ to track changes in iron folate compliance, and changes in hemoglobin levels will be the primary impact indicator.

¹⁶ The SRS is a population-based surveillance of fertility and child survival information from 10,000 households. A pregnancy module (Module D) was added by MotherCare to identify pregnancies, obstetrical complications, and causes of perinatal mortality.

These evaluation designs appear to be consistent with the objectives of the respective projects, and will use impact as well as process indicators where appropriate. Evaluation planning, then, can be judged to be adequate with respect to the communication component of MotherCare's activities.

Building communication expertise in the long-term host countries is one of MotherCare's sustainability activities. Examples are found in both the Indramayu and Tanjungsari projects. The counterpart organization in Tanjungsari, the University of Padjadjaran, intends to add training in social marketing and communication skills to its public health curriculum and hopes MotherCare consultants may be able to work with them on this. In the Indramayu case, MotherCare is collaborating with staff members of the University of Indonesia. A university staff member, who is now in charge of social marketing in the field, is strengthening his skills by working closely with the MotherCare communication consultant.

Outreach To Women

In January 1990, MotherCare hosted an all-day discussion for interested parties on the issues involved in reaching women with health messages and services. These issues were summarized in a short report. MotherCare consultants then visited several regions, particularly Africa and the Caribbean, to identify women's groups and to assess their potential as conduits for communication with women in their communities. Thereafter, this initiative seems to have lost momentum, with the notable exceptions of the Inquisivi project in Bolivia and the Save the Children project in Bangladesh.

Women's community development groups are the primary means of contacting women and initiating the process of community "self-diagnosis" *autodiagnostico* in Inquisivi. This approach has been successful on a number of fronts, as noted above, and it is reported that the groups are increasing in size and are generating growing interest. There is every reason to believe that they will be appropriate and effective means for disseminating health messages when the IEC campaign is launched.

In Bangladesh, savings groups organized by SCF will be one of the (perhaps the primary) channels through which the social marketing activities will operate. These groups include only the poorest village women, however, and the project's anthropological study revealed that even better-off women are at high risk of poor pregnancy outcomes. Nevertheless, these groups may be one of the few means of reaching women who are traditionally isolated even

from one another, and it is hoped that, through savings groups' members, awareness of risk and available services will be spread throughout the community.

It is clear from these experiences and MotherCare's consultancy reports that reaching women through women's groups is a promising avenue of approach. Of special interest is a consultant's report on women's groups in Africa (Belkis Wolde Giorgis, December 1990) that provided an inventory of types of groups and a series of recommendations for utilizing them effectively. MotherCare's upcoming project in Nigeria, which will include a behavioral research and communication component, might profit from this report and its recommendations in designing its "reaching women" component. If this approach turns out to be feasible, Nigeria could be treated as another test (in a setting that differs significantly from either Bolivia or Bangladesh) of the utility of women's groups in a communication program.

Conclusions

- From its inception, the MotherCare project has recognized the impact of behavior on pregnancy outcomes.
- Staff time and resources devoted to behavioral research have varied among projects. The best example of comprehensive and well-developed behavioral research has been the Reproductive Health Project in Cochabamba, Bolivia.
- In Indramayu, Indonesia, the social marketing component was brought on track after early delays by adding a resident social marketing specialist who could maintain continuous and consistent contact with the project and with Manoff; and by reassigning the project's former field coordinator to IEC as his primary area of responsibility.
- Reaching women through women's groups has been revealed to be a very promising approach that could be used more widely. To date, only the Inquisivi project in Bolivia has actively explored this approach to improving maternal health.

Recommendations

- If the Tanjungsari communication and social marketing component is to be a worthwhile investment of MotherCare's resources, a commitment of time and expertise similar to that which is being devoted to IEC in Indramayu will be required from staff members who are resident in country and able to maintain consistent communication with MotherCare and Manoff.
- Since the Indramayu social marketing study has been significantly delayed, a nine-month extension is recommended to allow an adequate test of the intervention.
- The contributions of the Bolivia projects to the state-of-the-art should be documented in one or more working papers that will identify elements of success, lessons learned, and suggestions for replication elsewhere. (The local Bolivian group (CIAES) prefers a book format to a journal article and has asked permission to take the lead in developing a manuscript.)

D. Applied Research and Assessment Methodologies

The 1990 Technical Advisory Group (TAG) of the MotherCare Project set out the scope and criteria for the applied research component of MotherCare. The TAG noted that the project provided "...an exciting opportunity to look beyond existing service delivery models, test new ideas, and bring fresh orientation to concepts of maternal and neonatal health care."

In pursuit of this, MotherCare has supported research in three main categories (see Annex 6):

- reviews of the literature to assess the present state of knowledge;
 - the development and testing of assessment or diagnostic methodologies;
and
 - field research.
-

Literature Reviews

Literature reviews have included issues concerned with pregnancy-related anemia, the impact of sexually transmitted diseases, maternal anthropometry, and neonatal and maternal tetanus. Literature reviews have contributed by clarifying what is known and identifying inadequacies in available knowledge. While most of them are (or will be) available as MotherCare working papers, it is important that the literature reviews also be published as journal articles to help ensure as wide a dissemination as possible. The review of maternal anthropometry has been published as an article in the bulletin of WHO,¹⁷ and as a book by PAHO.

Assessment and Diagnostic Methodologies

MotherCare has developed a number of assessment or problem-definition methodologies. The *MotherCare Guide for a Preliminary Country Analysis of Activities and Practices Supporting Breastfeeding* provides a clearly structured approach to analyzing factors within a country regarding actions relevant to encouraging or discouraging breastfeeding. The guide has drawn upon the experience of breastfeeding support activities in Bolivia and Haiti and the successful testing of the guide itself in the Dominican Republic and Bolivia. A separate maternal and neonatal health assessment guide, for long-term program development and short-term planning, has also been prepared for use at the national level.

While national maternal and neonatal health and nutrition assessments have been carried out in Bangladesh, Bolivia, Guatemala, Indonesia, Nigeria and Uganda, they have not been conducted according to MotherCare's maternal and neonatal health and nutrition guidelines nor as systematically as other similar breastfeeding assessments. These maternal and neonatal health and nutrition and breastfeeding assessments have differed in their adherence to MotherCare's guidelines probably because maternal and neonatal health and nutrition studies deal with a more complex issue, and each of the country maternal and neonatal health and nutrition assessments has a unique, specific focus.

MotherCare is building on investigations of maternal and perinatal deaths using verbal autopsies, case-control, and "process diagnosis" methodologies previously conducted in

¹⁷ "Maternal Anthropometry for Prediction of Pregnancy Outcomes: Memorandum from a USAID-PAHO-MotherCare Meeting," Bulletin of the WHO, 69 (5) 523-532, 1991.

Guatemala by other groups, to support its own similar studies in Bangladesh, Bolivia, Guatemala, and Haiti. In Inquisivi, Bolivia, the methodology has been extended to include a qualitative component ("autodiagnostico") concerned with gathering information on women's knowledge and opinions of local maternal health issues.

It is clear that in Bangladesh, Bolivia, and Guatemala, MotherCare's systematic review of the causes and circumstances leading up to maternal, perinatal and neonatal deaths has contributed greatly to: (a) identifying ways in which these deaths can be reduced and, (b) the development of locally appropriate maternal health care programs. This assessment and problem definitional methodology collaborated by MotherCare is well designed and has considerable potential for wider use.

However, to help make the methodology more widely available, MotherCare needs to prepare a manual which gives the rationale for carrying out verbal autopsies and "process diagnosis" of maternal and perinatal deaths. This should also give details of how the relevant data should be collected and clear criteria for the coding of data. Coding procedures should facilitate the identification of preventive public health measures as well as clinical case management issues in the deaths, once analyzed and interpreted. The results from the methodology field testing in Bangladesh and Bolivia should be published in international health or medical journals.

Applied Field Research

Field research studies are a major part of the work supported by the MotherCare project. Field research has concentrated principally on testing assessment and diagnostic tools (referred to previously) and three evaluative research topics central to improved maternal and perinatal health:

1. prevention and treatment of pregnancy related anemia;
2. provision of adequate care during pregnancy and labor through the maternal health care system in order to reduce maternal mortality and morbidity; and
3. reduction of perinatal and neonatal mortality.

Prevention and treatment of anemia. Two studies on improving iron and folate supplementation during pregnancy are being supported in Indonesia. In Indramayu Regency in West Java, the effectiveness of a health education and social marketing strategy to improve coverage and compliance with iron and folate supplementation interventions is being evaluated. A new iron and folate distribution system involving TBAs is being implemented in the intervention area. However, there have been delays in starting the health education and social marketing intervention (see section on Communication and Social Marketing). There have also been delays in deciding the final scope of module D of the surveillance Sample Registration System. (See page 42 for definition of Module D.)

This prospective pregnancy data collection module contains a very large number of questions, which caused the team to question the validity of some of the responses on, for instance, dietary intake, and the need for a detailed data analysis plan. As with questionnaires used in several other MotherCare-supported research projects, many questions dealing with issues that are not central to addressing the objectives of the study have been included. In order to give sufficient time for a reasonable trial of the delayed social marketing component—and for data analysis, interpretation, and presentation of the results—the project will probably need to be extended by about nine months. MotherCare needs to do considerable additional work on data analysis systems.

The study in Indonesia testing the effectiveness of the innovative gastric delivery system for iron is about to begin. This should provide valuable information on the extent to which side effects are reduced and iron absorption and patient compliance are improved with this novel drug formulation.

The provision of care during pregnancy and labor. MotherCare supports six projects that are developing innovative interventions to expand the effective coverage of maternal health services. In Tanggulangin, Indonesia, the Regionalization of Perinatal Care Project is evaluating an integrated community and referral level maternal health care system that includes the provision of birth centers, communication and transport for the transfer of women who develop complications, and in-service training of health workers in essential maternity care (see Section III.E. on Training). Information on the outcome of pregnancy for women living in both the intervention and control areas will be collected using an established "pregnancy surveillance system."

Other critical issues in the evaluation of the package of interventions being implemented in this study are process indicators to measure change in the utilization of the health services and

the costs of care. It is important to establish the costs of the regionalization system. Cost will largely determine if the interventions are successful and whether they can be replicated. It will be interesting to note the users' costs and the costs of the interventions themselves. It will also be interesting to monitor changes in the cost of care provided by hospitals resulting from changes in the numbers and case severity of women being cared for.

It is also important that mechanisms are established to monitor changes in process variables such as the use of services. This might include, for instance—

- numbers, rates and reasons for referrals;
- use of ambulances and radios;
- numbers, rates and "risk mix" of births taking place at home, in the birth centers, puskesmas (community health posts) and hospitals;
- adequacy of midwifery care provided, etc.

Technical assistance is required to establish both the process indicators and process variable components of the project evaluation.

We understand that the proposed Surabaya, Indonesia, project is scheduled to evaluate a maternal care system based on a community risk approach, in which midwives have a larger role than in the Tanjungsari project. It is intended that costing of the maternal health care system will be included in the Surabaya project from the beginning.

The maternal and neonatal health project being supported in Quetzaltenango, Guatemala, is assessing interventions designed to improve the effective use of local maternal health services. Traditional birth attendants are a critical part of these services. Key components of these interventions are—

- a new approach to the detection and management of high-risk obstetric and perinatal cases;
- the development and use of norms and standard clinical protocols for the care of pregnant women and neonates; and

- improvements in the links between different levels of the health care system.

Data collection instruments for evaluating the impact of the Quetzaltenango intervention on service utilization and the quality of maternal and neonatal care have been developed.

A project to improve use of maternal and neonatal health services in the urban and periurban areas of Cochabamba, Bolivia, has just begun by conducting a baseline survey of reproductive health.

In Grenada, an interesting descriptive case study of maternal health care has revealed that low levels of maternal and perinatal mortality can be achieved at relatively low cost and without tertiary care services.

Reduction of perinatal and neonatal mortality. Three studies related to the prevention of perinatal and neonatal mortality are being supported. Results from a descriptive study of birth weight, perinatal mortality and associated factors for groups of 500 babies each from seven rural areas in Indonesia should be available shortly. Two trials are being undertaken, both concerned with assessing potentially important interventions. The effectiveness of the Kangaroo Mother Method for caring for newborns with low birth weight is controversial; a study in the Maternidad Isidro Ayora, Ecuador, should help to clarify issues related to its use. Recruitment during the first two months (late 1991) of the Kangaroo Mother Method study was at about a half of that originally estimated. It is important that, if necessary, the recruitment period be extended to enable an adequate sample to test the morbidity-related hypotheses.

A trial to determine if treatment of bacterial vaginosis with Clindamycin cream reduces prematurity and resultant neonatal mortality is about to begin in Indonesia. This trial could produce useful findings for countries where prematurity accounts for a substantial proportion of babies with low birth weight.

Peer Review and the Technical Advisory Group (TAG)

In its two meetings, the TAG has acted as a mostly external review body for MotherCare. Participants of the first TAG meeting, held in 1990, agreed on and endorsed MotherCare's

general direction and priorities. This endorsement included the applied research component. The 1991 TAG reviewed progress achieved.

There has not been strict peer review of applied research proposals for possible support by MotherCare with the exception of the study of the Kangaroo Mother Method for caring for low birth weight babies. Given the nature of MotherCare, with the necessity for buy-ins, it may sometimes be difficult to follow strict peer review procedure to determine which proposal should be funded. In place of a cumbersome, impractical peer review, we understand that proposals and progress reports on supported studies are circulated within MotherCare, A.I.D., and usually subcontractors with relevant expertise. This has led to certain problems with revisions in study design or data collection that are not directly related to the objectives of the study. The evaluation team believes that explicit review procedure could help resolve these problems.

A.I.D.'s Future Research Priorities

We recommend that A.I.D.'s future research priorities in maternal and neonatal health should build on the experience and comparative advantage that MotherCare has established in certain research areas. The highest priority should continue to be evaluating innovative ways of providing adequate and appropriate care during pregnancy and labor through maternal health care systems in the reduction of maternal mortality and morbidity.

It is likely that certain issues being assessed in activities supported under the present project will require further refinement, such as:

- sustainable systems for case detection and pregnancy monitoring;
- the effectiveness of activities traditionally carried out in prenatal care and determining the optimal package of prenatal care;
- effective referral and transport systems; and
- quality assurance, including support and supervisory systems.

A key issue with regard to experience gained with the present rather small-scale demonstration projects, assuming they are successful, will be whether they can be replicated on a far larger scale. Support should be considered for the evaluation of this important

transition to a larger scale. Likewise, we believe there are advantages to pursuing further research on the prevention and improved management of pregnancy-related anemia. This is not only a key issue in relation to reducing maternal mortality from hemorrhage, but also maternal and neonatal morbidity, and the need for blood transfusion.

A.I.D., through MotherCare, is the only organization which, in the context of safe motherhood, is directly supporting ways of reducing perinatal and neonatal mortality and morbidity. The applied research component of this support could be considerably extended and strengthened. Applied research might, for instance, consider:

- cost-effective and affordable ways for preventing birth asphyxia;
- prevention of neonatal infections, including those due to sexually transmitted diseases;
- neonatal resuscitation and temperature control; and
- ways for improving the recognition and early management of illnesses detectable in the first month of life, especially potentially lethal infectious diseases.

Conclusions

- The applied research being supported by the project is dealing with issues that are critical if substantial reductions are to be achieved in the reduction of maternal and neonatal mortality in the next decade.
 - Given the complex and diverse nature of the interventions necessary for the effective reduction of maternal mortality to low levels, it is particularly notable that MotherCare has, in a short time, established an applied research component of technically-sound projects focused on a relatively few high-priority issues of global significance. This is particularly significant considering A.I.D.'s procedural requirements for the approval of funding for subcontracts. MotherCare's research topics have been selected within the broad framework outlined in the 1990 TAG meeting. MotherCare has the
-

ability to recognize competent researchers and to take advantage of opportunities to support relevant research.

- The continuing high levels of maternal, perinatal and neonatal mortality in many developing countries have only recently been recognized. There are still relatively few organizations that are supporting such efforts, including research to improve the situation. A.I.D., through MotherCare, is providing considerable support to the applied research of issues pivotal to reducing maternal and neonatal mortality.

Recommendations

- We contend that the highest priority for MotherCare's remaining one year and-a-half is to complete the studies already receiving support. This, in itself, is a considerable commitment. Several of the studies are behind schedule; others require critical technical support for successful implementation and later are likely to need further technical assistance for data analysis and the presentation of results (the Indramayu and Tranjungsari projects in Indonesia, for instance). The team recommends that no additional major research activities are begun over the remaining MotherCare contract period. Planning should begin for dissemination of the results of the applied research.
- We recommend that A.I.D.'s future research priorities in maternal and neonatal health should build upon the experience and comparative advantage that MotherCare has established in certain research areas. Support should be considered for the evaluation portion of the important transition of the project from small to large scale. In a similar way, we consider there are advantages to pursuing further research on the prevention and improved management of pregnancy-related anemia.

E. Training

The MotherCare project has identified training in the essential skills of pregnancy monitoring, case detection, and midwifery as a key activity and has provided support to several types of training activities. A critical component of effective maternal and neonatal care is the ability of primary maternal health workers to monitor pregnant women, assist at deliveries, and detect when complications are likely to occur. Women who develop complications need the assistance of health workers competent in midwifery skills and essential obstetrics.

In all of the long-term countries where MotherCare is involved, over three-quarters of deliveries occur at home and are attended by traditional birth attendants (TBAs) or family members. In Guatemala, Indonesia, and Nigeria training TBAs is part of the MotherCare projects. In the Quetzaltenango, Guatemala, Maternal and Neonatal Health project a systematic approach has been followed in assessing TBA training needs and skills requirements. Performance standards have been set and a training program developed. Specific materials concentrating on the recognition of life-threatening complications, basic skills, and recognizing when to refer have also been developed. It is planned that the competency of the TBAs will be regularly reviewed.

The approach to the training of TBAs in the two projects in Indonesia has been rather less systematic. In the Regionalization of Perinatal Care Project in Tanjungsari, the training of TBAs has been based on the previous successful experiences in a risk approach study. In the iron and folate distribution study in Indramayu, regular training and supervision meetings are held with TBAs.

In the Quetzaltenango Project in Guatemala and the Tanjungsari Project in Indonesia, the interventions include preparing of management protocols, setting norms, and training and supervising maternal health workers at the community level, the health centers and district hospitals. In Guatemala, these activities were preceded by a training needs assessment. In Tanjungsari, initial assessments of knowledge of essential obstetrics are being carried out for midwives and general duty medical officers. We suggest that MotherCare consider providing additional technical assistance to the Regionalization Project in Tanjungsari so these critical procedures, and an in-service training and support and supervisory program, can be established in the near future.

The project has supported the preparation by the American College of Nurse-Midwives (ACNM) of the *Life-Saving Skills Manual for Midwives*. This publication is a very important package of modules, together with details of how it might be used as a learning aid and in a teaching situation. The manual provides an extremely useful tool for improving the essential skills of midwives.

The major activity of the long-term projects in Nigeria and Uganda is assisting in-service training of midwives in life saving-skills using the ACNM manual. It was emphasized to MotherCare staff during initial discussions on both of these projects that the highest priority of the Governments of Nigeria and Uganda was to improve the skills of existing midwives. However, it was also recognized that in the long-term it will be necessary for the training to be incorporated into basic midwifery training programs. In both countries, discussions have been held with the midwifery associations, councils, and representatives of some schools of midwifery on how this might be achieved.

It is difficult to see how the costs of the present midwife in-service training projects in Nigeria and Uganda could be reduced. We understand that in Uganda, due to the erosion of midwifery training skills over the past 20 or so years, expatriate technical assistance was considered necessary.

Conclusions

- Training in essential midwifery and obstetric skills forms an important activity of several of the projects supported by MotherCare. Most of these training activities are using modern training techniques.
- The "Life-Saving Skills Manual for Midwives" is an excellent document and should receive wide use.
- The protocols and norms developed in the Quetzaltenango, Guatemala, project will probably be appropriate for use in other Latin American maternal health programs.

Recommendations

- Efforts should be made to further facilitate the use of modern training techniques in the projects in Tanjungsari and Surabaya.
- In the Nigeria and Uganda projects, every opportunity should be taken to incorporate the teaching of life-saving skills in the basic training curriculum of midwives.

F. Evaluation

The evaluation team was pleased that most of MotherCare's long-term projects have evaluation components embedded in them by design. The quality of these components is very good. Of the five long-term countries, the three with the larger community-based intervention programs (Bolivia, Guatemala, and Indonesia) will be evaluated for impact on health status, coverage, quality, and behavioral change. In some sites (Guatemala, for example) rational decisions have been made not to expect to detect statistical differences in mortality rates, since very large study groups are needed, but to use case fatality among selected complications as the impact measure. The complications are selected on the basis of their importance as a cause of death in the area. In Indonesia, the change in hemoglobin levels is used, since the intervention promotes iron tablets to combat anemia.

The evaluation designs are as rigorous as field conditions permit, and are appropriate to the interventions being presented. The information from these evaluations will be useful and practical. When the evaluations are completed, there will be an opportunity to decide which indicators provided the most information.

One common problem in all sites is the timing of the final evaluation. Several sites are using a pre-post intervention design, which requires obtaining data in a baseline survey before the intervention is put in place, and then collecting the same information after the intervention has run for at least one year. In most sites it has taken one to two years to negotiate, plan, and implement the intervention services, and with at least one year of intervention, that leaves very little time to carry out the second evaluation round. The post-intervention evaluation will have to be carefully planned, and launched well in advance of the final project dates so that there will be time to analyze the data. Many of these final activities will be

hurried, and MotherCare staff will have to ensure that the high quality of the initial phase is maintained in the final phase.

Measuring coverage involves statistics on the use of services and the rate of referral. The latter are the most difficult to count, but MotherCare has instituted surveillance logs in some projects to capture these important pieces of data. MotherCare will then have data about the increase in general community coverage by the services, and about the change in utilization of services by clients—that is, data from both the community and from the services.

Quality of care measures seem appropriate and have been adapted to the services involved. Many activities aimed at improving quality of care have required behavioral changes on the part of health service providers. These include clinical changes and facility changes, such as childbirth position, rooming-in, blankets in the labor and delivery room, heaters in cold delivery rooms, and so on. Other assessments include changes in professional knowledge about cultural practices and beliefs of clients, and attitude toward clients. The baseline data on many of these changes have already been collected in Guatemala. There are plans to evaluate changes in knowledge and attitudes once the educational and social marketing phases are implemented in Indramayu, Indonesia, and in Cochabamba, Bolivia.

The cost of the evaluation exceeds the cost of the intervention in some cases—Guatemala, for example. This has occurred through no fault of MotherCare staff, but is the result of attempts to work through the local Ministry of Health, which was caught up in a cholera epidemic, and then from the loss of the proposed control area by the arrival of another private voluntary organization which began providing services in what was supposed to be the non-intervention area. MotherCare then had to relocate and prepare a new control area. If the evaluation is done well, it will not have to be done again; the cost of the evaluation is money well spent for the information.

MotherCare has encouraged all project-supported services to carry out evaluation studies. Thus, service providers that would never have had a chance to learn about the evaluation process are given training in evaluation methods, then carry out at least a census of their service area. Data on use of services is collected as part of the census, which will be repeated toward the end of the MotherCare project to measure the change in service coverage. Since service personnel have taken the census, they are in a better position to serve their clients, and they are more likely to continue to carry out this community-oriented census activity.

Conclusions

- **MotherCare has designed technically sound evaluation studies for most of its projects that should provide the kind of data about intervention impact that is needed in the field of public health. Multiple impact indicators and measures of change are included.**

Recommendations

- **Projects are under time constraints. They must have their interventions in place now, so that at least one year can pass before the post-intervention data collection occurs.**
- **MotherCare needs to monitor the evaluation components of each project carefully so that there is sufficient time to analyze the findings properly before MotherCare ends.**
- **MotherCare is encouraged to hold steady through the end-of-project time crunch and maintain a quality approach to the intervention evaluations during the remainder of this contract.**

IV. Project Management and Staffing

A. A.I.D. Management

As a preface to this section, the evaluation team feels it is important to note that the relationship between A.I.D., JSI, and MotherCare is determined by the parameters of A.I.D.'s contracting process, which apply to most Office of Health contracts. Many aspects of MotherCare's contract cause strains at many levels. One example is the project duration (five years), which the team feels is too short for a project that is demonstration in nature and requires long-term advocacy and research. Constraints imposed by the buy-in structure of the contract are discussed further in Section V.

Another element that may factor in to the A.I.D.-JSI-MotherCare relationship is A.I.D.'s overall diminishing emphasis on health because of shifting priorities and budget cuts. The team feels that A.I.D. showed wisdom and foresight in creating the MotherCare project, and hopes that the leadership of A.I.D. will continue to find an important place for women's, maternal and neonatal health in its future portfolio.

In terms of A.I.D. technical oversight, the team recognizes that the cognizant technical officer's (CTO) strong personal commitment to the MotherCare project, combined with the CTO's experience and professional stature in the fields of maternal health and nutrition have been valuable to MotherCare. The CTO has been able to function as a very effective advocate for MotherCare both within A.I.D. and in other professional circles.

In terms of A.I.D. administrative oversight, the team also observed, through interviews with MotherCare staff and subcontractors, that the CTO's administrative oversight was more intense than was often necessary. One example often cited was the editing of non-technical, internal documents such as trip reports and correspondence regarding travel concurrence from USAID missions (as opposed to technical reports intended for external publication and circulation). The revisions requested took valuable MotherCare staff time away from more technical and program-related issues.

Recommendations

- Many factors that constrain (but are not unique to) MotherCare are inherent in the A.I.D. contracting process. It is recommended that these be closely examined in the preparation of a follow-on activity.
- A.I.D.'s technical supervision of MotherCare was professional and supportive, and the team recommends that this style continue. Administrative oversight was often more rigorous than necessary. Specifically, the team recommends that the emphasis in future A.I.D. review and editing of MotherCare documentation focus on technical and programmatic documentation (which will have an external audience) rather than internal documentation.

B. JSI/MotherCare Staffing and Support

The team's overall impression is that MotherCare is understaffed administratively in its Washington office and understaffed professionally in its long-term field site offices. A.I.D.'s project design from the beginning allowed for an insufficient number of support staff. (See Section V for a detailed discussion on the financial aspects of staffing.) However, the A.I.D. request for proposal included a sufficient number of professional slots. Some of these positions have been difficult to fill, largely because of the unique skills and training required for this new field. Given these limitations, the team found that MotherCare staff in Washington responded well to the technical support needs of its field staff (although responses were often delayed on financial matters, given their complexity and magnitude).

The technical quality and timely responsiveness of MotherCare consultants has been very good. Lack of continuity, however, caused by excessive but necessary reliance on consultants instead of more permanent MotherCare staff, has at times negatively influenced field projects.

The relationship with subcontractors has been problematic, in part due to the unusually high number of MotherCare subcontractors. As a result, MotherCare/Washington has a number of

staff working part-time on subcontracts in different parts of the United States. This creates unclear lines of authority and difficulties in supervision. It is difficult to encourage a sense of cohesiveness among MotherCare staff because some are part-time and their primary supervisory allegiance is, of course, to their primary employer.

MotherCare and its subcontractors produce a number of management tools including monthly reports, six-month reports, TAG meeting reports, work plans, and consultant and staff trip reports. Some of these are mandated by MotherCare's contract. All of the reports (with the exception of the monthly reports, which the team agrees are too time consuming and unnecessary) are generally agreed to be useful. Financial reporting is discussed in Section V.

Recommendations

- The follow-on activity should be staffed with more professional, secretarial, and administrative staff. Fewer staff should be hired through subcontracts, and instead hired directly by the prime contractor.
- A full-time project "coordinator and representative" should be hired for Indonesia as well as a social marketing professional to work on these aspects of the Indonesia projects.
- A full-time MotherCare staff member should be hired to work in Cochabamba (as opposed to La Paz) Bolivia to oversee the project there.
- A full-time, Spanish-speaking professional must be available at MotherCare/Washington at all times to backstop MotherCare projects in Latin America.
- The team recommends that monthly project reporting be eliminated (see also Section V.).

V. Project Financial Status and Financial Management

A. Analysis of Project Expenditures

MotherCare is a \$13.5 million, cost-reimbursable contract being implemented over a five-year period.¹⁸ According to the original project budget, MotherCare planned to expend \$7 million¹⁹ or 53 percent of the total contract amount by January 1992. Although total current obligations through December 31, 1991, exceed \$8 million, actual expenditures total approximately \$5.3 million, 26 percent less than planned (see Table 1). This spending shortfall is probably due to a number of interrelated factors, which could include the underestimation of time required to generate buy-ins and the delayed submission of vouchers by subcontractors.

A focus on maternal and neonatal health and nutrition represented a new direction in A.I.D.'s health programming. MotherCare has been required to:

- identify the scope and magnitude of the problems,
- promote awareness of the problems to USAID missions and host country governments,
- define practicable interventions to address the problems,
- select research activities to advance the state-of-the art,

¹⁸ The actual contract implementation period is 53 months rather than 60 due to delayed project start-up, which resulted from a formal protest and resultant stop work order.

¹⁹ Planned expenditures adjusted for FY 89 by subtracting seven months and adjusted for FY 92 by subtracting nine months.

- market a wide range of project services, and
- demonstrate the feasibility of providing a minimal, essential, cost-effective package of interventions in different settings to reduce maternal and neonatal mortality and related morbidities.

Moreover, these expansive efforts have coincided with significant shifts in A.I.D. programming, wherein USAID missions have been encouraged to "focus and concentrate" their resources on one to two priority areas; as a result, health portfolios have been or are being eliminated from many missions. Of those missions retaining health in their portfolios, child survival and its "twin engines"—Control of Diarrheal Diseases, and the Expanded Program on Immunization—remain priorities. Thus, field advocacy efforts have consumed, and continue to consume, more time than originally envisaged.

The current spending shortfall is not so large that it cannot be made up in the remaining months of the contract. MotherCare's early focus on problem definition, identification of appropriate research projects, planning, and marketing has paved the way for full field program implementation, the phase that MotherCare is currently in. This is in addition to the central activities, such as workshops, conferences, collaboration with other agencies, and publishing that all continue at a quick pace.

Moreover, monthly expenditure rates (See Table 3) and buy-in levels (see Figures 1 and 2) have steadily increased over the life of the contract, demonstrating that "catch-up" in spending the existing pipeline as well as the remaining contractual authority by the current project assistance completion date (PACD) of September 1993 is indeed not only feasible, but more than likely.

Planned Versus Actual Expenditures by Line Item (See Table 1)

With the exception of a salary (line item) ceiling, there exists within the MotherCare contract total line item flexibility. Therefore, an analysis of planned versus actual expenditures is only somewhat helpful in identifying issues. MotherCare staff have reported that the budget headings reflected in their contract have proven to be of only limited utility in facilitating financial reporting and, particularly, in representing an accurate expenditure picture.

For instance, it appears that the field programs are grossly underspent (see Field Office Support and Allowances line items, Table 1). Yet most field activity is currently contained in the subcontractor line. MotherCare staff have suggested that a modification of these budget headings be made. It is our understanding that these are the major budgetary headings used for all contracts negotiated with A.I.D. and do not preclude MotherCare from tracking its expenditures internally in a way that best facilitates financial planning and monitoring. Of course it also does not preclude asking the A.I.D. Contracting Officer the feasibility of renaming budget heads.

Table 1

Expenditures by Line Item Planned versus Actual			
Line Item	Planned	Expenses thru 12/91	Difference
JSI Salary, Benefits	\$641,644	\$888,870	+39%
Overhead	449,151	622,207	+39%
JSI Consultants	491,919	145,522	-70%
Travel, Transport, Per Diem	1,135,714	627,434	-45%
Allowances	125,036	4,047	-97%
Field office support (includes 3 research projects)	1,123,616	51,783	-95%
Commodities	234,393	124,234	-47%
Subcontractors	2,663,374	2,228,000	-16%
ODC	281,754	622,207	+121%
TOTAL	\$7,146,601	\$5,314,304 (excludes fee)	-26%

By examining spending levels to date and probing for additional information by reviewing documents and conducting interviews, some preliminary conclusions and implications can be drawn. They include:

- Central and field advocacy to generate interest in MotherCare has exhausted a larger than anticipated amount of core funds. Examples abound. For instance, to obtain a recent buy-in of \$318,673 in Uganda, significant core funds (\$113,465) were spent for travel (four trips of two persons each trip), salaries, planning, proposal development, and communication. In Bolivia, \$68,000 was expended up front prior to securing a buy-in. These marketing and proposal development efforts do not always result in buy-ins. For example, expenditures for marketing and proposal development in Papua New Guinea, Jordan, and Cote d'Ivoire, where buy-ins did not result, were \$31,000, \$48,000, and \$17,000, respectively. Furthermore, buy-ins, once obtained, routinely cover only local program implementation costs and not the technical, administrative, and financial management services required of the MotherCare/Washington staff to backstop the program, nor (often) the costs of a resident advisor.
- Precisely how a contract will evolve and what form field programs may take (i.e., which countries will wish to participate, what will be the need for resident advisors, who the counterparts will be, what the programmatic emphasis area(s) will be (e.g., IEC, research, training)) is difficult to predict, especially with a demonstration project where innovative activities are being designed and piloted. For instance, the original budget envisioned substantial relationships with seven U.S.-based subcontractors. However, as the project's needs have evolved, some subcontractors' services have not been required, new subcontractors have been identified, and financial and level of effort commitments to subcontractors have been modified (although still being negotiated and finalized). The subcontractor line now represents modified budgets and levels of effort for five U.S.-based institutions, and 25 subcontracts with non-governmental organizations, universities, and other institutions in seven countries. Thus, much of MotherCare's field activity is now contained in this line.

- The salary and benefits line is currently overrun by 39 percent. This is due to several causes, including billing more person months than originally bid for administrative and financial support. It also is due to moving some key technical and resident advisor positions from the subcontractor line to JSI's. This overrun is offset by significant under-billing in other lines. However it indicates a need to request that the A.I.D. contract officer amend this line since it is the one line item in the contract budget with a ceiling. The need for greater administrative and financial support staff relates primarily to an underestimation of the staff required to support a project with such a broad mandate, on the part of A.I.D. in its original project design, and JSI in its original bid.²⁰ Analyses of other R&D/Health projects with similar field components demonstrates great variance in the number of support staff employed in relation to the dollar size of the contract. However, in comparison to other projects, MotherCare is proportionally understaffed. It is quite clear that this component of a project is always underestimated and under-appreciated by the designers.
- The other direct costs (ODC) line is substantially overspent by 121 percent. A spreadsheet analysis reveals that the individual sub-line items most contributing to this cost overrun are communication, reproduction, rent, and outside services.

²⁰ While the A.I.D. Request for Proposal projected 2.5 person months each month for administrative and financial support, JSI bid 2.25. Yet, on average, monthly vouchers indicate 3.8 person months of assistance in these categories, resulting from a JSI-wide system of allocating common financial, management, and administrative costs in support of all JSI's Washington-based projects as direct labor costs to each project. This represents a JSI standard operating procedure for its Washington operation, and derives from advice given JSI by the A.I.D. Office of Procurement when its Washington office was first opened in 1985. This allocation practice has undergone internal and external audit. Nonetheless, this practice has resulted in A.I.D. disallowing person months in excess of what was originally bid since these costs were not calculated as direct labor in the JSI proposal. This requires resolution between JSI, the A.I.D. Office of Procurement, and the A.I.D. cognizant technical officer.

-
- Communication has averaged approximately \$2500 per month, for fiscal years' 91 and 92, or approximately 40 percent higher than budgeted. This is due in part to costs associated with advancing money to 13 country-based projects on a monthly basis. This involves telephone calls to obtain clarification and further documentation on field project financial reports, wire charges for bank-to-bank transfers, and follow-up calls to ensure that money has been received. Projects that have not had the benefit of a resident advisor have also required a significant amount of "hand-holding" from Washington, in which case telephone calls have been frequent and lengthy.
 - Reproduction costs have averaged \$2300 per month for fiscal years' 91 and 92, approximately 53 percent higher than budgeted. This is largely due to the significant accomplishments of the advocacy/dissemination component of the project, which has required photocopying of working papers, manuals, guides, project reports, materials in support of conferences, workshops and the annual Technical Advisory Group meetings, and 1300 copies of *MotherCare Matters*, a quarterly newsletter that is distributed in French, Spanish, and English. It is also partially caused by the reproduction of all monthly financial reports from 30 subcontractors.
 - Rent has averaged 35 percent higher than originally budgeted or approximately \$4888 per month. How rent is calculated deserves further comment. All of JSI's Washington-based projects share a percentage of the rental cost, basing each project's contribution on the number of project staff and space occupied. Assuming all project's are fairly stable, i.e., staff size and space occupied rents should remain fairly stable. However, the records demonstrate that rent fluctuates from month-to-month. To temper this fluctuation, MotherCare has negotiated a 12 percent cap on their monthly rent contribution. This system warrants further investigation since it appears that MotherCare is subsidizing fluctuations in other JSI project staff and occupancy rates.
 - The need for casual labor or outside services for conference, workshop and TAG support, as well as for word processing to support the development of working papers, etc., was not foreseen and therefore
-

not budgeted for. Yet this has consumed, on average, \$1900 per month for fiscal years '91 and '92.

It should also be pointed out that the Technical Advisory Group meetings have cost the project more than originally budgeted for.²¹

This underestimation of ODC in the original budget may stem from the inability of any firm to accurately predict these costs at a fixed point in time. Projects are dynamic in nature and do evolve, so that outputs may actually exceed original requirements. In many ways, MotherCare's ODC expenditures reflect the project's vigor, i.e., workshops, working paper series, book publishing, etc. Nevertheless, it is important to ensure that some of these sub-line overruns do not reflect lax monitoring and oversight of these costs on a day-to-day basis by MotherCare or JSI management.

Pipeline Analysis (See Figure 2)

The current pipeline, both core and buy-in, amounts to \$3.4 million. Remaining contractual authority is \$4.7 million. Although the original project design assumed a 60/40 split,²² i.e., 60 percent from core funds and 40 percent from buy-ins, this projected ratio was revised based on MotherCare's early buy-in history to a 70/30 split. Based on current projections, a possible buy-in funding scenario for the remaining contractual authority is \$1 million buy-in funds and \$1.4 in operational year budget (OYB) transfers (See Figures 1 and 2). Should the buy-in projections be realized, buy-ins (excluding OYB transfers) would represent approximately 20 percent of MotherCare's total funds by the end of project. If OYB

²¹ Actual costs: first TAG was \$42,980; second TAG was \$98,801 (higher costs due to travel support of MotherCare field representatives to Washington for National Conference for International Health (NCIH) and TAG attendance). Original budget projections: \$18,000 per TAG.

²² This design assumption was not incorporated into the contract and no preferred core/buy-in ratio was stipulated so there exists flexibility within the contract ceiling as to the proportion of buy-in funds to core. Current ratio assumptions derive from Cognizant Technical Officer (CTO) discussions with MotherCare management.

transfers are included, buy-ins would represent approximately 32 percent of the project's total funds.

Table 2

Pipeline Analysis (millions of dollars)				
	Obligated thru 12/31/91	Expenditures thru 12/31/91	Pipeline as of 1/1/92	Remaining Contractual Authority
R&D/Health	6.8	4.7	2.1	2.3
Buy-ins	1.8	.7	1.1	1.0
OYB Transfers	.25	.003	.24	1.4
TOTAL	8.8	5.4	3.4	4.7

***Average Monthly Expenditure Rate
per Fiscal Year (See Table 3)***

The average monthly expenditure rate has increased steadily since May of 1989:

- by 69 percent from year one to year two,
- 65 percent from year two to year three,
- 29 percent from year three to January 1992, representing only three months of year four.

In order to spend the remaining pipeline and contractual authority of approximately \$8.1 million by the PACD of September 30, 1993 (21 months), MotherCare will need to increase its monthly expenditure rate by 40 percent, to approximately \$386,000. Given the expenditure history over the life of the contract to date, this increase in expenditures is likely.

Table 3

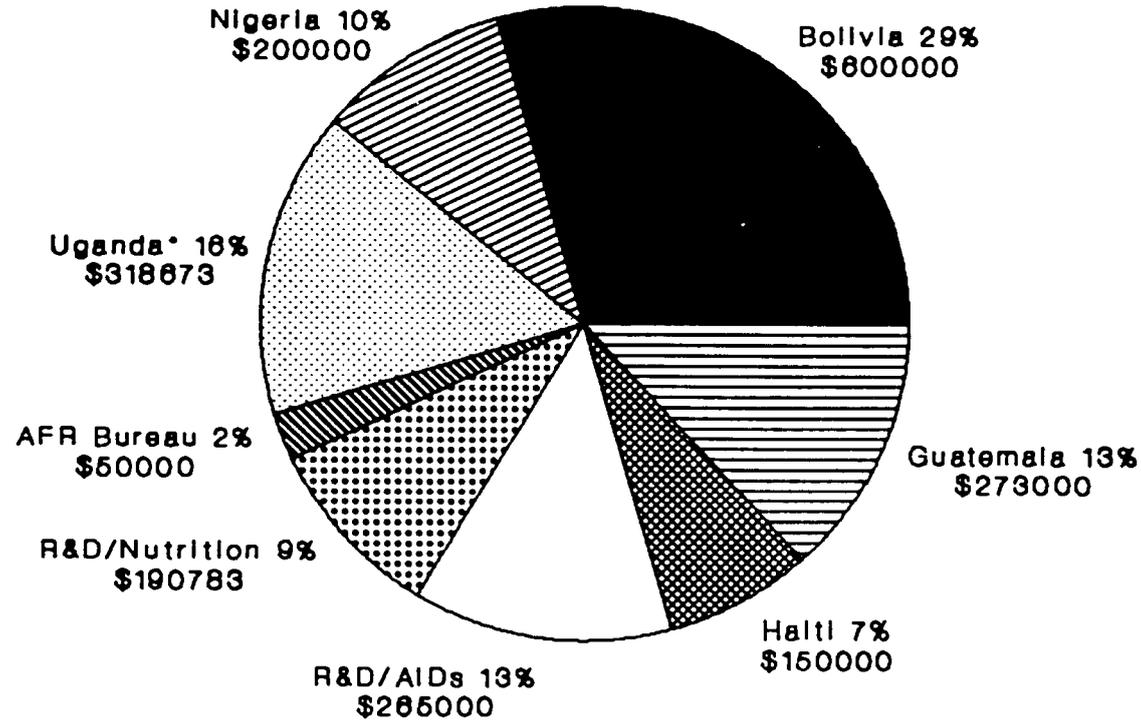
Average Monthly Expenditure Rate by Fiscal Year			
FY '89	FY '90	FY '91	FY '92
\$76,422	\$129,443	\$213,559	\$275,886

***The Buy-In Picture
(See Figures 1 and 2)***

The original A.I.D. project design envisioned at least \$5.4 million in buy-in funds (40 percent), but this requirement was not stipulated in the contract and actual experience of the project has shifted the expected buy-in target to \$4.5 million (approximately 33 percent). Buy-ins currently amount to 20 percent of obligations to date, and 13 percent of the total contract amount. OYB transfers currently amount to 3 percent of obligations to date and 2 percent of the total contract amount. However, MotherCare has met 46 percent of its target buy-in level of \$4.5 million. This represents a ten-fold increase since project start-up in May of 1989, when buy-ins amounted to \$265,000—an impressive gain.

We were asked to examine the extent to which buy-ins may have either deterred or enhanced MotherCare in achieving its original objectives. Probably neither term sufficiently captures how buy-ins have affected MotherCare in achieving its project objectives. Perhaps it is more accurate to say that buy-in funds have facilitated some of MotherCare's project activities, but have proved, overall, cumbersome when considering the technical, management, administrative and financial planning and monitoring that is necessary to both obtain and "nurture" the buy-in, including such things as the time and core funds expended prior to obtaining a buy-in, the frequent time lag before funds are actually available, and the sometimes very short period given to expend funds (before the buy-in project end-date).

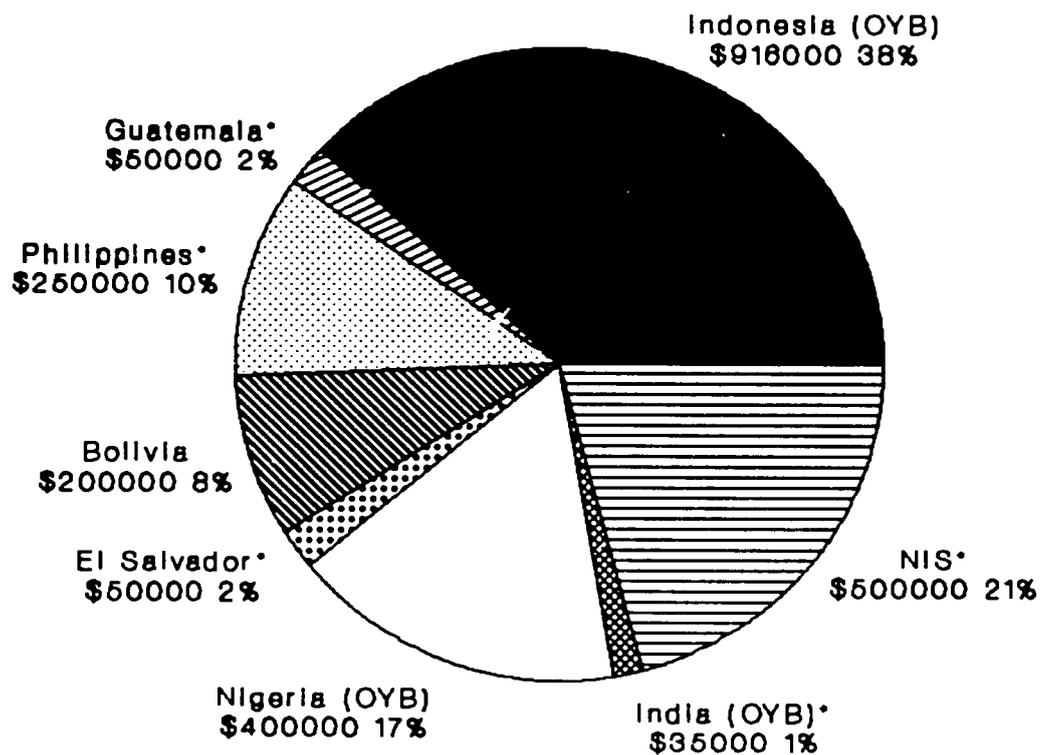
Current Buy-Ins (Total Obligations)



• In-country contribution, \$116,455

Total Buy-Ins = \$1,798,056
Total OYB Transfers = \$250,000
Total Combined = \$2,048,056

Projected Buy-Ins



NIS: Newly Independent States

***-uncertainty**

Total Buy-Ins Projected = \$1,050,000
Total OYB Transfers Projected = \$1,351,000
Total Combined Projections = \$2,401,000

Perhaps a shift in thinking about buy-ins for demonstration projects is in order. How realistic is it for an innovative demonstration project whose primary mandate is to raise awareness and advance the state-of-the-art to scurry about in search of funds? Probably a more realistic expectation for a project that is piloting new activities is 80 percent from core and 20 percent from buy-ins. In fact, "ideally" a demonstration project should perhaps be totally core funded for phase one (the first five years), with buy-in obligations commencing in phase two (the second five-year contract period).

Overall, the availability of funds to date, both core and buy-in, have been adequate for MotherCare to meet its project objectives. However, according to MotherCare's recent projections of funds required to successfully complete current project activities—coupled with the team's view that all of MotherCare's project activities be thoroughly analyzed, well documented in writing, and their findings widely disseminated—it is believed that overall core funding may be insufficient to achieve comprehensive evaluation and documentation of project activities. Consequently, close financial planning and monitoring will be required.

In-Kind and Cash Contributions

A number of in-kind and cash contributions have been made to the MotherCare project in the field. For instance a government pediatrician traveled for three weeks at the Government of Nigeria's expense to help MotherCare develop the Nigeria program. In Uganda, members of the community have been requested to volunteer their time to paint two of the training centers where MotherCare will provide midwife training. Worldwide, salaries and fringe benefits are not being paid by MotherCare to many of MotherCare's researchers in the field. The Center for Health Research in Indonesia is donating computers for the Bacterial Vaginosis project, and villages are donating huts that will be equipped by MotherCare to be used as birthing huts for Indonesia's Regionalization Project. Facility space has been offered free of charge for many of MotherCare's project workshops. No dollar value has been placed on all of these contributions. However, they have not only contributed to the project in purely an economic sense but also to its sustainability.

Recommendations

- Finalize budgets and level of effort with existing subcontractors. All subcontracts should be kept up-to-date.
- Obtain amendment to existing salary line to accommodate expected overruns.
- Obtain authorization to hire an additional program assistant to share administrative and financial management burden.
- Closely monitor other direct costs.
- Allocate rent on a fixed percentage based on MotherCare occupancy rate. Do not subsidize staff fluctuations in other projects. Rent should remain stable throughout life of contract.
- Resolve dispute between A.I.D. and JSI management on monthly staff disallowances. Involve the A.I.D. Contracting Officer if necessary.

B. Financial Management and Reporting

MotherCare's contract stipulated that quarterly expenditure reports be submitted to the A.I.D. cognizant technical officer. Very early in the project these were deemed unnecessary, however, as the expenditure report accompanying the monthly voucher proved adequate. MotherCare's and JSI's financial reporting system has matured since project start up in 1989. Although financial reporting, monitoring, and planning is labor intensive, it is necessary in order to comply with extensive A.I.D. reporting requirements. MotherCare reporting has been enhanced by JSI's adoption of Deltek accounting system software in January of 1991. Deltek software is designed to facilitate the financial management and accounting needs of U.S. government contractors. The system can easily share data files with Lotus, dBase, and other spreadsheet and database applications.

What has proved very time-consuming for MotherCare is the financial management of 30 subcontracts. In early 1990, before the first subcontract was entered into with a local in-country institution, MotherCare sought the advice of the A.I.D. Contracts Office who in turn referred MotherCare to A.I.D.'s Office of Financial Management. The Office of Financial Management advised that MotherCare could develop sub-project activities, which would be implemented through the award of subcontracts, with the proviso that advances to "non-profit, local host country organizations" not exceed "more than is required for immediate disbursing needs (defined as not more than 30 days cash needs)." MotherCare has been operating on this basis ever since.

Currently 13 of MotherCare's subcontractors in the field require monthly advances. This has required "heroics" on the part of MotherCare staff and patience and fortitude on the part of local subcontractor staff, since processing of an advance request and disbursement of funds is so time consuming. A recent cable from USAID/Jakarta describes how activities in the Regionalization Project at Tanjungsari are suffering due to financial delays and/or lack of funds at the project site and adds, "repeated visits to investigate delays seem to indicate that the present one month reimbursement mechanism is simply not feasible for maintaining project activities at a sustained high level."

Projecting future spending has also proved to be very time consuming. While MotherCare is able to produce excellent retrospective financial data, financial planning—projecting future expenditures based on program plans—has proved more difficult. MotherCare has not tracked expenditures related to program areas articulated in the project paper, such as the percentage of funds devoted to research, training, long-term programs, and short-term technical assistance.

Recommendations

- A detailed plan showing how MotherCare proposes to allocate its remaining central resources (not exceeding a \$9.1 core ceiling) should be submitted.
- MotherCare must take additional steps to increase its financial planning and monitoring capacity.

- A quarterly advance system should be investigated with A.I.D. Financial Management using the experience of JSI's Enterprise project as a model, wherein quarterly advances were approved for 80 project relationships.

C. Level of Effort

Examining actual person months used through December 31, 1991, and projected person months reveals a considerable level of effort cushion of 564 person months remaining by the project completion date (see Table 4 below). It appears that MotherCare is more in danger of reaching its financial ceiling and will significantly under-use its level of effort.

Table 4

Level of Effort Analysis (person months, rounded)				
	Contract Ceiling	Actual Spent thru 12/91	Projected Need thru end of project	Difference Remaining
Staff (JSI & Subs)	653	278	241	134
Consultants (Short-term TA)	1,078	258	390	430
Subtotal		536	631	
TOTAL	1,731	1,167		564

Recommendations

- A major time commitment went into providing the evaluation team with an accurate record of level of effort expended because this information had not been routinely collected. With the LOE records now up-to-date, it is important that MotherCare monitor and track the level of effort on a monthly basis and provide a status report to A.I.D. semiannually.

D. MotherCare Contract Deliverables

MotherCare project deliverables are a mix of activities and levels of effort. Table 5 on the next page shows the project's progress in producing these different deliverables and what remains to be accomplished by the project end date.

Recommendations

- The A.I.D. cognizant technical officer should officially endorse MotherCare Workplans for Years' Two and Three.
- Monthly progress reports should no longer be required.

Table 5

MotherCare Deliverables			
Deliverable	Contractual Requirement	Completed	Balance
Project Reports:			
●Annual Workplans	5	3 ¹	2
●Semi-Annual Progress Reports	10	5	5
●Final Project Report	1		1
●Trip Reports	all trips	81	n/a
●Quarterly Expenditure Reports	20	-	- ²
●Monthly Progress Reports	n/a	19	27 ³
Long-Term Country Programs	5	4	1 ⁴
Applied Research	3	5	
Country Proposals	5	14	
Short-Term TA	1078 person months (unlimited countries)	258 person months (21 countries)	820 person months ⁵
Tag Meetings	4	2	2
Significant Accomplishments (not contract deliverables)			
●Working Paper Series	n/a	8	7
●Books, Manuals, Guides	n/a	2	3
●Project Reports	n/a	21	
●Conferences/Workshops	n/a	21	1
●Newsletter, <i>MotherCare Matters</i>	n/a	approximately 1,300 copies distributed quarterly in French, Spanish, English ⁶	

¹ Only Workplan Number One has had official sign-off by the CTO; it is not clear why Workplans Two and Three have not received official endorsement. This requires resolution.

² Dispensed with early in the project per agreement with A.I.D. CTO as expenditure reports accompanying monthly vouchers proved adequate.

³ Instituted monthly progress reporting system per A.I.D. CTO direction in December 1989. Completed through June 1991. Reporting has been cumbersome and duplicative. Suggest waiving need for monthly reports. Requires resolution.

⁴ Nigeria identified as fifth long-term country; anticipated project start-up, first quarter, 1992.

⁵ 390 person months projected through PACD, leaving a 430 person month level of effort cushion.

⁶ First issue of *MotherCare Matters* was produced June 1990.

VI. Composite Recommendations

II. General Questions and Cross-Cutting Themes

Sustainability

The team felt MotherCare's inputs have real potential to be sustainable and replicable, *if* the following conditions are met over the next one and-a-half years:

- articulation of project findings is clear (and not overly technical) and timely;
- government officials continue to be involved and informed throughout the project; and
- cost implications of the services and research are clearly stated, and deemed affordable.

Recommendations to A.I.D. for Follow-on

- The team recommends that the emphasis in a follow-on activity should remain on the prevention of maternal mortality and morbidity along with the prevention of perinatal and neonatal mortality.
 - Many interventions being tested now through MotherCare could be "brought to scale" in the next five-year period if thoroughly documented and proven to be appropriate for replication.
 - The team also believes that work on testing and proving the impact-effectiveness of community-based, integrated maternal and neonatal health and nutrition intervention strategies should continue.
-

-
- Family planning groups should be encouraged to join MotherCare in the maternal and neonatal health and nutrition initiative, but the new MotherCare follow-on activity should concentrate efforts on neglected aspects of, and new developments in, maternal and neonatal health and nutrition.
 - Other departments and agencies specializing in nutrition studies and services should also be encouraged to collaborate in the initiative. However, the team recognizes that the specific area of maternal nutrition and service delivery would require additional attention and study as part of the follow-on activity. Neonatal nutrition (breastfeeding) should also be a part of this activity. Those involved with the new MotherCare activity should seek to integrate services with existing nutrition programs to augment maternal nutritional status. The new MotherCare activity should also advocate program design to improve nutrition of young girls and to equalize food distribution within families to girls and women.
 - The team believes that attention to sexually transmitted diseases (STD) should be part of a maternal care package. Diseases such as syphilis and gonorrhea have high incidence, have a dual impact on the health of women and their newborn babies, and are amenable to prevention and treatment.
 - The team recommends that the follow-on activity include the establishment and/or support of communication about maternal and neonatal health and service issues. The best format is a peer review journal, or a publication similar to *Studies in Family Planning*, where program administrators and researchers can publish findings from projects such as those in the current breastfeeding activity.
 - Regarding future research, we recommend that A.I.D.'s future priorities in maternal and neonatal health should build upon the experience and comparative advantage that MotherCare has established in certain research areas. Support should be considered for the evaluation portion of the important transition of the project from small to large scale. In a similar way, we consider that there are advantages to pursuing further research on the prevention and improved management of pregnancy-related anemia.
 - The team recommends that A.I.D. provide MotherCare with the funds and level of effort necessary to enable it to complete ongoing research and arrive at critical research findings; widely disseminate these findings; and avoid creating a gap between MotherCare and the follow-on activity that could interrupt the new momentum and interest of USAID missions in maternal and neonatal health and nutrition.
-

Reasons. The team's reasons for our recommendations are that—

- maternal mortality continues to be high in many developing countries;
- women's health issues must continue to be emphasized and a worthy target is the reduction of maternal mortality and morbidity;
- many morbidities women suffer relate directly to childbearing and the care received (conditions like vesico-vaginal fistula, uterine prolapse, and stress incontinence);
- the majority of perinatal and early neonatal deaths are linked to events occurring in pregnancy and childbirth, thus affecting two lives;
- the neonatal (first month) period of life has been largely ignored, yet this is when simple preventive measures such as exclusive breastfeeding could have a large impact on saving lives;
- prevention of maternal and neonatal mortality requires linking the entire health care delivery system from family to district hospital (and we still need to know what works the best and is most cost-effective); and
- pregnancy and childbirth provide a focus to address women's and infants' health and nutrition as well as a chance to affect the inter-pregnancy interval (which will require the integration of services).

III. Technical Questions

Advocacy, Policy, and Information Dissemination

- MotherCare's publications are high quality but, if resources permit, would benefit from wider and more systematic dissemination, including translation into Spanish where appropriate.
- Timely inclusion of cost components in service delivery research findings will be critical to the integration of these findings into the policymaking process.
- The team recommends that the project develop a more systematic strategy for disseminating research findings to policymakers, program planners, and academics. MotherCare may seek outside funds to maximize dissemination. We also encourage the use of workshops and videos in addition to scientific publications.
- Creating a stronger image for MotherCare, through more "public relations activities," would be appropriate. This would include placing a full-time staff member in Indonesia to coordinate and promote MotherCare activities.

Maternal and Neonatal Health and Nutrition Services

- The "Programming for Safe Motherhood" document, together with the valuable intervention data to be acquired, could form the basis of a practical guide that lays out the framework of the system of maternity care, which specifies the minimum service system needed to detect, treat, and prevent maternal and

neonatal mortality.²³ This guide would be associated with the assessment guide that is recommended in the research section.

- MotherCare should continue providing a broad range of service components that include family planning and nutrition, training and norm building.

Behavioral Research, Communication, and Outreach to Women

- If the Tanjungsari communication and social marketing component is to be a worthwhile investment of MotherCare's resources, a commitment of time and expertise similar to that which is being devoted to IEC in Indramayu will be required from staff members who are resident in country and able to maintain consistent communication with MotherCare and Manoff.
- Since the Indramayu social marketing study has been significantly delayed, a nine month extension is recommended to allow an adequate test of the intervention.
- The contributions of the Bolivia projects to the state-of-the-art should be documented in one or more working papers that will identify elements of success, lessons learned, and suggestions for replication elsewhere. (The local Bolivian group (CIAES) prefers a book format to a journal article and has asked permission to take the lead in developing a manuscript.)

²³ The system would consist of a "warm chain" of referral links with all the service needs detailed from the community level to the level of the "Mother Saving Hospital." (Very similar to the cold chain laid out for the EPI program, and the "Baby Friendly" Hospital laid out by UNICEF for breastfeeding.) It would include the basics needed to protect a normal delivery from becoming complicated, as well as what training, skills, supplies and equipment are needed at each link in the referral pathway. The guide should explain how to coordinate the levels into agreement about the referrals.

Applied Research and Assessment Technologies

- We contend that the highest priority for MotherCare's remaining one year and-a-half is to complete the studies already receiving support. This, in itself, is a considerable commitment. Several of the studies are behind schedule; others require critical technical support for successful implementation and later are likely to need further technical assistance for data analysis and the presentation of results (the Indramayu and Tranjungsari projects in Indonesia, for instance). The team recommends that no additional major research activities are begun over the remaining MotherCare contract period. Planning should begin for dissemination of the results of the applied research.
- We recommend that A.I.D.'s future research priorities in maternal and neonatal health should build upon the experience and comparative advantage that MotherCare has established in certain research areas. Support should be considered for the evaluation portion of the important transition of the project from small to large scale. In a similar way, we consider there are advantages to pursuing further research on the prevention and improved management of pregnancy-related anemia. (See page 50 for further discussion.)

Training

- Efforts should be made to further facilitate the use of modern training techniques in the projects in Tanjungsari and Surabaya.
- In the Nigeria and Uganda projects, every opportunity should be taken to incorporate the teaching of life-saving skills in the basic training curriculum of midwives.

Evaluation

- Projects are under time constraints. They must have their interventions in place now, so that at least one year can pass before the post-intervention data collection occurs.

- **MotherCare needs to monitor the evaluation components of each project carefully so that there is sufficient time to analyze the findings properly before MotherCare ends.**
- **MotherCare is encouraged to hold steady through the end-of-project time crunch and maintain a quality approach to the intervention evaluations during the remainder of this contract.**

IV. Project Management and Staffing

A.I.D. Management

- **Many factors that constrain (but are not unique to) MotherCare are inherent in the A.I.D. contracting process. It is recommended that these be closely examined in the preparation of a follow-on activity.**
- **A.I.D.'s technical supervision of MotherCare was professional and supportive, and the team recommends that this style continue. Administrative oversight was often more rigorous than necessary. Specifically, the team recommends that the emphasis in future A.I.D. review and editing of MotherCare documentation focus on technical and programmatic documentation (which will have an external audience) rather than internal documentation.**

JSI/MotherCare Staffing and Support

- **The follow-on activity should be staffed with more professional, secretarial, and administrative staff. Fewer staff should be hired through subcontracts, and instead hired directly by the prime contractor.**

- A full-time project "coordinator and representative" should be hired for Indonesia as well as a social marketing professional to work on these aspects of the Indonesia projects.
- A full-time MotherCare staff member should be hired to work in Cochabamba, (as opposed to La Paz), Bolivia, to oversee the project there.
- A full-time, Spanish-speaking professional must be available at MotherCare/Washington at all times to backstop MotherCare projects in Latin America.
- The team recommends that monthly project reporting be eliminated (see also Section V.).

V. Project Financial Status and Financial Management

Analysis of Project Expenditures

- Finalize budgets and level of effort with existing subcontractors. All subcontracts should be kept up-to-date.
 - Obtain amendment to existing salary line to accommodate expected overruns.
 - Obtain authorization to hire an additional program assistant to share administrative and financial management burden.
 - Closely monitor other direct costs.
 - Allocate rent on a fixed percentage based on MotherCare occupancy rate. Do not subsidize staff fluctuations in other projects. Rent should remain stable throughout life of contract.
-

- Resolve dispute between A.I.D. and JSI management on monthly staff disallowances. Involve the A.I.D. Contracting Officer if necessary.

Financial Management and Reporting

- A detailed plan showing how MotherCare proposes to allocate its remaining central resources (not exceeding a \$9.1 core ceiling) should be submitted.
- MotherCare must take additional steps to increase its financial planning and monitoring capacity.
- A quarterly advance system should be investigated with A.I.D. Financial Management using the experience of JSI's Enterprise project as a model, wherein quarterly advances were approved for 80 project relationships.

Level of Effort

- A major time commitment went into providing the evaluation team with an accurate record of level of effort expended because this information had not been routinely collected. With the LOE records now up-to-date, it is important that MotherCare monitor and track the level of effort on a monthly basis and provide a status report to A.I.D. semiannually.

MotherCare Contract Deliverables

- The A.I.D. cognizant technical officer should officially endorse MotherCare Workplans for Years' Two and Three.
 - Monthly progress reports should no longer be required.
-

Annex 1

Midterm Evaluation Scope of Work

Original document from A.I.D. R&D/H/HSD follows.

**Breastfeeding and Maternal and Neonatal Health Project
(936-5966)**

MotherCare Subactivity

Mid-term Evaluation Scope of Work

A. Purpose of the Evaluation

The purpose of the evaluation is threefold: 1) to assess performance and progress to date, 2) to advise on any need for reorientation of priorities and strategies during the remainder of the contract through 9/30/93, especially keeping replicability and sustainability in mind, and 3) to provide guidance to AID on the content of follow-on maternal and neonatal health and nutrition activities to pursue over the next five years after MotherCare ends.

B. General Questions

The following six general questions should be addressed as major themes throughout the evaluation:

1. Is MotherCare making adequate progress in reaching the goals, purposes and outputs specified in the Project Paper Logical Framework?
2. What are the major project accomplishments or products to date which contribute to the worldwide state of the art in maternal and neonatal health and nutrition? Are these being disseminated widely enough?
3. Are the small-scale, intensive demonstration activities sustainable, and likely to be replicated at regional or national levels as intended per the purpose of the A.I.D. Project Paper? Is MotherCare working enough with host country governments and policymakers at national level? Is there verifiable progress on institutionalization of MotherCare efforts to date? What actions could be taken during the remainder of the contract to enhance replicability and sustainability?
4. Are activities, including evaluation, standardized across countries wherever feasible to be generalizable for larger, global lessons learned? What are those larger lessons learned to date?

5. As part of a centrally-managed R&D project with a leadership role, does MotherCare have an overall vision of what it is trying to accomplish? What criteria have been applied for systematically selecting long-term countries and the interventions to pursue in individual countries consistent with accomplishing a global vision?
6. Based on the lessons learned by MotherCare to date, what approaches should A.I.D. pursue in a potential follow-on maternal and neonatal health and nutrition activity over the next five years? How could AID better focus its financial assistance to have greater impact on a larger scale at least cost?

C. Technical Questions

1. Advocacy, Policy and Information Dissemination

- a. Which advocacy techniques have been most effective--conferences, newsletter, publications? By what criteria?
- b. Has MotherCare had an ascertained effect due to information dissemination?
- c. Are MotherCare's results being adequately disseminated to AID and AID-supported projects and others active in international health? What have been the most effective ways to disseminate project outcomes and lessons learned?
- d. How actively, and with what degree of success, has MotherCare collaborated with other groups/donors who work in maternal and neonatal health and nutrition? Other R&D projects? USAID bilateral projects? Regional projects?

2. Maternal and Neonatal Health and Nutrition Services including recognition and response to problems, quality of care during pregnancy, delivery and postpartum, and referral systems

- a. Is the actual mix, prioritization and phasing-in of interventions appropriate given the typology of countries at four different stages of development in which MotherCare is working? Is anything critical left out? Is the balance between prevention and case management and between maternal and neonatal care appropriate?

- b. Is MotherCare doing enough to prevent neonatal tetanus per the mandate in its contract and the recommendations of the workshop it co-sponsored with REACH in January 1990?
 - c. Is MotherCare addressing maternal undernutrition sufficiently in its demonstration projects? How are the recommendations of the Maternal Anthropometry workshop it co-sponsored with PAHO and WHO being implemented?
 - d. Are MotherCare community-based activities sufficiently linked to referral systems and improvement in management of obstetric emergencies at hospitals to be effective?
 - e. What is MotherCare doing to improve coverage and quality of services? What evidence is there that these efforts have been effective?
 - f. Has MotherCare considered the necessary financial and institutional requirements to continue activities after A.I.D. funding is terminated and selected affordable interventions?
3. Communication and social marketing including behavioral research
- a. Can MotherCare's behavioral research methodologies contribute to improved study design in future projects?
 - Were some methods (focus groups, depth interviews, structured observation, "autodiagnostico," etc.) superior to others, either singly or in combination?
 - What are the lessons learned with respect to behavioral research -- its execution, replicability and application to service delivery problems?
 - b. Were the chosen research methods appropriate to the collection of behavioral data and deployed effectively?
 - c. What components on the research results (i.e. vocabulary, concepts, etc.) have been utilized in the development of social marketing/communication strategies?
- 91

- d. How were appropriate communication channels identified? Were pertinent audience characteristics (education level, language, economic status, etc.) established prior to message development? How were messages and materials pretested and modified?
- e. Are messages aimed at the appropriate audiences such that all significant actors (e.g. husbands, mothers-in-law, traditional healers) are targetted?
- f. Are systems for monitoring the delivery of inputs and achievement of outputs in communication activities adequate?
- g. Are the educational materials affordable by host governments with a view to replicability and sustainability?

4. Applied Research and Assessment Methodologies

- a. What is the technical quality and global relevance of MotherCare's maternal and neonatal health and nutrition research? What should AID's future research priorities be in these fields?
- b. How have research topics been selected? Has MotherCare followed the selection criteria and process outlined in its research strategy from its 1990 Technical Advisory Group meeting? What, if any, changes are needed in these criteria and process?
- c. What is the extent of peer review of research? Are peer review mechanisms documented?
- d. During the remainder of MotherCare through September 1993, what specific activities could it pursue toward consensus-building around remaining controversial or unproven interventions for improving maternal and neonatal health and nutrition? This could include new studies and field testing, literature review, workshops?

GV

- e. Are the various assessment methodologies developed by MotherCare well-designed and worthy of recommending for broader use? If so, how should they be disseminated with what, if any, modifications? Which appear most promising? These include rapid national breastfeeding assessments, and case review/verbal autopsy/process diagnosis of maternal and neonatal deaths.

5. Training

- a. Should MotherCare be working to improve basic (pre-service) training of midwives, not just in-service training? How will the midwife training activities in Uganda and Nigeria be sustained and replicated? How can the high cost of midwife in-service training be reduced to reach larger numbers? Might this be achieved by reducing the expatriate technical assistance? Is the content of the ACNM midwife life saving skills training manual appropriate?
- b. How effective has the training of traditional birth attendants been?
- c. To what extent is MotherCare applying state-of-the-art training technologies including training needs assessment, task analysis, design of competency-based materials, performance standards (norms) and assurances that trainers are as experienced in delivering babies as trainees and speak the same language as trainees? What products have been developed of broader use?

6. Evaluation

- a. Are well designed evaluation components in place in MotherCare long-term demonstration projects to measure impact on coverage of services, behavioral change, quality of care, maternal and neonatal health and nutrition?
- b. Are appropriate evaluation indicators being accurately measured? Which indicators appear most useful toward evolving a short list of key indicators for global use?

197

7. Reaching Women

- How effective have MotherCare's innovative activities to reach more women, involve women's groups, etc. been?

D. Administrative Questions

1. Management

a. AID

i. What has been the quality and quantity of A.I.D. oversight of MotherCare?

ii. Are the management monitoring tools in the contract, e.g. annual workplans, semi-annual progress reports, trip reports etc. sufficient to measure progress, need for change, and expected outcomes as envisioned in the project design? What reports have been the most useful to JSI and AID for management? Are there examples of reporting that could be omitted?

b. JSI

i Are there sufficient core staff and consultants to perform the specified level of effort? Will the contract level of effort be exhausted before 9/93 at current projections? Has the organizational structure been well-suited to the demands of the contract? What impact has the turnover and vacancy of key positions had on implementation?

ii Are the relationships between field offices and MotherCare/Washington effective from the perspectives of headquarters, R&H, field staff, USAID Missions?

iii To what degree has the use of consultants and resident advisors included:

- timely availability
- a far-reaching selection process
- clearly defined scopes of work
- adequate administrative and managerial support
- mechanisms in place for accountability and communication issues
- emphasis on technical and language qualifications and cultural sensitivity
- use of in-country expertise

iv What has been the relationship between the prime (JSI) and the subcontractors? Are there any financial issues? Do the subcontractors have clearly defined scopes of work? Are there mechanisms in place for accountability? How has communication and team work been?

2. Contractual Requirements, Project Deliverables Outputs

- Comparing implementation to date against the specified terms for each of the contract's delineated areas of activity, are the targets for deliverables being met? Is there any need for adjustment, and, if so, what are the management and budget implications?

3. Financial and Level of Effort Considerations

- a. Has the contract achieved the most effective and efficient use of resources?
- b. Have outside parties provided resources to MotherCare? Can the efficacy and impact of this contribution, if any, be assessed?
- c. Is the current financial reporting system adequate and timely, including tracking of buy-ins? Are improvements needed?
- d. Have buy-ins deterred/enhanced MotherCare in achieving its original objectives? What have been the benefits, compromises, lessons learned with the buy-in process? In each of the five long-term countries and overall, what percent of total costs is being met by buy-ins (including OYB transfers)?
- e. Has the availability of funds -- central and buy-in-- been adequate to cover expenditures necessary to achieve the project's objectives? How close is MotherCare to reaching its budget ceilings for central and buy-in funds? Is the salary budget line item likely to be exceeded before 9/93?
- f. To what degree are local subcontracts with in-country institutions impeding/expediting MotherCare's operations? Has the requirement by AID that advances not exceed one month caused any management or implementation problems for MotherCare? If so, how could these be overcome?

1
17

Annex 2

People Interviewed

Washington, D.C.

USAID:

Mary Ann Anderson

**Cognizant Technical Officer,
MotherCare Project and Deputy
Chief, Health Services Division,
Office of Health, Bureau for
Research and Development**

Sue Anthony

**Nutrition Advisor
R&D, Office of Nutrition**

Alfred Bartlett

**Technical Advisor for Aids and
Child Survival (TAACS) and
Assistant Professor of International
Health, Johns Hopkins School of
Public Health, Long Term Advisor
to ROCAP/AID**

Robert Clay

**Chief, Health Services Division,
Office of Health, Bureau for
Research and Development**

Ann Van Dusen

**Director, Office of Health, Bureau
for Research and Development**

Sam Kahn

**Senior Nutrition Advisor,
R&D, Office of Nutrition**

9/6

Allen Randlov	Public Health Advisor, R&D, Office of Health
Hope Sukin	Acting Chief, Health and Human Resources Division, Office of Analysis, Research, and Technical Support, Africa Bureau
Mellen Tanamly	Former Acting Chief, Health, Population, and Nutrition Division, Office of Development Resources, LAC Bureau
Ionna Trilivas	AIDS Division, Office of Health, Bureau for Research and Development

MotherCare:

Colleen Conroy	Deputy Director
Patricia Daunas-Chopinsky	Program Assistant
Anne Helveston	Program Assistant
Marjorie Koblinsky	Director
Barbara Kwast	Women's Health Advisor
Patricia Taylor	Coordinator, Long-Term Projects
Saipin Vongkitbuncha	Program Administrator

John Snow, Inc.

Norbert Hirschhorn, MD	Vice President
------------------------	----------------

Richard Moore	Vice President
Robert Steinglass	REACH
Joel Lamstein	President
Roy Brunson	Director of Finance, Washington
Wendy Friedman	Director of Finance, Boston

SubContractors:

Peggy Curlin	Center for Development and Population Activity
Marcia Griffiths	Communication and Social Marketing Advisor and President, The Manoff Group
Karen LeBan	Save the Children Federation
Nancy Sloan	Research Coordinator The Population Council
Mary Ellen Stanton	American College of Nurse Midwives
Beverly Winikoff, MD	Senior Research Coordinator The Population Council
Kim Winnard	Senior Communication Advisor, MotherCare Project, The Manoff Group

65

Other:

Susan Stout	Public Health Specialist Population and Human Resources Division, Asia Region The World Bank
Anne Tinker	Health Specialist, Population and Human Resources, The World Bank
Susan Brems	Independent Consultant

Indonesia

AID/Jakarta:

Kenneth R. Farr	Health/Population Development Officer
Michael Linnan	Technical Advisor in AIDS and Child Survival/TAACS
Joy Riggs-Perla	Deputy Chief, Office of Health, Population and Nutrition
John Rogosch	Chief, Office of Health, Population and Nutrition

MotherCare:

Mary J. Hansell	MotherCare Consultant
Carrie Hessler-Radelet	MotherCare Consultant

GA

Indramayu Project Team:

Research Staff:

Dr. Budi Utomo

**Principal Investigator, Indramayu
Project**

Dr. Pandu Riono

**Epidemiologist, Center for Health
Research**

Dr. Teghu

**Field Coordinator and Social Marketing
Manager**

Indramayu Regency Health Office (Dinas Kesehatan Kabupaten Indramayu)

Drs. Oman Hidayat

Dr. Leonard F. Tjahyar

Dr. Nur Badriah

Dr. Rocky Pardede

National Family Planning Coordinating Board (BKKBN)

Drs. Moch. Rodjak

Drs. H. Mahdi MZ

Sliyeg Subdistrict (Kecamatan Sliyeg)

Dr. Liana M.S.

Sudarji Muin Sh.

Gabuswetan Subdistrict (Kecamatan Gabuswetan)

Dr. Ima Culatawati S.

Dr. Jesron Marpaung

Drs. H. Nurdjali Aziz

Drs. Supendi

Field staff of

Drs. Teguh Budiono	Field Coordinator
Drs. Yuswardi Azwar	Field Coordinator
Drs. Heru Suparno	Research Assistant
Drs. Ali Zazri	

MotherCare Regionalization Project Team, Padjajaran University (Bandung)

Dr. Anna Alisjahbana	Chief, Health Research Unit, School of Medicine
Dr. Hadiana	Research Coordinator
Hedy B. Sampurno	MCH Director
Dr. Soeprapti Thaib	Research Unit, School of Medicine, UNPAD
Dr. Sutyedja	Research Coordinator
Dr. James Thouw	Co-principal Investigator

Padjajaran University:

Dr. Harun Djuned	Head, Academic Affairs
Dr. Koeswadji	Dean of the Medical School
Prof. Dr. J.S. Liem	Deputy for the Vice Rector IV
Prof. Lukito Sukahar	Vice Rector for Academic Affairs and Research
H. Tirtapradja	Head of Research Institute

Government of Indonesia:

Dr. Ratna Budiarse	National Institute of Health Research and Development, Ministry of Health
Dr. Gulhardi	Perinasia (Perinatal Assn.)
Dr. H. Nardho Gunawan, MPH	Director of Family Health Directorate General of Community Health Ministry of Health
Dr. Hadi Pratomo	Perinasia (Perinatal Assn.)
Sumarmo P. Soedarmo, MD.,Ph.D.	Professor and Head National Institute of Health Research and Development Ministry of Health

The World Bank:

Ms. Karina Clark-Trumbull
Ms. Umi Samekto

SOMARC:

Rita L. Leavell, MD, MBA Asia Regional Manager

PATH:

Leona A. D'Agnes Country Representative
(telephone interview)

The Population Council:

Dr. Gour Dasvarma Associate

World Health Organization:

Dr. S. Khanna	Representative
Abdul Rachman Soerono	Programme Development Officer

UNICEF:

Dr. A. Samhari Baswedan	Programme Coordinator, Health
-------------------------	-------------------------------

Guatemala City, Guatemala**Division of Nutrition and Health, INCAP
(Instituto de Nutricion de Centro America y Panama):**

Hernan Delgado, MD, MPH	Director
Carlos Samayoa, MD	

MotherCare Quetzaltenango Project Team:

Elizabeth de Bocaletti, MD	past Consultant for MotherCare
R. Najarro, MD	Obstetrician, past Consultant to MotherCare project
Barbara A. Schieber, MD, MA	Principal Investigator of the MC Project on Maternal and Peri-Neonatal Health in Quetzaltenango
Junio Robles, MD,	Field Coordinator, Quetzaltenango
Joseph Antonio Szaszdi, MD	Data Processing

***USAID/ Regional Office for
Central America and Panama (ROCAP):***

Sandy Callier

ROCAP

USAID/Guatemala

Gary Cook

Head of Office of Health and
Education

Lynn Gorton

Chief of Health, Office of Health and
Education

Jayne Lyons

Population Advisor

***Department of Maternal and Infant Health,
Ministry of Public Health and Social Welfare:***

Haroldo Medina Girón, MD

Head of Maternal Health Section

Fernando Salazar, MD

Director

***Association of Obstetricians
and Gynecologists:***

Julio Luis Pozuelos, MD

President

APROFAM:

Roberto Santizo, MD

Head

***Guatamalan Social Security
(IGSS) Hospital***

Napoleon Diaz, MD

Department of Preventive Medicine,
Guatemalan Social Security (IGSS)
Hospital

Quetzaltenango, Guatemala

Hospital del occidente

Heberto de Leon, MD
Head of the Department of Obstetrics

Mario Mejia, MD,

Neonataologist

Dr. Sanchez

Acting Director and Head of
Orthopedics

***Department of Quetzaltenango
Health Department, Ministry of
Health***

Raul Chinchilla, MD
Clara Luz Barrios, Enf.Lic.
Berna de Gonzalez

Head of the Department
Head Nurse of the Department
Head Nurse of the District of San
Juan Sila

San Carlos Sija Health Center:

Comadrone Joanna

Partera Empirica (TBA) and staff of
MotherCare

105

Cochabamba, Bolivia***MotherCare***

Mary McInerney, MPH

In-country Project Coordinator

Mario Saavedra

Field Supervisor

USAID/Bolivia

Jose Infante

Cochabamba office

CPCCM

Dr. Ramiro Bacerra

Head

***Ministry of Health and
German Urquidi Maternal/Child Hospital***Walter Salinas, MD
Director, Maternal/Child Hospital

Enf. Lic. Marcia Ramos

Chief Nurse

Reuben Aranya, MD

Neonatologist

***Team 1 on the Vagon Sanitaria
(Health Train) of SOPACOF-ENFE***

Carmina Rojas, MD

Maria Gomez

Auxiliary Nurse

Sunil da Quinones

Social Worker

COMBASE Hospital

Hugo Castrillo, MD	Coordinator for MC Project
Cristina Barros	Hospital Administrator
Elizabeth Pujan, Enf.Lic.	Head Nurse

Other

Ariel Perez	Applicant for the position of MotherCare IEC Coordinator in Cochabamba
-------------	--

CIAES

Giovanna Chiarella, MD	Director
Roberto Vargas, MD, MPH	
Fernando Gonzalez, MD	Principal Investigator of Baseline Study
Lic. Eduardo Vexina	Anthropologist

MEDICO

Jose Quiroga, MD	Director
------------------	----------

**Regional Unidad Sanitaria
(Regional Ministry of Health
Department)**

Magaly de Zannier, MD	Director
-----------------------	----------

PROMEFA

Nancy Mendez, MD	Pediatrician
Elizabeth de Fuentes, MD	Obstetrician
Oscar Nino de Guzman, MD	Obstetrician
Ramiro Arnaz, MD	Pediatrician

La Paz, Bolivia**MotherCare**

Lisa Howard-Grabman
Bolivia Field Office Representative

Pamela Putney
Certified Nurse-Midwife, Advisor
to PROSALUD, and MotherCare
consultant

**USAID/Bolivia,
Office of Health and Human Resources**

Sigrid Anderson	Deputy Director
Elba Mercado	Assistant to the Reproductive Health Project
Jennifer Macias	University of Michigan Fellow, Reproductive Health Project

***Bolivian Ministry of Social
Welfare and Public Health***

Jack Antello, MD

Director

COTALMA (Comite Tecnico de Apoyo a La Lactancia Materna)

Andres Bartos, MD

Director, Breastfeeding Promotion
Committee***PAHO***

Daniel Gutierrez, MD

SOPACOF Mobile train project (ENFE)

Eduardo del Castillo, MD

Director General

Carmen Monesterios

Coordinator of the Train Wagon

***Save the Child Federation
MotherCare Inquisivi Project***

David Rogers

Director in Bolivia

Guillermo (Willy) Seoane, MD

Coordinator of Health Projects

Elsa Sanchez, RN

Coordinator of MotherCare Project

Basilía Laime

Auxiliary Nurse, Field
Coordinator in Inquisivi area

Annex 3

Highlights of MotherCare Accomplishments

Original document from MotherCare follows.

REDUCING MATERNAL MORTALITY

CONFERENCES

WHO Interested Parties Meeting
June 18-23, 1989; Geneva, Switzerland
Attended by Marge Koblinsky, MotherCare Project Director

Safe Motherhood Initiative: Technical Working Group on Measurement of Reproductive Morbidity
Sponsored by WHO
August 30 to September 1, 1989; Geneva Switzerland
Attended by Marge Koblinsky, MotherCare Project Director

Inter-country Workshop of Safe Motherhood Initiative: Recent Developments and Key Issues
Sponsored by WHO/SEARO
November 6-10, 1989; New Delhi, India
Attended by Zahidul Huque, MotherCare Consultant

Safe Motherhood South Asia Conference
Sponsored by IPPF
March 24-28, 1990; Lahore, Pakistan
Attended by Gretchen Berggren, MotherCare/SCF Technical Advisor

Pre-Congress Workshop and Triennial Congress of the International Confederation of Midwives
Co-sponsored by International Confederation of Midwives, WHO, and UNICEF
October 1-12, 1990; Kobe, Japan
Attended by Margaret Marshall, MotherCare/ACNM Technical Advisor

The National Council of International Health Conference on Women's Health
June 17-24, 1991; Arlington, Virginia U.S.A.
Presentations made by the Principal Investigators of MotherCare Field Projects in: Guatemala, Indonesia, Bangladesh, and Bolivia
Poster Session by the MotherCare Project

Pre-Congress Workshop and XIII World Congress of Gynecology and Obstetrics, 1991
Singapore, Sponsored by FIGO, WHO, World Bank, and MCI
Perinatology PERINASIA Congress
Indonesia
September 5-20, 1991
Attended by Margaret Marshall, MotherCare/ACNM Technical Advisor

American Public Health Association Conference on Health Policy
November 10-14, 1991
Poster Session by the MotherCare Project

UNICEF Guidelines Workshop for Safe Motherhood
November 11-15, 1991; Amman, Jordan
Attended by Patricia Taylor, MotherCare Associate Director

The World Bank Safe Motherhood Guidelines Working Group
November 18-22, 1991; Washington, D.C. U.S.A.
Co-sponsored the MotherCare Project

World Health Assembly on Women's Health
Sponsored by WHO
May, 1992; Geneva Switzerland
[To be attended by Vicki Hammer, MotherCare Consultant]

WORKING PAPERS/OTHERS

A Case Study of Maternity Care in Grenada
MotherCare Working Paper 6
October, 1990
Virginia Hight Laukaran and Adity Bhattacharyaa

Notes on Appropriate Approach to Safe Motherhood
Mother Care Working Paper 8
June, 1991
USAID/Jakarta

Assessment of Maternal Mortality and Perinatal Outcomes in Haiti
August, 1991
Jeannine Coreil

Interventions to Improve Maternal and Neonatal Health and Nutrition
MotherCare Working Paper 4
December, 1991
Niki George

Life Savings Skill Manual for Midwives
1991
Margaret Marshall and Sandra T. Buffington

MotherCare and More: Broader Perspective on Women's Health
July, 1991
Marge Koblinsky, Oona M.R. Campbell, Siaban D. Harlow
Chapter in Women's Health: A Global Perspective, eds. M. Koblinsky, J. Timyan, J. Gay.
Westview Press, 1992

World Bank Guidelines for Programming in Safe Motherhood
Expected early 1992
Marge Koblinsky

MANUALS

**Quetzaltenango Maternal and Neonatal Health Project, Guatemala
February-June, 1991
Raul D. Najarro Pelaez**

**INCAP Quetzaltenango Maternal and Neonatal Health Project, Guatemala
August, 1991
Susan Colgate Goldman**

PROJECTS

**A Pilot Study of a Perinatal Regionalization Network, Tanjungsari, Indonesia
January, 1991 to September, 1993**

**Reproductive Health Project, Cochabamba, Bolivia
October, 1990 to September, 1993**

**Quetzaltenango Maternal and Neonatal Health Project, Guatemala
July 1990, to April, 1993**

**Maternal Health Project, Peru
1990 National Assessment**

INFLUENCING BEHAVIORS

CONFERENCES

Workshop on Iron Deficiency Control Programmes
Sponsored by ACC/SCN
June 6-8, 1990; Dublin, Ireland
Attended by K. Mona Moore, MotherCare/Manoff IEC Advisor

WORKING PAPERS

Behavioral Determinants of Maternal Health Care Choices in Developing Countries
MotherCare Working Paper 2
November 1990
K. Mona Moore

Qualitative Assessment of Attitudes Affecting Childbirth Choices of Jamaican Women
MotherCare Working Paper 5
December, 1990
Maxine Wedderburn, K. Mona Moore

Maternity Services in Cochabamba, Bolivia: Cost Recovery and Changing Markets
MotherCare Working Paper 9
Expected January 1992
Allison Percy, Gerry Rosenthal

Qualitative Research on Knowledge, Attitude and Practices Related to Women's Reproductive Health
MotherCare Working Paper 10
Expected February, 1992
CIEAS

Auto-Diagnostico Methodology
MotherCare Working Paper 12
Expected June, 1992
Save the Children Federation, Bolivia

REACHING WOMEN

CONFERENCES

Reaching Women
Sponsored by the MotherCare Project
January 5, 1990; Arlington, Virginia U.S.A.

Sixth International Women and Health Meeting
November 2-13, 1990; Philippines
Attended by Willa Pressman, MotherCare/CEDPA Technical Advisor

WORKING PAPERS/OTHERS

Reaching Women Through Women's Groups: Constraints and Options
Working Paper 11
Expected March, 1992
K. Mona Moore

PROPOSALS

MotherCare Safe Motherhood Project: Strengthening Safe Motherhood Project Activities in Uganda
December 10, 1990
Willa Pressman, MotherCare/CEDPA Technical Advisor

Assessment of Women's Groups and NGO Activity in Maternal and Neonatal Health, Haiti
April, 1991
Willa Pressman, MotherCare/CEDPA Technical Advisor

MotherCare Country Assessment, El Salvadore
April, 1991
Patricia Taylor, MotherCare Associate Director; Debra Kirth, MotherCare/ACNM Consultant

MotherCare Country Assessment, Papua New Guinea
May, 1991
Patricia Taylor, MotherCare Associate Director; Willa Pressman, MotherCare/CEDPA Technical Advisor; Marcia Dupar, MotherCare/ACNM Consultant; Pamina Gorbach, MotherCare/JSI

PROMOTE HEALTHY WOMEN

MATERNAL NUTRITION

Conferences

Maternal Nutrition and Pregnancy Outcome: Anthropometric Assessment
Co-sponsored by the MotherCare Project, WHO and the Pan American Health
Organization
March, 1990

Projects

MotherCare/SCF Maternal Health Project, Bangladesh
April, 1991 to August, 1993

**Improved Iron-Folate Distribution to Alleviate Maternal Anemia in Two Subdistricts of
the Indramayu Regency, Indonesia,**

Inquisivi "Warmi" Woman's Project, Bolivia
July, 1990 to July, 1993

A Pilot Study of a Perinatal Regionalization Network, Tanjungsari, Indonesia
January, 1991 to September, 1993

ANEMIA

Conferences

Workshop on Iron Deficiency Control Programmes
Sponsored by ACC/SCN
June 6-8, 1990; Dublin Ireland
Attended by K. Mona Moore, MotherCare/Manoff IEC Advisor

Working Papers

The Prevalence of Maternal Anemia in Developing countries, 1979-1989
MotherCare Working Paper 7A
February, 1991
Elizabeth A. Jordan, Nancy Sloan

The Prevalence of Maternal Anemia in Developing Countries
MotherCare Working Paper 7b
Expected January, 1992
Elizabeth A. Jordan, Nancy Sloan

The Effects of Iron Supplementation on Maternal Hematologic Status
MotherCare Working Paper
Expected January, 1992
Nancy Sloan

Iron Supplementation or Fortification in Infants Under 6 Months: A Probe
MotherCare Working Paper
Expected March, 1992
Naomi Baumslag

Projects

Improved Iron-Folate Distribution to Alleviate Maternal Anemia in Two Subdistricts of the Indramayu Regency, Indonesia,

Study of the Acceptance of a Slow-Release Iron Capsule in Pregnant and Non-Pregnant Women Indonesia
In Development

STDS

Conferences

Zambia 7th Regional Conference of African Union of Venereal Disease and Treponematoses
March, 1991
Attended by Marge Koblinsky, MotherCare Project Director

STD Research Workshop
Sponsored by the Centers for Disease Control
July 23-25, 1991; Atlanta, Georgia U.S.A.
Attended by Marge Koblinsky, MotherCare Project Director

Women, Infants and STDs:
November 7-8, 1991; Arlington, Virginia U.S.A.
Co-sponsored by the MotherCare Project and the Agency for International Development

Working Papers/Others

Proceedings of the Women, Infants and STDs Workshop
Expected early 1992
Jill Gay

Women Infants and STDs, Where Can We Go From Here
Brochure of the outcome of the MotherCare STD Workshop
Expected early 1992
Joe Coyle

Reproductive Tract Infections: Global Impact and Priorities for Women's Reproductive Health
Expected early 1992, Plenum Publishing
A. Germain, K. Holmes, P. Piot, J. Wasserheit

Proposals

A Proposal for Syphilis Control in an Urban Slum in Haiti
The Centres for Development and Health; July, 1991

A Proposal to Evaluate Syphilis Screening Intervention in Antenatal Clinics in Mangochi, Malawi
McDermott, Jeanne; August, 1991

Opportunities to Improve Maternal and Child Health: Syphilis Control program During Pregnancy, Kenya
Temmerman, Marlene; November, 1991

Projects

Prevention of Prematurity in Pregnant Women with Bacterial Vaginosis in Indonesia
November, 1991 to September, 1993

REDUCING PERINATAL MORTALITY

MANUALS

Guatemala Technical Report
January, 1991
Roberto Sosa

ASPHYXIA

Conference

Post-Congress Consultation on Asphyxia and Thermal Control in Newborns
Sponsored by the International Children's Center
July 29-31, 1989; Paris France
Attended by Sharon Guild, MotherCare Consultant

LOW BIRTH WEIGHT

Projects

Birth Weight Distribution: Low Birth Weight, Perinatal Mortality in Several Selected Rural Areas in Indonesia

Kangaroo Mother Method, Ecuador

INFECTION

Projects

INCAP Project to Reduce Maternal and Neonatal Mortality, Guatemala

PROMOTE HEALTHY NEWBORNS

BREASTFEEDING

Conferences

Working Papers/Others

**Guide For a Preliminary Country Analysis of Activities and Practices
Supporting Breastfeeding
1991**

**Marcia Griffiths, MotherCare/Manoff IEC Advisor; Mary Ruth Horner,
MotherCare/Manoff Consultant**

**Early Infant Feeding in Haiti: A Synopsis and a Proposal
MotherCare Working Paper 3
October, 1990
Maria D. Alvarez**

International Assessments

**India - November, 1991
Dominican Republic - July, 1991
Bolivia - August, 1991
Ghana - January, 1992
Nigeria - April, 1991
Guatemala**

TETANUS

CONFERENCES

Workshop on Prevention of Tetanus of the Newborn
Sponsored by WHO
June 26-28 1989; Geneva, Switzerland
Attended by Gretchen Berggren, MotherCare/SCF Technical Advisor

Neonatal Tetanus Elimination: Issues and Future Directions
Co-Sponsored by the MotherCare Project, REACH, and AID
January 9-11, 1990; Alexandria, Virginia U.S.A.

WORKING PAPERS

Eliminating Neonatal Tetanus: An Annotated bibliography
Working Paper 1
January 1990
Connie Keedle

Elimination of Neonatal Tetanus: Lessons From Haiti in Social Mobilization
MotherCare Working Paper
Expected January, 1992
Gretchen Berggren

Maternal Tetanus: Magnitude of the Problems and Potential Control Measures
MotherCare Working Paper
Expected February, 1992
Vincent Fauveau, et al.

Annex 4

Criteria for Selection of Countries, Sites, and Implementing Organizations

Original document from MotherCare follows.

Criteria for Selection of Countries, Sites and Implementing Organizations

- **Need -** high rates of mortality and morbidity
- **USAID interest -** invitation or positive response to MotherCare proposal for assessment/project; willingness to commit buy-in funding
- **Government commitment -** on-going/planned activities to improve maternal or neonatal health and willingness to collaborate on project
- **Important/generalizable questions -** issues to be addressed are significant nationally, regionally and/or internationally
- **Organizational capability -** leadership, political skills, ability to convey findings and influence national policies, administrative systems in place, previous experience managing donor assistance.
- **Coordination -** Potential to work with and build on inputs of government's, AID and other donor agency programs.
- **Political Stability**

Annex 5

Background Documents Reviewed

General Background

Agency for International Development. Draft Paper: Evaluation Policy and Guidelines for the Research and Development Bureau.

Agency for International Development. A.I.D. Evaluation Handbook, AID Program Design and Evaluation Methodology Report No. 7 (Supplement to Chapter 12, AID Handbook 3, Project Assistance). April 1989.

Agency for International Development, Office of Health. Project Paper: Maternal and Neonatal Health and Nutrition. March 21, 1988.

Bossert, Thomas J. Can They Get Along Without Us? Sustainability of Donor-Supported Health Projects in Central America and Africa. *Social Science and Medicine*, Vol. 30, No. 19, pp. 1015-1023. 1990.

Carp, Carol A. Report on Brainstorming Session on Accessing Women for Maternal Health. Jan. 5, 1990.

Center for Health Research, Consultation and Education (CIAES). Qualitative Research on Knowledge, Attitudes and Practices Related to Women's Reproductive Health. July 1991.

Forgy, L. Draft: Costing Safe Motherhood Programs - A Guide. The World Bank. September 1991.

Graham, W.J.; and Campbell, O.M.R. Measuring Maternal Health - Defining the Issues. London School of Hygiene and Tropical Medicine. May 1991.

Griffiths, M.; Horner, M.R.; and Anderson, M.A. Guide for a Preliminary Country Analysis of Activities and Practices Supporting Breastfeeding. 1991.

Griffiths, M.; Moore, M.; and Favin, M. **Communicating Safe Motherhood: Using Communication to Improve Maternal Health in the Developing World (for the World Bank Safe Motherhood Guidelines Meeting).** November 1991.

Herz, B.; and Measham, A.R. **The Safe Motherhood Initiative, Proposals for Action.** World Bank Discussion Papers, No. 9. May 1987.

Krasovec, K.; and Anderson, M.A., eds. **Maternal Nutrition and Pregnancy Outcomes: Anthropometric Assessment.** Pan American Health Organization, Scientific Publication No. 529, 1991.

McCarthy, J.; and Maine, D. **A Framework for Analyzing the Determinants of Maternal Mortality: Implications for Research and Programs, forthcoming, Studies in Family Planning.** January 1992.

Moore, M. **Mother's Clubs for Health Promotion: A Brief Review of Program Experience and Lessons Learned.** May 1990.

Project Assist, The Pragma Corporation. **Evaluation Handbook: Roles, Responsibilities, Style and Format.**

Rooney, C. **Outline for Effective Care at Delivery for Safe Motherhood - Background paper for Discussion at World Bank Meeting on Safe Motherhood Guidelines.** November 1991.

Rooney, C.; and Graham, W. **A Review of the Evidence on the Effectiveness of Antenatal Interventions in Developing Countries, with regard to Maternal Health Outcomes.** May 1991.

Tinker, A. **The Influence of Maternal Health on Child Survival, Presentation to the American Public Health Association Meeting.** November 1991.

Walsh, J.A.; Feifer, C.N.; and Measham, A.R. **Health Sector Priorities Review, Maternal and Perinatal Health Problems.** The World Bank (also forthcoming in Dean T. Jamison and W. Henry Mosley (editors), *Disease Control Priorities in Developing Countries*. New York: Oxford University Press for the World Bank. July 1991.

The World Bank. **Safe Motherhood Guidelines Working Group.** Washington, D.C. November 18-22, 1991.

World Health Organization. The Partograph - A Managerial Tool for the Prevention of Prolonged Labour, Section I, The Principle and Strategy, WHO/MCH/88.3. Geneva. 1988.

MotherCare

Agency for International Development, Office of Procurement. Award/Contract with John Snow Incorporated. September 1988.

Huque, A.A.Z.; and Koblinsky, M.A. Guidelines for Safe Motherhood Programming: Background paper prepared for the Safe Motherhood Programming workshop organized by The World Bank and MotherCare, November 18-22, 1991. Washington, D.C.

Koblinsky, M.A. Medical Problems during Pregnancy, Labor and Delivery - Postpartum Complications, Conditions of the Fetus or Newborn. June 1991.

Koblinsky, M.A.; Campbell, O.M.R.; and Harlow, S.D. Mother and More: A Broader Perspective on Women's Health. Unpublished paper.

Marshall, M.A.; and Buffington, S.T. Life Saving Skills Manual for Midwives. 1991.

MotherCare. Report of MotherCare Technical Advisory Group Meeting, June 27 - July 2, 1991. Rosslyn, VA.

MotherCare. MotherCare Project Fifth Six Month Progress Report, June 1, 1991 - December 1, 1991.

MotherCare. MotherCare Monthly Progress Reports, September, 1989 - April, 1991.

MotherCare. MotherCare Project Annual Workplan Year 3, June 1, 1991 - May 31, 1992.

MotherCare. MotherCare Matters, A Quarterly Newsletter and Literature Review on Maternal and Neonatal Health and Nutrition, Volumes I and II.

MotherCare. MotherCare Costing Study, Indonesia. Undated.

MotherCare. MotherCare Technical Advisory Group Meeting, June 22 to July 2, 1991.

MotherCare. MotherCare Country Assessment for Long Term Program Development and Short Term Planning Assignments. Undated.

MotherCare Working Paper Series:

1. Keedle, C. **Eliminating Neonatal Tetanus: An Annotated Bibliography.** January 1990.
2. Moore, M. **Behavioral Determinants of Maternal Health Care Choices in Developing Countries.** October 1990.
3. Alvarez, M.D. **Early Infant Feeding in Haiti: A Synopsis and a Proposal.** October 1990.
4. George, N. **Interventions to Improve Maternal and Neonatal Health and Nutrition.** November 1990.
5. Wedderburn, M.; and Moore, M. **Qualitative Assessment of Attitudes Affecting Childbirth Choices of Jamaican Women.** November 1990.
6. Laukaran, V.H. **Achieving Safe Motherhood with Limited Resources: A Case Study of Maternity Care in Grenada.** June 1991.
- 7a: Jordan, E.A.; and Sloan, N.L. **The Prevalence of Anemia in Developing Countries, 1979-1989. An Annotated Bibliography.** February 1991.
8. US Agency for International Development, Jakarta, Indonesia. **Notes on an Alternative Approach to Safe Motherhood.** June 1991.

REACH/MotherCare. Neonatal Tetanus Elimination: Issues and Future Directions, Meeting Proceedings, Alexandria, Virginia, January 9-11, 1990.

Simmons W.K. *Evaluation of a Novel Delayed-release Formulation for Iron Supplementation in Pregnancy.* Report Number 5. Washington: International Center for Research on Women. 1990.

WHO. *Indicators for Assessing Breast-feeding Practices.* WHO/CDD/SER/91.14. Geneva: WHO. 1991.

Country Documents—Bolivia

Bartlett, A. (1990) Inquisivi, Bolivia Technical Report, September 24-October 6, 1990.

Bartlett, A. (1991a). Inquisivi, Bolivia Technical Report #2, March 23-April, 1991.

Brems, S. Cochabamba, Bolivia: Trip Report #4, May 29-June 15, 1991.

Brems, S. Cochabamba, Bolivia: Trip Report #4: A Qualitative Assessment of Maternal and Neonatal Health Problems and Resources, May 29-June 15, 1991.

Brems, S. Trip Report: Cochabamba, Bolivia. Transition from Qualitative Research to Program Strategy, August 26-September 5, 1991.

Burns, A.A. Inquisivi, Bolivia Trip Report #4: Protocol Development for SCF/Inquisivi "Warmi project," November 7-23, 1991.

Day, L.; and Rosenthal, G. Study of the Costs and Cost-Recovery Alternatives for Maternal and Neonatal Care Services at the Hospital German, Urquidi, Cochabamba, Bolivia. Phase One Report. November 1990.

Grabman, L.H.; Guzman, A.; Rosso, P.; Taylor, P.; and Trott, M. Trip Report #4: Assessment Report and Proposal for MotherCare Project in Cochabamba, Bolivia, July 9-17, 1990.

Horner, M.R. Trip Report: Breastfeeding Assessment in Bolivia, August 5-23, 1991.

Koblinsky M.A.; and Taylor, P. Trip Report: Towards Improving Maternal and Neonatal Health and Nutrition, La Paz, Bolivia, June 1-8, 1989.

Rosenthal, G.; and Percy, A. Maternity Services in Cochabamba, Bolivia: Costs, Cost-Recovery, and Changing Markets (Report of a Field Study), April 25-27, 1992.

Sanchez, E.; Howard-Grabman, L.; Rogers, D.L.; and Bartlett, A. Researching Women's Health Problems Using Epidemiological and Participatory Methods to Plan the Inquisivi MotherCare Project. Undated.

Sloan, N. Design of the Baseline Study for Cochabamba, Bolivia Project, September 14-27, 1992.

Slusser, W. Inquisivi, Bolivia Trip Report #3: Development of the Detailed Implementation Plan for the Save the Children MotherCare Project Called "Warmi," April 19-May 9, 1991.

Subcontract No. 1659-024. Baseline Study of Reproductive Health Practices, Cochabamba, Bolivia. 1991.

Country Documents—Guatemala

Bartlett, A.; and de Bocaletti, M.E.P. (1991b). Intrapartum and Neonatal Mortality in a Traditional Indigenous Community in Rural Guatemala: A Case-Control Study. *Acta Paediatrica Scandinavica*; 80: 288-296.

Bartlett, A.; and de Bocaletti, M.E.P.; and Bocaletti, M.A. (1991a). Neonatal and Early Postneonatal Morbidity and Mortality in a Rural Guatemalan Community: The Importance of Infectious Diseases and their Management. *Pediatric Infectious Disease Journal*; 10: 752-757.

Daulaire, N.M.P. Guatemala Trip Report #3A. August 27-September 6, 1990.

Daulaire, N.M.P. Guatemala Trip Report #7. April 1-17, 1991.

Goldman S.C. (1991). Trip report: Guatemala INCAP Quetzaltenango Maternal and Neonatal Health Project. July 25-August 24, 1991.

MotherCare. Quetzaltenango Maternal and Neonatal Health Project. Evaluation instruments, including: monitoring and evaluation framework; process monitoring and impact evaluation indicators for traditional birth attendants, for health centers and health posts, for hospitals; case management summary questionnaire; summary monitoring tool. Undated.

MotherCare. Quetzaltenango Maternal and Neonatal Health Project. Appendix B: Performance Standards for Traditional Birth Attendants. Undated.

MotherCare. Quetzaltenango Maternal and Neonatal Health Project. Pre-MotherCare diagnostic studies, including assessment instruments for: gynecology and obstetrics hospitalization services; knowledge, practice and attitudes of traditional birth attendants; mother's/father's knowledge of high risk conditions; observation of prenatal care at health centers; evaluation of neonatal clinic records; evaluation of pregnancy clinic records; health personnel's attitudes towards TBAs. Undated.

Pelaez, R.D.N. Quetzaltenango Maternal and Neonatal Health Project. Obstetrical care norms. 1991.

Schieber, B.; Bartlett, A.; Hermida, J.; and Delgado, H. Quetzaltenango Maternal and Neonatal Health Project. 1990.

Sosa, R. Guatemala Technical Report, January 13-18, 1991.

Taylor, P. Initial Site Visit to Guatemala, October 10-17, 1989.

Country Documents—Indonesia

Mothercare Project - Fourth Six Month Progress Report, November 30, 1990 - May 31, 1991.

Draft Report of the Pretest Results, Improved Iron Folate Distribution to Alleviate Maternal Anemia in Indramayu, West Java.

Analysis of Posyandu Financing in Indonesia - A Consolidated Report.

Improved Iron-Folate Distribution to alleviate Maternal Anemia in two Subdistricts of Indramayu Regency, West Java, Indonesia, Subcontract No. 1659-011 between John Snow, Inc. and the Center for Child Survival, University of Indonesia,

Regionalization of Perinatal Care, A Pilot Study in Tanjungsari, West-Java, Subcontract No. 1659-014 between John Snow, Inc. and The Research Unit, School of Medicine, Padjadjaran University.

Birthweight Distribution, Low Birth Weight and Perinatal Mortality in Seven Selected Rural

Areas in Indonesia, Subcontract No. 1659-009 between John Snow, Inc. and University of Padjadjaran.

Prevention of Prematurity in Pregnant Women with Bacterial Vaginosis (BV) in Indonesia.

Center for Child Survival, University of Indonesia; National Family Planning Coordinating Board, Ministry of Health, Republic of Indonesia. *The Indramayu Health and Family Planning Prospective Study: a Progress Report*. January 1989-December 1991. (A Preliminary Report for Discussion). Jakarta: Center for Child Survival, University of Indonesia; National Family Planning Coordinating Board, Ministry of Health, Republic of Indonesia. 1991 a.

Center for Child Survival, University of Indonesia; National Family Planning Coordinating Board, Ministry of Health, Republic of Indonesia. *The Indramayu Health and Family Planning Prospective Study: a Progress Report*. January 1989-December 1991. (Preliminary Tables). Jakarta: Center for Child Survival, University of Indonesia; National Family Planning Coordinating Board, Ministry of Health, Republic of Indonesia. 1991 b.

Government of Indonesia - UNICEF, Situation Analysis of Children and Women in Indonesia. April 1989.

Gunawan, N.; Vidyasagara; Khanna, S.; Samhari, B.; and Bakri, Z. Recommended Plan of Action [1992-1996] Safe Motherhood, Ministry of Health, Republic of Indonesia, UNDP, WHO, Volume 5. December 17, 1991.

Gunawan, N.; Khanna, S.; and Bakri, Z. An Executive Summary of Assessment and Recommended National Strategies - Safe Motherhood, Republic of Indonesia, UNDP, WHO, Volume 4. December 17, 1991.

Koblinsky, M. Trip Report #1 - Indonesia, October 1-9, 1989.

Koblinsky, M. Trip Report #2 - Indonesia, January 17-February 8, 1990.

Koblinsky, M. Trip Report #3 - Indonesia, September 17-October 2, 1991.

Maynard-Tucker, G. Research plan and Research Instruments for the Regionalization of Perinatal Care - A Pilot Study in Tanjungsari, Indonesia, September 23 - October 12, 1991.

Moore, M. Improvement of Iron Folate Distribution to Alleviate Maternal Anemia - Analysis of the Qualitative Research Results and Preparation of the Research Report, April 22 - May 18, 1991.

Moore, M. A Qualitative Investigation of Factors Influencing Use of Iron Folate Tablets by Pregnant Women in West Java: A Summary of Findings. May 1991.

Moore, M. Development of the Social Marketing Component of a Project to Alleviate Maternal Anemia in Indramayu - Review of Possible Social Marketing Activities in the Perinatal Regionalization Network Project in Tanjungsari, January 9-31, 1991.

Moore, M. Development of the Social Marketing Component of a Perinatal Regionalization Project in Tanjungsari, West Java, May 20-27, 1991.

PERINASIA. *The Establishment of a Maternal Death (Audit) Working Group. A Trial in Three District Hospitals in Indonesia.* (North Sulawesi, Bali and West Java). A Concept Paper. Jakarta: PERINASIA. 1990.

Poerwanto, P.; and Imam, H. Assessment on Socio-Cultural Aspect of Safe Motherhood, Republic of Indonesia, Department of Health, UNDP, WHO, 1991.

Pollard, R. Preparing the Communications Plan. Improved Iron Folate Distribution to Alleviate Maternal Anemia in Two Subdistricts of Indramayu Regency, West Java, Indonesia. July 1991.

Shah, U.; and Sudomo, S. Assessment on Health Services - Safe Motherhood, Republic of Indonesia, Department of Health, UNDP, WHO, 1991.

Utomo, B.; and Riona, P. The Use of the Indramayu Sample Registration System for the Detection of Early Pregnancy and Studying Maternal Morbidity. Paper presented at 18th National Council of International Health, June 23-26, 1991, Arlington, Va.

Utomo, B.; Phillips, J.; Costello, C.; Dasvarma, G.; Budiono, T. (1991). *Field Procedures of the Demographic Data Component of the Indramayu Health Family Planning Prospective Study.* Jakarta: Center for Child Survival, University of Indonesia; National Family Planning Coordinating Board, Ministry of Health, Republic of Indonesia, DEPOK.

Wirawan, D.N. Bali indirect Mortality study (BIMMS). Using the Sisterhood Method. Denpasar, Bali: Udayana University. 1991.

USAID. *Analysis of Posyandu Financing in Indonesia. A Consolidated Report.* Jakarta: USAID. 1988.

USAID/Indonesia, Office of Population and Health. Strategic Plan, 1989-1994.

Country Documents—Nigeria

Conroy, C.; and Marshall, M. Nigeria Trip Report, April 22-May 10, 1991.

MotherCare. MotherCare Proposal to the Federal Ministry of Health, Primary Health Care, Nigeria. 1991.

Country Documents—Uganda

Conroy, C.; Kaufman, C.; and Neumann, C. Uganda Trip Report, December 1-19, 1989.

MotherCare/American College of Nurse-Midwives. Proposal: Improved Maternal and Neonatal Care through Upgrading Nurse-Midwifery Skills and Services, Submitted to: Ministry of Health and USAID Uganda. July 1990.

Country Documents—Other Countries

Alvarez, M.D. *Early Infant Feeding in Haiti: a Synopsis and a Proposal.* MotherCare Working Paper: 3. 1990.

Alvarez, M.D. Haiti Trip Report, September 18-October 5, 1990.

Bartlett, A. The MotherCare Project/Save the Children, Bangladesh. July 13-28, 1991.

Blanchet, T. An Anthropological Study on Maternal Health in Nasirnagar. March-June 1991.

Giorgis, B.W. Community Level Maternal and Neonatal Health Information and the Collaboration of MotherCare with Local and Women's Organizations in Africa. December 1990.

Berggren, G.G. Haiti Trip Report: Mothers Milk is Best Milk - A Plan to Promote Breastfeeding in Haiti, April 7-15, 1991.

Coreil, J. Haiti Trip Report: Maternal Mortality and Perinatal Outcomes in Haiti, August 12-19, 1991.

Coreil, J. Trip Report: Haiti, May 13-20, 1990.

De Chavez, A. Trip Report: Dominican Republic Breastfeeding Assessment Review of Health Services, June 23-July 7, 1991.

Koblinsky, M. Maternal and Neonatal Health and Nutrition: Ecuador - Report to the USAID Mission, Quito, Ecuador. 1989.

Pressman, W. Haiti Trip Report: Assessment Report on Women's Groups and NGO Activity in Maternal and Neonatal Health, April 1-12, 1990.

Stern, C.; and Sloan, N.L. Proposal: Evaluation of the Effects of the "Kangaroo Mother" Program Neonatal Care of Low Birthweight Newborns in the Isidro Ayora Maternity, Quito, Ecuador. 1990.

Wedderburn, M.; and Moore, M. *Qualitative Assessment of Attitudes Affecting Childbirth Choices of Jamaican Women*. MotherCare Working Paper: 5. 1990.

Winnard, K.; and Pollard, R. Trip Report: MotherCare/Save the Children, Bangladesh Project: The Social Marketing/Information, Education, Communication Process and Progress. Oct. 16-Nov. 8, 1991.

Annex 6

MotherCare's Applied Research Projects

A. *Reviews of the Literature*

Maternal Nutrition

General

1. **Mothercare, WHO and PAHO. (1991). Maternal Nutrition and Pregnancy Outcome: Anthropometric Assessment. Washington: Mothercare, WHO and PAHO.**

Anemia

1. **Jordan EA, Sloan N. (1991). The Prevalence of Maternal Anemia in Developing Countries, 1979-1989. Mothercare Working Paper 7A.**
 2. **Jordan EA, Sloan N. (1992 forthcoming). The Prevalence of Maternal Anemia in Developing Countries. Mothercare Working Paper 7B.**
 3. **Sloan N. (1992 forthcoming). The Effects of Iron Supplementation on Maternal Hematologic Status. Mothercare Working Paper.**
 4. **Baumslag N. (1992 forthcoming). Iron Supplementation or Fortification in Infants Under 6 Months: a Probe. Mothercare Working Paper.**
 5. **Sloan NL, Jordan EA. (1992). The prevalence of maternal anemia in developing countries. Submitted for publication.**
-

125

Sexually Transmitted Diseases

1. Germain A, Holmes K, Piot P, Wasserheit J. (1992 forthcoming). *Reproductive Tract Infections: Global Impact and Priorities for women's Reproductive Health*. Washington: Plenum Publishing.

Tetanus

1. Keedle C. (1990). *Eliminating Neonatal Tetanus: an Annotated Bibliography*. Mothercare Working Paper 1.
2. Fauveau V, et al. (1992 forthcoming). *Maternal Tetanus: Magnitude of the Problems and Potential Control Measures*. Mothercare Working Paper.

B. Development and testing of assessment and diagnostic methodologies

1. Mothercare Country Assessment for Long Term Program Development and Short Term Planning Assignments.
2. Griffiths M, Horner MR, Anderson MA (1991). *Guide for a Preliminary Country Analysis of activities and Practices Supporting Breastfeeding*.
3. *Case Review/Verbal Autopsy/Process diagnosis of Maternal and Neonatal Deaths*.
4. *Auto-diagnostico Methodology*.

C. Field Research***Diagnostic/Assessment***

1. *Country Assessments in Nigeria, Uganda, Guatemala, Bolivia, Bangladesh and Indonesia*.
-

2. National Breast Feeding Assessments in Dominican Republic, Haiti and Bolivia.
3. Case Reviews in Guatemala, Bangladesh, Bolivia and Haiti.
4. Application of the auto-diagnostico Methodology in Inquisivi, Bolivia.
5. Maternal Morbidity (see Indramyu project under anaemia).

Maternal Nutrition

Anaemia

1. Improved Iron-folate Distribution to Alleviate Maternal Anemia in Two Subdistricts of Indramyu Regency, West Java, Indonesia.
Ongoing: August 1990 to May 1992.
 2. Gastric Delivery System, Indonesia.
Final agreement awaited.
-

Adequate and Appropriate Care during Pregnancy and Labor to Reduce Maternal and Perinatal Mortality.

1. Regionalisation of Perinatal Care, a Pilot Study in Tanjungsari, West Java.
Ongoing: January 1991 to September 1993.
2. Reduction of Maternal Mortality, Surabaya, Indonesia.
Final agreement awaited.
3. Cochabamba Reproductive Health Project, Bolivia.
Ongoing: October 1990 to September 1993.
4. Quetzaltenango Maternal and Neonatal Health Project, Guatemala.
Ongoing: July 1990 to April 1993.
5. Achieving Safe Motherhood with Limited Resources. A Case Study of Maternal Care in Grenada.
Completed.

Reduction of Neonatal Mortality and Morbidity

1. Birth Weight Distribution, Low Birth Weight and Perinatal Mortality in Seven Rural Areas in Indonesia.
Completed: final report awaited.
 2. Bacterial Vaginosis and Low Birth Weight: a Trial.
Final agreement awaited.
 3. Evaluation of the effects of the "Kangaroo Mother" program of neonatal care of low birthweight newborns in the Isidro Ayora Maternity, Quito, Ecuador.
Ongoing: ?when started, due to last two and a half years.
-

1/3