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# Accelerating Progress towards Achieving the MDG to Improve Maternal Health:

## A Collection of Promising Approaches

Geeta Nanda, Kimberly Switlick and Elizabeth Lule

April 2005





**ACCELERATING PROGRESS TOWARDS ACHIEVING  
THE MDG TO IMPROVE MATERNAL HEALTH:**

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**April, 2005**

## Health, Nutrition and Population (HNP) Discussion Paper

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# Health, Nutrition and Population (HNP) Discussion Paper

## Accelerating Progress towards Achieving the MDG to Improve Maternal Health: A Collection of Promising Approaches

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**Abstract:** One of the Millennium Development Goals (MDG) is to improve maternal health, with the target of reducing maternal mortality by three-quarters between 1990 and 2015. In an effort to accelerate progress towards achieving this MDG, this paper brings together high-quality information on a wide range of promising approaches that aim to improve maternal health outcomes. These global promising approaches, based on field research and practice by experienced organizations working in this arena, can serve as a useful starting point in the process to improve current maternal health programming. This paper will be useful for World Bank staff when assisting client countries in developing their National Poverty Reduction Strategy Papers (PRSPs) and costing health sector plans. Moreover, the paper provides Bank staff with substantive evidence to share with governments on how best to prioritize and implement maternal health programs, and scale up efforts to achieve progress. Although primarily intended for use by Bank staff, we hope this guide will also be useful to governments, other international donor agencies, and nongovernmental organizations (NGOs), who are interested in improving maternal health, and minimizing the disparities that currently exist between industrialized and developing countries.

**Keywords:** maternal health, maternal mortality, developing countries, MDGs

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## PREFACE

For almost two decades, the World Bank has been dedicated to the objective of improving maternal health outcomes, which is fundamental to improving human welfare, reducing poverty, and promoting economic growth, which are the overarching goals of the World Bank.

The Bank has made maternal health an important corporate priority and is committed to assisting countries in accelerating progress towards achieving the Millennium Development Goals, which all 191 United Nations Member States have pledged to meet by 2015. Included in the health-related Millennium Development Goals is the goal to improve maternal health, calling on developing countries to reduce their maternal mortality ratios by three-quarters from 1990 to 2015. The Bank is a co-founder of the Safe Motherhood Initiative, which was launched in 1987, and also supported the Program of Action of the 1994 International Conference on Population and Development.

This paper builds on ongoing work to enhance the Bank's leadership in efforts to improve the lives of women, and particularly, to support the objectives of the Bank's Health, Nutrition, and Population Sector. The document is part of the activities aimed at increasing the effectiveness of the Bank's efforts in maternal health and poverty reduction, and will be useful in dialogue with client countries to scale up efforts, and strengthen action and progress towards achieving the Millennium Development Goal to improve maternal health. In particular, when assisting client countries in the development of their National Poverty Reduction Strategy Papers, we hope this document can be used as a tool to inform the process, and provide an opportunity to mobilize policymakers to prioritize the goal of investing in maternal health.

By bringing together a collection of promising approaches, this paper provides substantive evidence and useful program experiences for Bank operations staff to advise governments on how to scale up efforts to achieve the Millennium Development goal of improving maternal health. This guide is intended for the use of World Bank staff, governments, other international donor agencies, and nongovernmental organizations, who are interested in improving maternal health outcomes and minimizing the disparities that currently exist between industrialized and developing countries. We look forward to hearing about any initiatives that emerge as a result of this discussion paper.



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## ABBREVIATIONS AND ACRONYMS

ACNM	American College of Nurse-Midwives
AED	Academy for Educational Development
AIDS	acquired immunodeficiency syndrome
AMDD	Averting Maternal Death and Disability Program
AMTSL	active management of third stage of labor
ANC	antenatal care
BBI	Better Births Initiative
BCC	behavior change and communication
BCI	behavior change initiative
BLP	Better Life Options Program
BNPP	Bank Netherlands Partnership Program
C-section	Caesarean section
CBCA	criterion-based clinical audit
CCP	Center for Communications Programs
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CEDPA	Center for Development and Population Activities
CFR	case fatality rate
CmSS	community support system
CPR	contraceptive prevalence rate
CTT	core training team
D & C	dilatation and curettage
DALY	disability-adjusted life year
DANIDA	Danish International Development Agency
DFID	Department for International Development (UK)
DHMT	district health management team
DSI	Dinajpur Safe Motherhood Initiative
EC	emergency contraception
EmOC	emergency obstetric care
ESARO	UNICEF Regional Office of East and Southern Africa
EsOC	essential obstetric care
FCI	Family Care International
FEMME	Foundations to Enhance Management of Maternal Emergencies
FIGO	International Federation of Gynecology and Obstetrics
FP	family planning
HBLSS	home based life saving skills
HHCC	household to hospital continuum of care
HIS	health information system
HIV	human immunodeficiency virus
HNP	Health, Nutrition, and Population
ICM	International Council of Midwives
ICPD	International Conference on Population and Development
IDP	internally displaced person

IEC	information, education, and communication
IMMPACT	Initiative for Maternal Mortality Program Assessment
IPT	intermittent preventive treatment
IRC	International Rescue Committee
ITN	insecticide-treated nets
IUD	intrauterine device
JHU	Johns Hopkins University
JSI	John Snow, Inc.
KAP	knowledge, attitudes, and practices
LHW	lady health worker
LSS	lifesaving skills
M & E	monitoring and evaluation
MASAF	Malawi Social Action Fund
MBB	marginal budgeting for bottlenecks
MCH	maternal and child health
MDG	Millennium Development Goal
MH	maternal health
MHO	mutual health organization
MIP	malaria in pregnancy
MM	maternal mortality
MMR	maternal mortality ratio
MNH	maternal and neonatal health
MOH	Ministry of Health
MSF	Médecins Sans Frontières
MTCT	mother-to-child transmission
MTEF	Medium Term Expenditure Framework
MVA	manual vacuum aspiration
NGO	nongovernmental organization
NSMP	Nepal Safer Motherhood Project
OBGYN	obstetrician gynecologist
PAC	post-abortion care
PHC	primary health center
PHMT	provincial health management team
PMM	Prevention of Maternal Mortality (Network)
PMTCT	prevention of mother-to-child transmission
PNM	private nurse-midwife
PPH	postpartum hemorrhage
PPP	public-private partnership
PQI	performance and quality improvement
PRSP	Poverty Reduction Strategy Paper
PVO	private voluntary organization
QAP	Quality Assurance Project
QI	quality improvement
RAMOS	reproductive age mortality survey
RBM	Roll Back Malaria

RESCUER	Rural Extended Services and Care for Ultimate Emergency Relief (Project)
RH	reproductive health
RHRC	Reproductive Health Response in Conflict (Consortium)
RPMM	Regional Prevention of Maternal Mortality
SBL	social and behavioral change
SCI	Skilled Care Initiative
SIDA	Swedish International Development Cooperation Agency
SM	safe motherhood
SMA	safe motherhood advocate
SMI	Safe Motherhood Initiative
SMV	safe motherhood volunteer
SNL	Saving Newborn Lives initiative
SP	sulfadoxine-pyrimethamine
SRH	sexual and reproductive health
STIs	sexually transmitted infections
SWAp	sector-wide approach
TBA	traditional birth attendant
TFR	total fertility rate
TOT	training of trainers
TPC	targeted performance-based contract
UN	United Nations
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population Activities
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UON	unmet obstetric need
USAID	United States Agency for International Development
WHO	World Health Organization

# 1. OVERVIEW

## 1.1 BACKGROUND

While some developing countries have shown great progress in improving maternal health, progress remains slow and levels of maternal mortality are persistently high in much of the developing world (Pathamanathan et al., 2003; Koblinsky, 2003). The United Nations Millennium Development Goals (MDGs) represent a concerted global pledge to significantly improve the human condition by 2015, with efforts aimed at reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women. One of the MDGs aims to improve maternal health, with a target of reducing the maternal mortality ratio by three-quarters between 1990 and 2015 (Table 1). By building on past declarations of United Nations (UN) conferences, this goal reaffirms an international commitment to addressing the problems associated with reproductive health, safe motherhood, and family planning. Furthermore, the MDG initiative provides a unique opportunity to refocus and accelerate program efforts by donors, governments, and civil society, to improve maternal health for individual and societal well-being.

**Table 1: The Millennium Development Goal to Improve Maternal Health**

<b>Goal 5</b>	<b>Target</b>	<b>Indicators</b>
Improve maternal health	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	Maternal mortality ratio Proportion of births attended by skilled health personnel

*Source:* United Nations Millennium Declaration, 2000.

Of particular importance in influencing the women's health field was the UN International Conference on Population and Development (ICPD) held in Cairo in 1994, which led to a "paradigm shift" in addressing maternal health, from within a demographically-driven framework to a reproductive health framework that incorporates reproductive rights (Box 1). The ICPD Program of Action clearly frames maternal health within the context of reproductive health. However, the framing of the MDG to improve maternal health presents at least two conceptual challenges for providing guidance on scaling up efforts to achieve progress (Freedman et al., 2003). First, the goal is improved maternal health, yet the target is stated in terms of reduction in maternal death. Although health and death are related, in practice, efforts can improve maternal health without directly reducing maternal death, and vice-versa. For example, most aspects of routine care during pregnancy will have little impact on the likelihood of a woman developing a life-threatening obstetric complication (Freedman et al., 2003). At the same time, reducing maternal deaths will not reduce the burden of pregnancy-related complications and subsequent poor maternal health (Graham and Hussein, 2004). Second, the goal is stated in terms of maternal health, without explicitly indicating that maternal health is inextricably linked to reproductive health, of which maternal health is one facet (Lule et al., 2003). Thus, it should be clarified that while we use the phrase maternal health

throughout this document, we recognize that maternal health is, of course, intrinsically linked to the broader concept of reproductive health. Furthermore, in the context of this paper, we are focusing on maternal health as specified in the MDG to improve maternal health (including the reduction of maternal mortality), and not focusing on the entire gamut of women's reproductive health issues, which would entail a much broader and more comprehensive focus.

**Box 1: Definition of Reproductive Health**

Reproductive Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.

*Source:* ICPD Program of Action (Paragraph 7.2), 1994.

## 1.2 OBJECTIVES

We have the knowledge to improve maternal health outcomes and in general, we know what interventions and strategies are needed to achieve this goal. In order to scale up efforts and accelerate progress towards achieving the Millennium Development Goal to improve maternal health, however, we must also be able to implement effective maternal health programs given a country's particular setting, policies, and resource constraints.

The objective of this discussion paper is to share up-to-date high quality information on a wide range of *promising approaches*<sup>1</sup> that aim to improve maternal health outcomes. By bringing together a set of global promising approaches, based on field research and practice by experienced organizations working in this arena, this document is a resource for program planners and managers involved in designing and implementing maternal health programs in developing countries. Specifically, the practical examples described here, including the successes achieved, challenges addressed, and lessons learned, can serve as a useful starting point in the process to improve current maternal health programming. By learning from the experiences of others, these promising approaches can be further improved and adapted to different field situations in order to scale up efforts to ensure improved maternal health outcomes. For the most part, the promising approaches presented in this paper are supported by evidence-based knowledge and strategies that have proven to be effective in improving maternal health outcomes.

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<sup>1</sup> Promising approaches may include overall programs, specific practices, research efforts, complex or discrete interventions, innovations, or other strategies to improve maternal health outcomes.

However, some of the promising approaches described in this report are more recent or innovative, and may not yet have been evaluated rigorously to show impact in changing maternal health outcomes. Thus, without such measurable results, we have used the term ‘promising approaches’ rather than ‘best practices’ to describe this collection. These approaches are being documented and disseminated to share knowledge, and to illustrate current efforts from the field, although this collection of promising approaches is not exhaustive.

Discussion papers such as this one are disseminated to a large audience, including World Bank staff members, bilateral and multilateral agencies, country policymakers, and other stakeholders and donors. In particular, this paper will be useful for World Bank staff when assisting client countries in developing their National Poverty Reduction Strategy Papers (PRSPs) and costing health sector plans. Moreover, the paper provides Bank staff with substantive evidence to share with governments on how best to prioritize and implement maternal health programs, and scale up efforts to achieve progress. Although primarily intended for use by Bank staff, we hope this guide will also be useful to governments, other international donor agencies, and nongovernmental organizations (NGOs), who are interested in improving maternal health, and minimizing the disparities that currently exist between industrialized and developing countries.

## 2. INTRODUCTION

### 2.1 MAGNITUDE OF THE PROBLEM

Maternal mortality, the most severe maternal health outcome, has been described as “one of the shameful failures of development” (Freedman et al., 2003: 6). Although some developing countries have shown great progress in reducing maternal mortality (for example, Sri Lanka and Malaysia), progress remains slow and levels of maternal mortality are persistently high in much of the developing world (Pathmanathan et al., 2003). It is estimated that each year, some 8 million women suffer pregnancy-related complications and over 500,000 women die, with 99 percent of these maternal deaths taking place in developing nations, mainly in sub-Saharan Africa and South Asia (WHO, 2004a; AbouZahr and Wardlaw, 2003a). Thus, most maternal deaths result not from ‘disease’ per se, but from pregnancy-related complications, which are now widely recognized as a leading cause of death and disability among women of reproductive age in developing countries. The five direct obstetric complications that cause the majority of maternal deaths throughout the developing world are hemorrhage, sepsis, unsafe induced abortion, hypertensive disorders of pregnancy, and obstructed labor (WHO, 1996). What is especially tragic is the fact that most of these maternal deaths could be averted with very cost-effective interventions, even where resources are limited (Koblinsky, 1995; WHO, 2004a).

Maternal mortality is often characterized as the ‘tip of the iceberg’ since for every maternal death an estimated 20 women suffer injury, infection, or disease – about 10 million women each year. In some cases, long-term disabilities (such as prolapse, infertility, obstetric fistula, incontinence) can result (Fortney and Smith, 1999). More than 40 percent of pregnant women in developing countries may experience complications, illnesses, or permanent disability (WHO, 1996).

Among commonly used human development indicators, maternal mortality shows one of the starkest disparities between developed and developing countries, and between the rich and poor within countries. For example, in developing countries, one woman in 16 is at risk of dying of pregnancy-related complications, whereas in developed countries, the risk is one woman in 2800 (WHO, 2004a). Moreover, the poorest countries are progressing the slowest towards reducing maternal mortality: low-income countries have been reducing maternal mortality by 2.4 percent a year, compared to lower middle-income countries (4.9 percent) and upper middle-income countries (2.5 percent) (Wagstaff and Claeson, 2004). At 18 percent, maternal causes of death and disability comprise the biggest contribution to disability-adjusted life years (DALYs) lost among reproductive age women in low-income countries (World Bank, 1993; WHO, 1999).

## 2.2 RATIONALE FOR INVESTING IN MATERNAL HEALTH

The death or illness of a woman of reproductive age has clear implications for a country's productive capacity, labor supply, and economic well-being, and also translates into substantial economic loss and social hardship for her family. Pregnancy-related disease burden associated with frequent or too-early pregnancies, poor maternal health and pregnancy complications, drains women's productive energy, jeopardizes their income-earning capacity, and contributes to their poverty. Especially important is that women's wage earnings are critical to the family unit, community, and overall poverty reduction, and in fact, benefit family welfare more than men's wage earnings. Experience in Bangladesh has shown that when women have an income, they invest their money toward the well-being of their families, particularly their children's health and education (World Bank, 1998). For example, a study from Bangladesh found a positive impact of women's participation in credit programs on their decision to seek formal health care, whereas there was no such impact of men's participation in credit programs on their demand for formal health care (Nanda, 1999). In addition, children whose mothers die or are disabled in childbearing have vastly diminished prospects of leading a productive life (World Bank, 1999). Thus, poor maternal health exacts costs and incurs losses not only at the household level, but at the community and national levels as well.

In addition to the economic justification for investing in maternal health, it is now recognized that the well-being of women is an end in itself, because women are intrinsically valuable (Thaddeus and Maine, 1994). There are also compelling human rights and social justice dimensions to reducing death and illness associated with pregnancy and childbirth. During the last decade, a human rights lens has been increasingly applied to view and monitor maternal health, and these issues have been codified in a number of international covenants including the Convention on the Elimination of all forms of Discrimination (CEDAW) and the international policy agenda that emerged from the Cairo ICPD.

Poor maternal health and health care (for example, lack of skilled care) not only affects women's survival but has serious implications for the survival of their newborns as well (Lawn et al., 2005). Pregnant women's poor nutrition contributes to low birth weight in 20 million babies each year. In one study that reported on child outcomes for mothers who died in labor, all the newborn babies died within one year of birth (Greenwood et al., 1987; cited in Lawn et al., 2005). The risk of death for children under 5 years is doubled if their mothers die in childbirth, and at least 20 percent of the burden of disease among children under the age of 5 is attributable to conditions directly associated with poor maternal and reproductive health, nutrition, and the quality of obstetric and newborn care (World Bank, 1999). It is also recognized that motherless children, especially girls, are less likely to have access to education and health care resources as they grow up (Strong, 1992; Panos London, 2001).

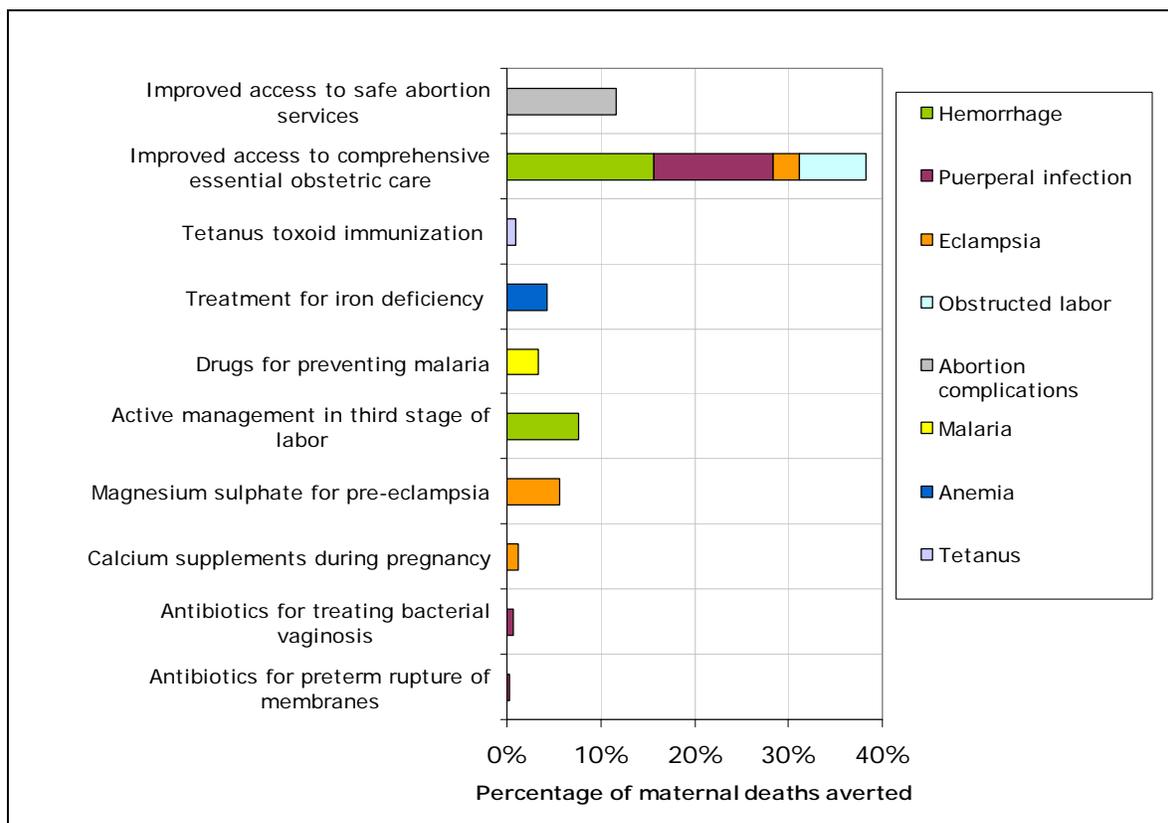
## 2.3 KEY TECHNICAL INTERVENTIONS TO IMPROVE MATERNAL HEALTH

In developing countries, historically, approaches to reducing maternal mortality tended to focus on training traditional birth attendants (TBAs) and prenatal screening to identify women at ‘high risk’ of developing obstetric complications. However, we now know that all pregnant women are at risk of developing obstetric complications and some 15 percent of them will develop a life-threatening obstetric complication that requires treatment at a health facility (WHO, 1996). Thus, over the last decade, the effectiveness of these earlier strategies has been questioned. It is now recognized that the success of TBA training programs in reducing maternal mortality is limited (Bergström and Goodburn, 2001). Traditional birth attendants can, however, provide essential social support to women during childbirth, and where they are more formally linked to the health care system, trained TBAs can play a role in birth preparedness and strengthening community-based referral practices (Lule et al., 2003). Furthermore, it has become increasingly understood that prenatal screening programs that focus on identifying ‘high risk’ women are not effective in reducing maternal mortality. The risk approach fails to identify the majority of women who will develop obstetric complications since a greater number of complications and deaths occur among ‘low risk’ women (Rosenfield and Maine, 1985; Maine et al., 1997). Moreover, risk screening can create a false sense of security among those in low risk groups, and may leave them unprepared for an obstetric emergency (Yuster, 1995). Nevertheless, antenatal care remains important to improving maternal health and in the management of certain conditions, and can serve as an initial point of contact between women and the health care system (Carroli, Rooney and Villar, 2001).

Given that the majority of maternal deaths occur around the time of labor and delivery, it has been necessary to shift the focus of maternal health programs from an emphasis on these earlier strategies, to strategies that prioritize skilled delivery care and the management of complications to save women’s lives (UNICEF, 2003). It is estimated that 391,000 maternal deaths worldwide might be averted if coverage rates of key maternal mortality interventions were increased from current levels to 99 percent (Wagstaff and Claeson, 2004) (Figure 1). Notably, access to essential obstetric care accounts for more than half the maternal deaths averted. The WHO’s Mother-Baby Package (MBP), which incorporates a set of key maternal health problems and interventions, would cost approximately \$2 per capita to deliver the maternal component alone in low-income countries (WHO, 1996; Jowett, 2000). Essential obstetric services, costing approximately 24 percent of the Mother-Baby Package, could reduce maternal mortality by about 74 percent (Jowett, 2000).

The following sections provide an overview of major technical interventions to improve maternal health outcomes, including emergency obstetric care, skilled attendance, management of unsafe abortion, focused antenatal care, and family planning services. It must be emphasized that these interventions should not be implemented as stand-alone vertical interventions or programs, but rather, they should be part of an overall package of essential services to improve maternal health. They are described here separately for clarity in identifying and understanding some of the key technical interventions that are required to improve maternal health outcomes.

**Figure 1: Maternal Deaths Averted with Full Use of Existing Interventions**



Source: Wagstaff and Claeson, 2004.

### 2.3.1 Emergency Obstetric Care

There is strong supporting evidence that emergency obstetric care should be an essential component of programs aimed at reducing maternal mortality (Paxton et al., 2005). The majority of obstetric complications cannot be predicted, but almost always can be treated successfully with good, timely medical care (Maine, 1993). Health facilities that provide certain medical services including antibiotics, blood transfusions, and Caesarean sections, can save nearly all women with obstetric complications (Maine and Chavkin, 2002). Since most women in developing countries deliver outside of health facilities, and since most maternal deaths occur during labor, delivery, and the immediate postpartum period, it is essential that all women with obstetric complications who need treatment have timely access to health facilities providing good quality emergency obstetric care. Thus, unlike many other public health problems, reducing maternal death and disability depends on effective medical treatment rather than primary prevention (Ganatra et al., 1996).

Emergency obstetric care (EmOC) refers to a set of signal functions performed at health facilities that can prevent the death of a woman experiencing an obstetric complication. (UNICEF/WHO/UNFPA, 1997). For Basic EmOC, usually provided at health centers

and small maternity homes, these signal functions include administering certain drugs and performing lifesaving procedures as described in Table 2. For Comprehensive EmOC, usually provided at sub-district or district hospitals, this means being able to provide Caesarean sections and blood transfusions, in addition to Basic EmOC signal functions. According to current UN recommendations, for every 500,000 population, there should be at least 1 Comprehensive and 4 Basic EmOC facilities (Table 2).

**Table 2: Signal Functions of Basic and Comprehensive EmOC**

<b>Basic EmOC</b>	<b>Comprehensive EmOC</b>
<ol style="list-style-type: none"> <li>1. Administer parenteral antibiotics</li> <li>2. Administer parenteral oxytocic drugs</li> <li>3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia</li> <li>4. Perform manual removal of placenta</li> <li>5. Perform removal of retained products</li> <li>6. Perform assisted vaginal delivery</li> </ol>	<p>Includes all the signal functions in Basic EmOC as well as:</p> <ol style="list-style-type: none"> <li>7. Perform surgery (caesarean section)</li> <li>8. Perform blood transfusion</li> </ol>
<p>A Basic EmOC facility is one that is performing all of functions 1 to 6.  A Comprehensive EmOC facility is one that is performing all of functions 1 to 8.</p>	

*Source:* UNICEF/WHO/UNFPA, 1997.

Increasing the provision of EmOC does not necessarily require the construction of new health facilities. Much can be accomplished by upgrading existing infrastructure, staff skills, and service provision guidelines. Moreover, efforts to strengthen maternal health services also benefit the entire health care system, for example, by providing services that are important for treating other health problems such as road traffic accidents, which comprise a large proportion of the disease burden in many low-income countries (Jowett, 2000). An increasing number of maternal health programs now recognize that EmOC is critical to reducing maternal death and disability. When programming for maternal health, bottlenecks in accessing EmOC services are generally assessed using the “Three Delays” Model, which addresses the delays involved between the onset of an obstetric complication and its outcome: 1) delay in the decision to seek care; 2) delay in arrival at a health facility; and 3) delay in the provision of adequate care at the health facility (Thaddeus and Maine, 1990; 1994).

### 2.3.2 Skilled Attendance at Birth

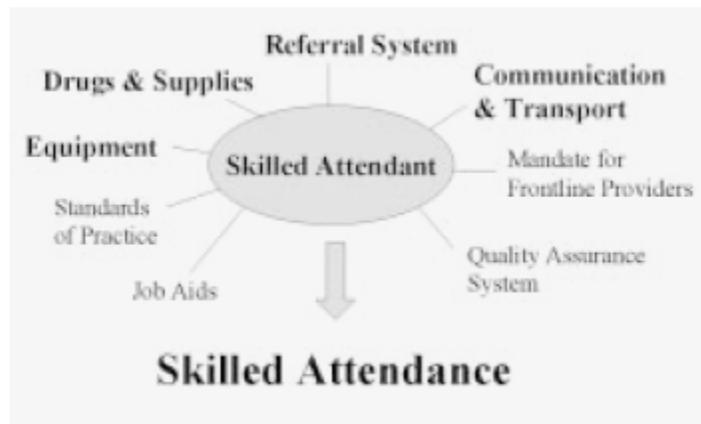
#### Box 2: Definition of ‘Skilled Attendant’

According to a statement by WHO, ICM, and FIGO, the term ‘skilled attendant’ refers to “an accredited health professional – such as midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management or referral of complications in women and newborns”. Traditional birth attendants, either trained or not, are excluded from this category of skilled health workers.

Source: WHO, 2004b.

A skilled attendant who is present during childbirth and the immediate postpartum period is a key player in saving women’s lives (WHO, 1996). Appropriate management by skilled attendants at labor, delivery, and the immediate postpartum period, can avert complications such as retained placenta, even without modern obstetric techniques that require surgery and blood transfusion (MacDonald and Starrs, 2002). In order to be effective, however, a skilled attendant requires an enabling environment that includes access to a referral system, communication and transport, drugs and supplies, and equipment. Furthermore, the enabling environment – a well functioning health system – requires adequate human resources and management systems, which ensure that there are: sufficient skilled attendants with all the necessary skills deployed where they are needed; satisfactory pay scales and career advancement opportunities; continuing education opportunities to maintain and upgrade skills; supportive supervision mechanisms; and possibilities for skilled attendants to refer women and newborns directly to higher-level care if necessary (WHO, 2004b). Hence, the term *skilled attendance* refers to both the skilled attendant and the enabling environment (Figure 2).

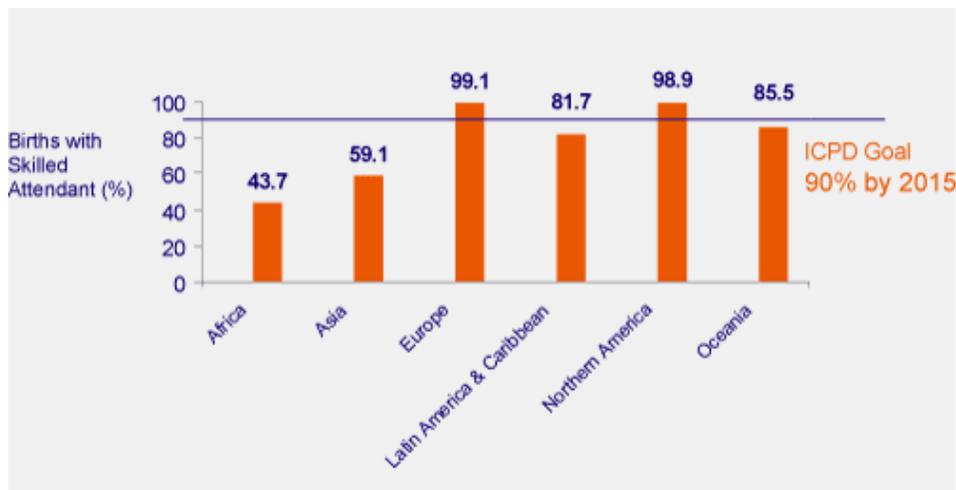
Figure 2: The Enabling Environment



Source: Family Care International and the Safe Motherhood Inter-Agency Group, 2001.

The “proportion of births attended by skilled health personnel” is one of two indicators to measure the Millennium Development Goal to improve maternal health. In developed countries, the use of a skilled attendant at delivery is nearly universal. However, only 58 percent of pregnant women in developing countries deliver with the assistance of skilled health personnel (WHO, 2004c). In Africa, for example, just 44 percent of births are attended by skilled health personnel compared to about 99 percent in Europe and North America (Figure 3). Some developing regions have shown improvement in the use of skilled attendants. For example, Sri Lanka and Malaysia have reduced maternal deaths considerably, and providing professional midwives to assist deliveries is likely to have played a major contributing role (Pathmanathan et al., 2003). In Tunisia too, increasing skilled attendance at birth was a key factor in reducing maternal deaths by 80 percent in only 23 years (Panos London, 2001). Nevertheless, progress in increasing the proportion of births attended by skilled personnel has been slow, particularly in resource-constrained settings in Africa and Asia (WHO, 1999). Given the chronic shortages of skilled personnel and weak health systems, many women still deliver without the presence of an attendant who can provide lifesaving care.

**Figure 3: Proportion of Births Attended by Skilled Health Personnel in 2004**



Source: WHO, 2004c.

One of the core functions of a skilled birth attendant is the active management of the third stage of labor (AMTSL), which is a proven, simple, preventive measure for reducing postpartum hemorrhage (PPH). Postpartum hemorrhage, or severe bleeding, is a leading cause of maternal mortality worldwide with at least 25 percent of maternal deaths being attributed to PPH (AbouZahr, 1998). The majority of women with PPH have no identifiable risk factors and PPH is often unpredictable, occurs suddenly, and can rapidly become life-threatening. The majority of cases of PPH occur during the third stage of labor. The most common cause of severe PPH that occurs within 24 hours of delivery is uterine atony, or the failure of the uterus to properly contract after delivery (Ripley, 1999). Other factors that contribute to PPH are retained placenta, vaginal or cervical lacerations, and uterine rupture or inversion.

Skilled attendants, who manage the third stage of labor actively, carry out interventions to avert uterine atony, and thus prevent PPH (Prendiville, Elbourne, and McDonald, 2004). One component of AMTSL is the injection of a uterotonic drug immediately after delivery of the newborn. Oxytocin is the most commonly used uterotonic drug, and has proven to be very effective in reducing the incidence of PPH and prolonged third-stage labor (Ripley, 1999). Another drug that can help reduce postpartum bleeding is misoprostol, which has a wide range of potential benefits over other available uterotonic drugs including its ease of administration (oral or rectal), low cost, and stability at room temperature (Ripley, 1999; Tsu, Langer and Aldrich, 2004). Several recent and ongoing studies have been evaluating misoprostol's effectiveness in reducing PPH as compared to other uterotonic drugs. In places where women do not receive any uterotonic drugs, the use of misoprostol may be a feasible option (Darney, 2001).

### **2.3.3 Management of Unsafe Abortion**

Unsafe abortion is defined as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both (Panos London, 2001). Although accurate data are difficult to obtain, the World Health Organization estimates that there are 46 million pregnancies each year that end in an induced abortion; nearly 20 million of these are estimated to be unsafe (WHO, 2003a). Approximately 13 percent of pregnancy-related deaths have been attributed to complications of unsafe abortion, amounting to roughly 67,000 deaths annually. There are also long-term health problems that result from unsafe abortion, including chronic pelvic pain, pelvic inflammatory disease, tubal blockage, and infertility (Family Care International and the Safe Motherhood Inter-Agency Group, 1998a). In addition, complications of unsafe abortion exact a toll on health care systems in terms of hospital space, providers' time, antibiotics, blood, and supplies (Dayaratna et al., 2000). Almost all the deaths and complications from unsafe abortion are preventable.

In many developing countries, women who lack access to safe and acceptable contraceptive services may be faced with an unwanted or unplanned pregnancy, which too often results in unsafe abortion. Moreover, even where family planning services are accessible, pregnancy may still occur as a result of contraceptive failure or as a result of incest or rape (Thonneau, 2001). Women who have abortions (either spontaneous or induced) need access to comprehensive post-abortion care (PAC) services since they are susceptible to a variety of complications. For incomplete abortion, follow up with evacuation of the uterus may be needed to stop bleeding and prevent infection. Three important features of PAC services include: emergency treatment of complications of abortion; family planning counseling and services; and linkages to other reproductive health services (JHPIEGO, 2004). Skilled providers are critical to ensure the success of PAC services, and services should be available at all levels of the health care system.

### 2.3.4 Focused Antenatal Care

It is now understood that antenatal care (ANC) interventions, in and of themselves, cannot be expected to reduce maternal mortality significantly (Bergsjø, 2001). Although antenatal care is not an effective means of identifying women who will develop life-threatening obstetric complications during pregnancy and childbirth, antenatal care can play a role in improving maternal health and improving the health and survival of infants (AbouZahr and Wardlaw, 2003b). Current recommendations for routine antenatal care in developing countries are described below (Box 3).

#### **Box 3: The Role of Antenatal Care**

- 4 antenatal visits with a skilled provider to detect problems
- Birth preparedness and complication readiness planning with family
- Detection and management of co-existing conditions and complications
- Voluntary counseling and testing for HIV (especially in areas with high HIV prevalence)
- Counseling for breast feeding, family planning, HIV/STIs, nutrition, and danger signs of pregnancy and delivery complications
- In select populations: address iodine deficiency; treatment for malaria; and helminth presumptive treatment
- Treatment of diagnosed infections (i.e., syphilis, gonorrhea, or tuberculosis)
- Tetanus toxoid immunization (2 doses)
- Where iron deficiency and anemia are high, supplying iron and folate supplements
- Where vitamin A deficiency is prevalent, supplying low-dose supplements of vitamin A
- Screening women for domestic violence and providing appropriate counseling and referral

*Sources:* White Ribbon Alliance for Safe Motherhood/India, 2002; Ransom and Yinger, 2002.

#### *Detection and management of anemia*

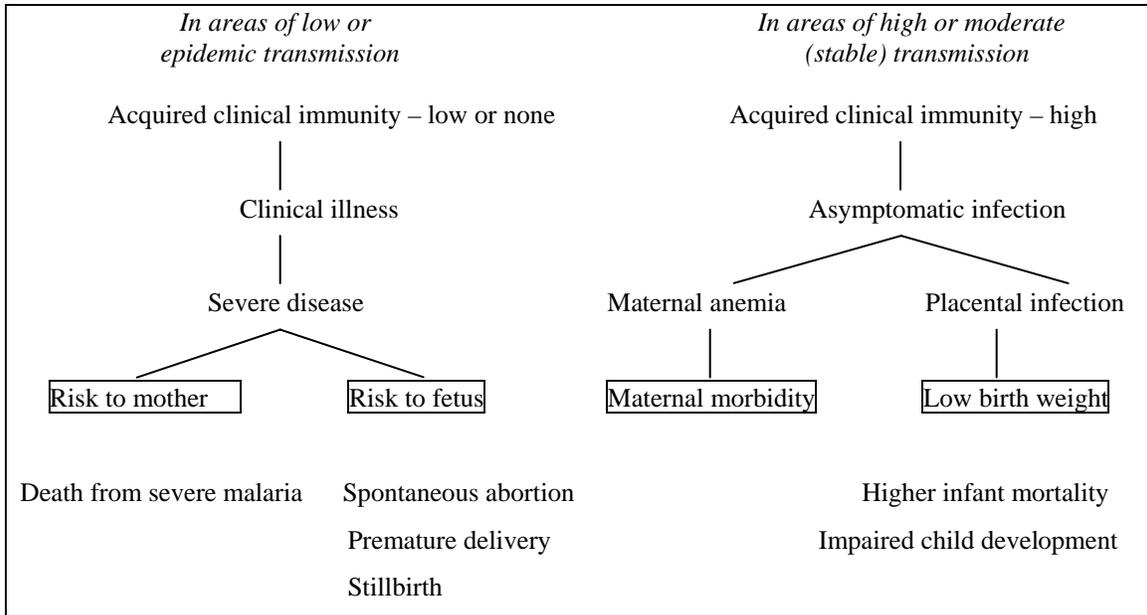
Anemia during pregnancy is a significant problem for many women in developing countries. In India, for example, the prevalence of anemia among pregnant women is estimated at almost 50 percent (Shali, Singh, and Goindi, 2004). An important component of antenatal care is for the detection and management of severe anemia among pregnant women, which is a significant underlying cause of maternal mortality and low birth weight outcomes. Iron-deficiency anemia also causes deficits in work productivity, care-giving capacity, and child development (Stoltzfus, 2001; Elder, 2000). The use of iron and folate supplementation to treat iron-deficiency anemia has been shown to reduce the prevalence of anemia.

#### *Prevention and treatment of malaria*

Forty percent of the world's pregnant women are at risk of malaria infection (Shulman and Dorman, 2003). Pregnant women are particularly vulnerable to malaria since pregnancy reduces immunity, making women more susceptible to malaria infection, and increasing the risk of illness, severe anemia, and death. HIV infection may further compromise a pregnant woman's immunity to malaria (Steketee et al., 1996). Malaria in pregnancy is also a major cause of miscarriage, premature delivery, low birth weight, and newborn death. Pregnant women in non-endemic areas are more likely to die than non-

pregnant women if they develop malaria, and their health is more likely to deteriorate faster (Panos London, 2001) (Figure 4).

**Figure 4: Malaria during Pregnancy**



Source: WHO/UNICEF, 2003.

The World Health Organization recommends a three-pronged approach using low-cost interventions to address malaria in pregnancy: insecticide-treated nets (ITNs); intermittent preventive treatment (IPT); and effective case management of malarial illness during pregnancy (WHO/UNICEF, 2003). Antenatal care provides a major opportunity for applying this three-pronged approach since the majority of women in developing countries attend antenatal care at least once during pregnancy (WHO/UNICEF, 2003). Despite the high toll malaria exacts on pregnant women and their infants, malaria control during pregnancy had not received adequate attention or program support until relatively recently. In the Abuja Declaration from the African Summit on Rollback Malaria in 2000, the following goals for the prevention and control of malaria were agreed upon: 1) at least 60 percent of pregnant women will have access to and use effective preventive measures; and 2) at least 60 percent of children under five will have access to prompt and effective treatment (WHO, 2003b).

### 2.3.5 Family Planning Services

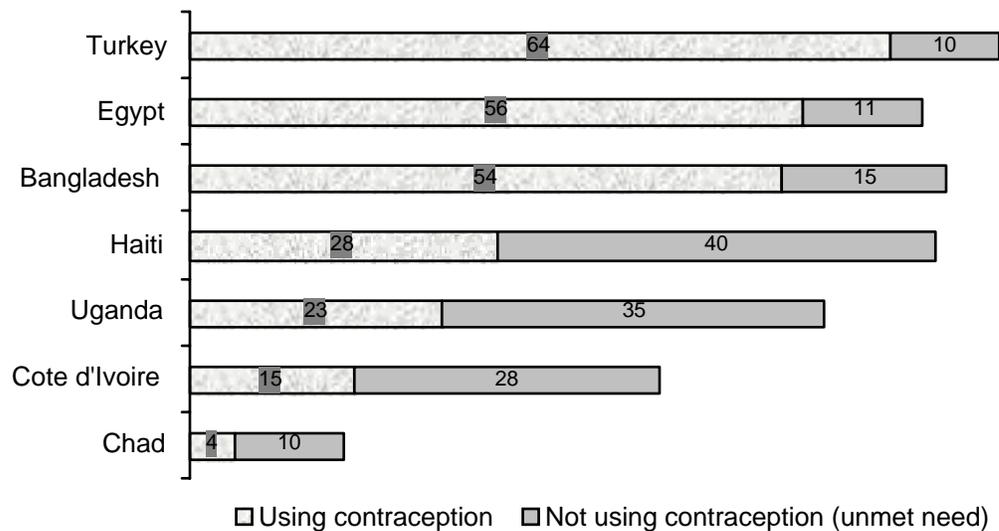
Undesired fertility contributes directly to maternal death. According to a Global Health Council report analyzing the impact of unintended pregnancies on maternal deaths in developing countries, more than 300 million unintended pregnancies and the resulting deaths of nearly 700,000 women occurred between 1995 and 2000 (Daulaire et al., 2002). Providing access to voluntary, safe, affordable, and appropriate family planning (FP) knowledge and information services can have a significant impact on averting maternal mortality by reducing the number of pregnancies, and thus, reducing women’s exposure

to the risk of developing an obstetric complication that will possibly lead to maternal death (Freedman et al., 2003; Maine, 1997). Moreover, family planning services can be used to prevent unwanted pregnancies and abortions, and promote optimal birth spacing.

Although family planning is cost-effective at US\$0.90/ per capita, unmet need for contraception remains a significant problem (World Bank, 2002). It has been estimated that if unmet need was met and women had only the number of pregnancies at the interval they desired, maternal mortality would drop by 20–35% (Freedman et al., 2003). Furthermore, it is estimated that 122.7 million women in developing countries have an unmet need for contraception; women aged 15-24 account for one-third of unmet need (Ross and Winfrey, 2002). In many settings, unmet need is especially a problem for sexually active adolescent girls and young women who want to avoid pregnancy for limiting or spacing births, but are not using contraception for various reasons. Figure 5 shows the proportion of young people using family planning and their levels of unmet need in selected countries. Data also suggest that the unmet spacing needs of young people are 2.3 times higher than those of the adult population as a whole (UNFPA, 2003).

Family planning also contributes to slower population growth, a reduction in poverty, and preservation of the environment. A variety of means have been tried for providing contraceptives, including clinics, private providers, community-based distribution systems, pharmacies, and social marketing (Dayaratna et al., 2000).

**Figure 5: Percent of Married Women Aged 15 – 19 Who Would Prefer to Avoid a Pregnancy**

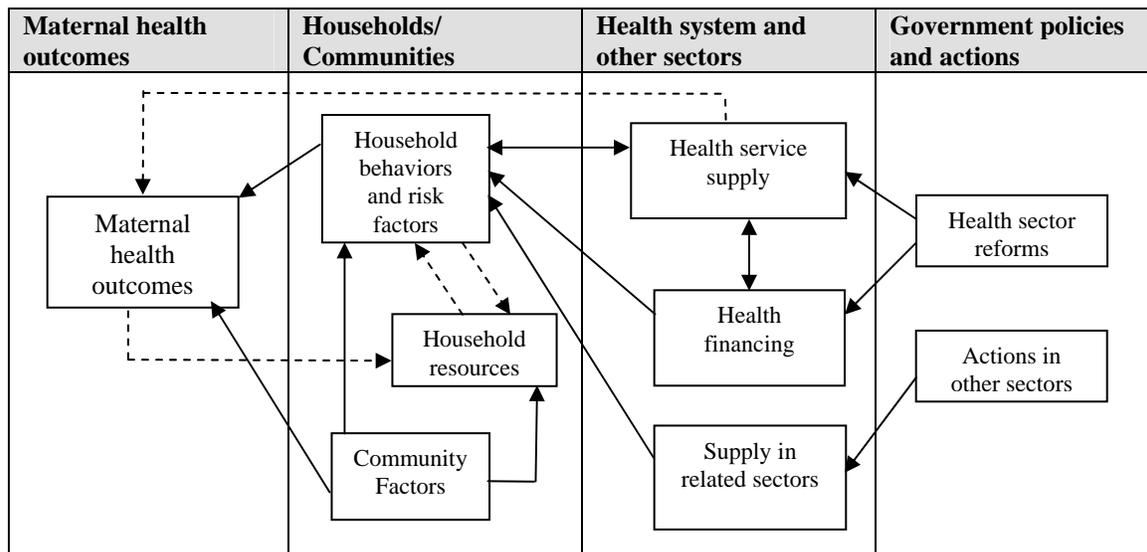


Source: Ashford, 2003.

## 2.4 CONCEPTUAL FRAMEWORK FOR UNDERSTANDING MATERNAL HEALTH OUTCOMES

Maternal health outcomes are influenced by a range of multisectoral factors, including household and community behaviors along with cultural norms, health systems and other sectors, and government policies and actions. All of these factors have the potential to impede or enhance maternal health. One way of contextualizing how these multisectoral factors affect maternal health outcomes is through the *Pathways to Improved Maternal Health Outcomes* framework (Figure 6), which was adapted from the World Bank’s Health, Nutrition and Population Chapter in the Poverty Reduction Strategy Paper Sourcebook (Claeson et al., 2001). The *Pathways* framework is used in the Poverty Reduction Strategy process because it responds to the results-based approach. The framework allows one to conceptualize the interconnectedness of variables that affect health outcomes and helps to identify risk factors and interventions at different levels of the system, all of which affect maternal health outcomes. It can also help us understand disparities in health status between the rich and the poor. As illustrated in the framework, the solid lines link the predominant pathways through which factors influence maternal health outcomes. The dashed lines represent some of the “secondary linkages” that also need to be considered.

**Figure 6: Pathways to Improve Maternal Health Outcomes**



Source: Claeson, et al, 2001.

As shown in the framework, maternal health outcomes are directly and indirectly affected by factors at different levels. Under government policies and actions, for example, health reforms and actions in other sectors (e.g. transport or infrastructure sectors) directly affect the health service supply and other parts of the health system, heavily influencing factors at the household and community level, which are immediate determinants of maternal health outcomes. Traditionally, efforts to improve maternal health have tended to focus on issues within the health system. However, as indicated by the framework, improving maternal health outcomes requires strategic efforts that address forces inside

and outside the health system. For appropriate interventions to comprehensively address maternal health, investments are needed at all levels of the *Pathways* framework.

The *Pathways* framework makes clear the steps between policy action and improved maternal health outcomes. The framework can help in identifying the desired outcomes, the actions needed to achieve the outcomes, the inputs required to produce the actions, and a strategy for linking it all together to attain good maternal health. Further, the process requires achieving consensus on: key problems and how to address them; risks that need to be managed to achieve the outcomes; and indicators that should be measured to monitor and evaluate performance. All of these are imperative to obtaining good health outcomes (Claeson, et al, 2001).

According to the framework, household and individual behaviors can be major determinants of maternal health outcomes. These behaviors include: use of household resources, nutrition behaviors, health-care demand (demand for contraception, antenatal care, etc.), and early marriage and pregnancy. To promote healthy behaviors adequately requires knowledge about how to promote health, and also requires the ability to use and act on this information. Household resources, such as access to food, clean water and sanitation, as well as financial resources to meet basic needs, can influence behavior and therefore affect health outcomes. Risks during pregnancy and early life are exacerbated by behaviors and by limited household resources. Furthermore, poor maternal health outcomes can affect household resources. Research and interventions have tended to regard all members of a household as a single unit: whatever benefits one member of the household was assumed to benefit all members equally. Evidence now suggests that this is not, in fact, the case. For example, food distribution in a family and utilization/access to health services are often not equal. It is commonly acknowledged that intra-household differences affect how decisions are made. Recognizing the importance of individuals and households in generating good or poor reproductive health outcomes should lead policy makers to focus on the constraints faced by vulnerable households and vulnerable members within households (Merrick, 2004).

Community factors, such as gender norms and practices, fatalistic attitudes, social cohesion, access to community services and cultural practices can also have a direct impact on maternal health outcomes. These factors can affect the way a household member behaves or uses household resources, which, as discussed above, can greatly affect maternal health outcomes. For example, in Ghana, pregnant women were forbidden to eat food rich in protein, including meat, fish, and fresh milk, in order to prevent the fetus from becoming overweight, thereby prolonging labor. This traditional practice could potentially have detrimental effects on the health of the expecting mother and fetus (Mills and Bertrand, 2005). Because the community factors that determine maternal health outcomes are often not within the health sector, it is essential that initiatives that aim to achieve improved maternal health outcomes encompass multisectoral issues.

The health sector and other sectors are also important areas for achieving improved maternal health. For example, an ample supply blood and other medical supplies that are required for treating an emergency are also vital to ensuring safe delivery. An often-

overlooked area is the management of reproductive health commodities. Without a sustainable and ample supply of commodities, good maternal health will not be achieved. Sectors outside of health are also crucial, such as the education sector, water and sanitation, and transportation sectors. For example, in rural Tanzania, 84 percent of women who gave birth at home intended to deliver at a health facility but did not due to distance and lack of transportation (Bicego et al., 1997). Other examples include human resources, a referral system, and health education and outreach services.

Finally, government policies and actions impact health services and therefore health outcomes. These include health reforms, health financing mechanisms, factors that improve health sector performance, and public-private partnerships. Also, policies from other sectors can greatly affect maternal health outcomes. Education policies, for example, that aim to improve girls' access to education will have long-lasting effects on maternal health outcomes.

If all the arrows from the pathway boxes pointed directly to health outcomes, achieving improved maternal health would be significantly easier than it has proven to be. However, different factors within the *Pathways* framework affect one another, both positively and negatively, and influence the final desired outcome. It is therefore of paramount importance that we recognize the synergies of the different factors inside and outside the health sector, and how they are linked to the desired outcome of improved maternal health.

### **3. BUILDING ON EXPERIENCE: AN OVERVIEW OF PROMISING APPROACHES TO IMPROVE MATERNAL HEALTH**

In light of the Millennium Development Goal to improve maternal health, this global compendium includes selected current approaches to improve maternal health outcomes that appear good or promising, or that demonstrate an innovative approach to addressing maternal health. In collecting these approaches, we contacted expert external organizations working in the area of maternal health and sought their participation in sharing their experiences. In addition, although this document is not a comprehensive review of the World Bank portfolio of maternal health-related projects, we have also shared a handful of examples from within the Bank. We have also included relevant program examples from available literature on maternal health. It should be reiterated that the approaches described are at varying stages of implementation. Although many examples have evaluation findings available, others do not yet have measurable results from evaluations to show that they work. Nonetheless, this chapter illustrates the wide range of approaches that are necessary to accelerate progress towards achieving the MDG to improve maternal health.

Based on the promising approaches included in this collection and using the *Pathways* framework as a guide, we were able to distill a number of salient themes that emerged, and that provided a means for organizing the promising approaches. The themes describe various aspects related to improving maternal health outcomes, including government policies and actions; health systems and health financing; access to health services; building capacity; quality of care; community involvement; monitoring and advancing progress; and partnerships and collaborations. For ease of understanding, the promising approaches have been organized according to these salient themes where applicable. However, this organization is not rigid, and in practice, there is overlap of promising approaches across the different themes, with many promising approaches addressing more than one theme.

The sections below provide a short narrative that describes each theme, followed by a brief overview of relevant examples. For promising approaches contributed by external organizations or from the World Bank, annexes provide more detailed information. For examples of promising approaches from the literature, we have indicated the source that was used; the full citation may be found in the References section.

#### **3.1 GOVERNMENT POLICIES AND ACTIONS**

A major challenge in achieving the Millennium Development Goal to improve maternal health is mobilizing political commitment and creating an enabling and supportive policy environment to implement evidence-based interventions and strategies effectively. Investing in social and economic development – for example, female education, poverty

reduction, and improving women's status – is critical to improving maternal health (Koblinsky, 2003). National-level policies that improve the functioning of health systems as a whole and that foster multisectoral linkages among the ministries of health, education, social protection, and transport are necessary for improved maternal health outcomes (Lule et al., 2003). Developing countries that have successfully improved maternal health outcomes generally had strong political commitment and enabling policies that supported women's education, voting and employment; and had health programs that specifically target maternal mortality reduction. Importantly, countries that have policies that explicitly target maternal mortality reduction can be successful in reducing levels of maternal mortality. Further, evidence-based advocacy using available data can enhance political commitment and is important for fostering an enabling policy environment that promotes maternal health.

**Honduras** In 1990, a surveillance study found that maternal mortality was much higher than expected at an estimated 182 maternal deaths per 100,000 live births. This finding prompted the MOH to target mortality reduction explicitly and implement policies to increase the availability of maternal health services. Regions in the country with the highest MMRs were targeted, and the government, with donor assistance, built seven new rural area hospitals and, with community input, five new maternity waiting homes attached to rural hospitals, as well as eight new birthing centers. Efforts to train health personnel, especially auxiliary nurses, accompanied the rise in facilities. By 1997, the MMR was measured at 108 deaths per 100,000 live births. [Source: Koblinsky, 2003.]

**Africa, Asia** In order to stimulate policy dialogue and strategic planning on maternal health and safe motherhood, the Academy for Educational Development (AED) developed REDUCE, an advocacy tool. The REDUCE process uses computer models to estimate the human and economic consequences of poor maternal health and maternal mortality. During a two-week workshop, a team of local experts projects the survival, health, and economic impact of maintaining the status quo versus implementing known interventions that result in reductions in mortality and morbidity. The data provide sound arguments for giving higher priority to maternal health in policy formulation, strategy development, and resource allocation. The computer models have been used in nine countries: Ethiopia, Ghana, Mali, Mauritania, Mozambique, Nigeria, Senegal, Uganda and Viet Nam. [Annex 2]

### 3.2 HEALTH SYSTEMS AND HEALTH FINANCING

According to the World Health Organization, a health system may be defined as including all the activities whose primary purpose is to promote, restore or maintain health (WHO, 2000). The specific vital functions of a health system relate to service provision; providing financial protection against the cost of illness by raising, pooling and allocating financial resources for services; responding to people's expectations of how health is delivered by making available skilled providers, equipment, drugs and supplies; and providing overall stewardship or oversight through regulation, other policies, and the collection and dissemination of information (WHO, 2000).

#### **Box 4: Supply Chain: A Vital Component of Health Systems**

Supply chain management is crucial to the success of any health system and public health program. Without an adequate supply of essential health commodities – from medicines and HIV test kits, contraceptives, to routine and emergency health supplies – the maternal health MDG will not be achieved. Simply put, if there is no product, there will be no program. In order to deliver the products to the end-users requires logistics support. Improving logistics systems and ensuring product availability requires focusing on the customer – regardless of where on the supply-chain you are working. Further, when public health logistics systems use accurate, current information, they run more efficiently and save countries money. Finally, it is important to secure policymaker support and ensure a sustained funding stream specifically for supplies and logistics. For example, the Chilean Ministry of Health is developing software with its own funding to track inventory movements and consumption. Another example is in Bangladesh, where they redesigned its in-country distribution system, installed a logistics management information system, improved forecasting procedures, and trained more than 10,000 staff in the family planning community. Today, fewer than 5 percent of facilities under its control run out of supplies.

*Sources:* John Snow, Inc. 2005; Global Health Council, 2002.

Strong functioning health systems are the necessary platform from which good quality maternal health services can be provided. Strengthening maternal health services benefits the entire health system – ensuring that a health facility can provide essential obstetric care (for example, anesthesia, blood transfusion, surgery) also means that it can provide care for trauma, accidents, and other medical emergencies (Family Care International and Safe Motherhood Inter-Agency Group, 1998b). Countries need to engage their national health systems at all levels in order to develop a culture of quality and professional accountability (Van Lererghe and De Brouwere, 2001). Unfortunately, enormous gaps remain between the potential of health systems and their actual performance, with much variation among countries that appear to have the same resources and possibilities. Health systems have failed to narrow the gap in health status disparities between rich and poor countries over the last century, and in fact the gap is widening (WHO, 2000).

In search of more accountable and efficient health systems, and to address fundamental deficiencies, many health ministries throughout the developing world are engaged in health sector reform (Box 5). These intensive long-term efforts are aimed at strengthening and improving health systems by addressing system-wide problems that hinder the adequate delivery of health services. In the end, health sector reforms should ensure equitable access to efficient, sustainable, and good quality health services. Components of health sector reform may include a variety of strategies, policies, and interventions that focus on organizational changes (decentralization, public-private partnerships, integration of service delivery); expanding health financing (alternative financing approaches); and policy changes (providing oversight, changing laws and regulations) (Dmytraczenko, Rao, and Ashford, 2003).

### Box 5: Five Goals of Health Sector Reform

- *Efficiency.* Health improvements should be achieved at the lowest possible cost.
- *Quality.* Appropriate and safe clinical services, adequate amenities, skilled staff, and essential drugs, supplies, and equipment should be available.
- *Equity.* Health resources should be distributed fairly so no one is denied access to essential care.
- *Client responsiveness.* The system should meet people’s expectations and protect their rights, including their rights to individual dignity, privacy, autonomy in decision-making, and choice of health provider.
- *Sustainability.* The health system can continue to achieve its goals using available resources.

Source: WHO, 2000; cited in Dmytraczenko, Rao, and Ashford, 2003.

### 3.2.1 Decentralization

A common organizational change under health sector reform is decentralization – the transfer of decision-making authority and management from higher levels of government (typically from central agencies) to agencies at the regional, provincial or local levels (Brinkerhoff and Leighton, 2002). These transfers may include a number of responsibilities, including planning, finance, human resources, service delivery, operations, maintenance, and information management. Decentralization is based on the notion that local organizations are in the best position to respond to the needs of health service users (Dmytraczenko, Rao and Ashford, 2003). Decentralization involves one or more of the following: delegation, privatization, devolution and deconcentration (Table 3).

**Table 3: Decentralization – Types and Definitions**

Delegation	Privatization	Devolution	Deconcentration
Transfer of managerial authority to organizations outside of the government structure, such as parastatals or NGOs	Transfer of government functions to voluntary organizations or to for-profit/non-profit organizations with varying regulation from the government	Authority transfer that creates or strengthens sub-national units of government with clear legal and geographic boundaries	Transfer of administrative authority from a central agency located in the country’s capital to the central agency’s field offices

Source: Brinkerhoff and Leighton, 2002.

As decentralized systems become better established, the hope is that they will improve accountability and transparency, and ensure that maternal health services reach vulnerable populations at the community level. Decentralization of services means that facilities are available as close to people’s homes as possible; there are adequate supplies, equipment, and trained staff (particularly in rural and remote areas); and written policies and protocols to guide service provision and allow certain functions to be delegated to appropriately trained personnel at lower levels (World Bank, 1993). Decentralization brings both advantages and disadvantages to the achievement of improved maternal health. One main advantage is the possibility of developing the District Health Systems approach, which encourages community participation as well as integration between primary care services and the district hospital (Aitken, 1998). It also allows ownership at

the district level and flexibility in the integration of different reproductive health services in a manner that best responds to local needs and available resources. However, it should be noted that if not carried out properly, decentralization and other structural changes could lead to a loss of focus and deterioration of services – for example, local entities may lack the technical and managerial skills to address maternal health issues (Lakshminarayanan, 2003) (see Box 6). To help avoid such shortfalls, health specialists and other stakeholders need to be part of the reform process, and engaged in discussions about the financing, management, and structure of the health system (Dmytraczenko, Rao, and Ashford, 2003).

#### **Box 6: Lessons Learned from a Decentralization Experience in the Philippines**

The decentralization experience in the Philippines offers many lessons to suggest that decentralization alone does not always ensure positive results, efficiency, and equity. Decentralization in the Philippines affected service delivery by disrupting the links between rural health units at the municipal level and referral facilities at the district and provincial levels. It also weakened local commitment to reproductive health problems, aggravating disparities between women and men and between the poor and non-poor. The Church had greater jurisdiction and control over some local health posts, which influenced the nature of reproductive health services that were provided. Health personnel were also affected, receiving fewer benefits and incentives for working in the decentralized system. Five years after the decentralization process was implemented, MCH outcomes remained unimpressive.

The Philippines decentralization demonstrates important lessons:

- Non-health factors, such as gender and the church, can affect health outcomes
- Health sector reforms should not be initiated without clear objectives and action plans
- Health sector reform is affected by and affects other elements of health sector performance and any reform needs other factors to be in place to achieve efficiency and effectiveness
- Not all processes and functions should be decentralized
- Monitoring and evaluation is crucial during implementation to balance authority, ensure efficiency, equity, and effectiveness
- Stakeholder involvement is critical to ensure needs are met, and fosters ownership of the process
- Decentralization, and health reform in general, is a means to an end
- Reproductive health can be acutely affected by health sector reforms
- Decentralization should be introduced gradually, focusing on institutional capacity at all levels

With a centralized health system, initiatives were generally driven from the center. With decentralization, however, such efforts must be regionally driven and regionally owned. Thus reproductive health must have advocates and proponents at the regional levels to ensure availability and access to services.

*Source:* Lakshminarayanan, 2003.

**India** The World Bank-assisted Family Welfare Urban Slums Project in India aimed to improve access and demand for family planning services in urban slums. It also aimed to improve maternal and child health by decreasing maternal and infant mortality rates among slum residents. The key strategy was to decentralize program management to municipalities and empower slum communities through a network of women mobilizers. The results indicated a significant decline in fertility among slum dwellers and improved maternal and child health outcomes, evidenced by a decrease in child mortality and an increase in the use of essential reproductive health services. [Annex 3]

### 3.2.2 Public-Private Partnerships

Public-private partnerships (PPP) are another type of organizational change in health sector reform. Governments worldwide have been looking for new techniques of providing and funding services with limited involvement and resources from the government. Engaging the private sector has the potential to improve the quality of services, expand the supply of key health goods and services, complement and supplement public health schemes, and increase utilization of health services. Public-private partnerships contribute to the financing and provision of health services by combining the skills and resources of a wide range of collaborators in innovative ways (Widdus, 2001).

The private sector includes all actors outside the government, such as for-profit, nonprofit, formal and non-formal entities, and comprises service providers, non-governmental organizations, pharmacies and pharmaceutical companies, producers and suppliers, shopkeepers, and traditional healers, among others. Examples of instruments available to engage the private sector include: contracting (Box 7), social marketing, regulation and standard setting, information dissemination and training, conversion, and social franchising.

#### **Box 7: Contracting of Reproductive Health Services**

Government contracting of private organizations is increasingly being used to meet the growing demand for quality reproductive health care in developing nations. Although contracting is not a cure-all for ailing health systems, many recognize the potential of contracting as a powerful tool to improve reproductive health care. Many different forms of contracting exist, such as contracting out (outsourcing), contracting in, subsidy, leasing or rental, and privatization.

There are many reasons to contract health services, such as: to improve access and quality; to improve access for the poor and for other under-served groups; to minimize the financial burden on the public sector; and to make up for lack of capacity in specific tasks. For example, in Madagascar, non-governmental groups were contracted for maternal and child nutrition programs, as the existing government programs were not reaching the poor and peri-urban areas. Further, contracting of reproductive health services can shield governments from the controversy around services such as family planning: to avoid criticism by religious conservatives, the Colombian government left the provision of family planning services to the private sector.

*Source:* Rosen, 2000.

**Pakistan** A 2003 needs assessment found that women in 6 out of 8 sub-districts in Khairpur did not have 24-hour EmOC and that services were poorly managed and of poor quality. Thus, a partnership between Marie Stopes Society, a public sector NGO, and a government Rural Health Center in Khairpur district, Sindh, Pakistan aims to upgrade the center as a referral facility for EmOC. The project is in the process of making investments in physical infrastructure and equipment, training key staff in surgery and anesthesia, and helping set up community management teams to act as local watchdogs. To increase the sustainability of the intervention, a revolving fund managed by the

community will be set up to pay for recurring maintenance expenses. The project is underway and a formal impact assessment has not yet been done. [Annex 3]

**India** The Family Welfare Project, supported by the World Bank, aimed to strengthen and improve the performance of the Government of India's Family Welfare Program in three states: Assam, Rajasthan, and Karnataka. The goal was to improve maternal health and reduce maternal and child mortality. One component of this project implemented public-private partnerships, particularly to make reproductive and maternal health information and services more available to people in hard to reach areas. NGOs and private voluntary organizations (PVOs) were contracted to conduct information, education, and communication (IEC) campaigns, social marketing of contraceptive supplies, training of auxiliary nurse-midwives, and management of service delivery in remote areas. The partnerships between the Government of India and the NGOs/PVOs were deemed successful and are being scaled up. [Annex 3]

**Kenya** Experienced private nurse-midwives (PNMs) are an ideal cadre for scaling-up primary-level PAC services in Kenya, as they are the major source of antenatal care, family planning and other reproductive health services in many parts of the country. The PRIME Project developed a pilot program in 1998 to train PNMs in key areas of PAC services. Through the PRIME II Project (implemented by IntraHealth International Inc. and partners), the program was scaled-up in the three pilot provinces in 2000 and expanded to a fourth province in 2003. Components of training included values, client-provider interaction and counseling, management of complications, manual vacuum aspiration procedures, infection prevention, pain management, post-abortion family planning counseling and other services, STI/HIV management, record keeping and community outreach. Cost-sharing by providers was an important part of scale-up. The program demonstrated that PNMs can and do deliver comprehensive PAC services and that they are acceptable to women. Results from a 2004 study on sustainability of private providers of PAC services are expected to have implications for future scale-up efforts. [Annex 3]

**Jordan** The MOH Health Insurance Directorate in Jordan is working with the Partners for Health Reform*plus* (PHR*plus*) project, Abt Associates Inc., to develop a financing mechanism for contracting with private hospitals that would contain better financial incentives for care as well as improve continuity of care for MOH beneficiaries. The new contracting system would enable expectant women to enroll with a participating private hospital that would be paid a single amount for the entire bundle of necessary services, including prenatal, delivery, and postpartum care. After conducting a comprehensive assessment of private hospitals in Amman, the MOH plans to launch a pilot project to contract with three private hospitals to provide maternity care for 250 MOH beneficiaries, which will be launched in 2005. [Annex 3]

**Indonesia** A Safe Motherhood Project, launched by the Government of Indonesia with support from the World Bank, was designed to meet the needs of the poor and attempted to improve maternal health status and reduce mortality and morbidity. The unique component of this project was the targeted performance-based contracts (TPC)

component that used privately trained village midwives (BDD) to provide reproductive health services. To ensure equity amongst poorer women receiving maternal health services and to enhance the TPC BDD's revenue-earning potential in poor villages, poor women who qualify under a certain set of criteria, received booklets of printed vouchers. The vouchers were used to pay for a basic package of safe motherhood services from the TPC BDD, and the TPC BDD could present the vouchers to the government for payment. The TPC pilot successfully demonstrated that performance-based contracts for private healthcare providers, in combination with demand side intervention strategies such as the vouchers that reach and empower the poor, is a suitable, practical and sound model for continued use by the district health systems. [Annex 3]

### **3.2.3 Integration of Health Services**

In the years prior to health sector reform, many programs, such as those for family planning, immunization, and tuberculosis treatment, were usually provided by stand-alone, vertical programs that rarely coordinated their efforts or pooled resources with other services. A key initiative in health sector reform has been to combine separate health services into a single restructured system, which in principle, reduces cost and improves services by using the same infrastructure, supplies, equipment, and personnel for multiple functions. Although integration can potentially improve the overall efficiency of service delivery, if conscious efforts are not made to ensure the integration, it can also lead to the loss of certain services, since providers have to divide their time and resources over a wider array of health services (Dmytrazcenko, Rao, and Ashford, 2003).

**Zambia** In order to improve the care and health outcomes of all pregnant women, regardless of HIV status, the USAID-funded LINKAGES Project, managed by AED, integrated prevention of mother-to-child transmission (PMTCT) services with maternal and child (MCH) services in 48 sites in 9 districts in 3 provinces of Zambia by providing a comprehensive clinical and community care package. The package featured training providers in PMTCT and infant feeding counseling, safe delivery practices, universal HIV counseling as part of routine antenatal services, short-course antiretroviral prophylaxis for HIV-infected women and their infants, and referrals to family planning, child health, and community services. Other program interventions included facility, community, and behavioral assessments; policy advocacy for maternal and infant health and nutrition; and community mobilization. To increase demand for HIV testing and counseling and raise awareness of risk reduction methods, the program developed a behavior change communication strategy. [Annex 3]

**Ghana** A community-based Safe Motherhood Initiative was piloted in Ghana for 17 months by the Center for Development and Population Activities (CEDPA). The initiative integrated safe motherhood activities into existing family planning programs in 3 rural communities in northern Ghana. A main component of the initiative was training safe motherhood volunteers (SMVs) and safe motherhood advocates (SMAs). SMVs were originally community-based distributors and educators in family planning, whose expanded role included providing information to help women and families recognize

danger signs. SMAs were community development workers who helped remove barriers that prevented pregnant women from reaching appropriate care promptly. An endline evaluation identified a number of the initiative's achievements: 86% of pregnant women visited an antenatal clinic within the first trimester of pregnancy (compared to only 5% before); 75% of recently delivered mothers indicated that they ate more food during their recent pregnancy than during their previous pregnancy; 44% of recently delivered mothers indicated that they introduced nutritious foods into their diet during their most recent pregnancy; 7% of pregnant women said they used a local herb with toxic effects to induce labor during their most recent pregnancy, compared to 49% during their previous pregnancy; and 36% of mothers said they breastfed their babies immediately after delivery, compared to only 15% before the SMI. Furthermore, through counseling provided by SMVs, pregnant women and their families were able to: organize a birth plan for normal birth; anticipate and identify obstetric complications and self-refer for care; and organize an emergency plan for unanticipated complications. [Source: Payne and Afenyadu, 2003.]

### **3.2.4 Costing of Maternal Health Services**

Achieving the MDGs and the goals set forth in the ICPD Program of Action require significant improvements in maternal and reproductive health. Yet despite extensive sector reforms, health systems in many developing countries still fail to reach large numbers of women with appropriate interventions – especially the poorest and most vulnerable (Knippenberg et al., 2004). There are a number of reasons for estimating the costs, effectiveness, and benefits of safe motherhood programs. Cost analysis is necessary for assessing the affordability of proposed or ongoing programs, considering the need to mobilize resources, and identifying effective interventions to which more resources should be directed. Since ICPD, there has been considerable interest among policy makers, program planners, and managers in the cost of providing maternal and reproductive health (RH) services. In part, there was concern that the delivery of the full package of RH services that was recommended in the ICPD Program of Action would be too costly for countries realistically to afford. It is much easier to identify what is needed to ensure improved maternal health outcomes than it is to identify what those services are going to cost and where the finances are going to come from.

Considering the financial costs and constraints to health service provision is a crucial component when motivating policy makers and service providers to invest in maternal health and allocate resources effectively. At the time of ICPD, there was a substantial lack of good data regarding the true costs of running a reproductive health program. However, several studies since then have measured the costs of these services and identified methodologies to do so, for example, the Mother-Baby Package as described in Box 8. Costing information can be used to improve maternal health outcomes through advocacy, planning, implementation and monitoring.

### **Box 8: Mother-Baby Package**

The Mother-Baby Package Costing Spreadsheet is a tool that estimates the cost of implementing a set of WHO Safe Motherhood Program interventions to reduce maternal and newborn mortality and morbidity at the district level. It provides a detailed list of clinical assumptions that can be modified or adapted to different settings. The tool also has a number of tables with comparative country data for the user to access in case local data are not readily available. Included are estimates of total, per capita and per-birth cost for the district. The estimates are further broken down by input (such as drugs, vaccines, salaries and infrastructure), by intervention (such as management of normal birth, hemorrhage, eclampsia and sepsis), and by service location or level (hospital, health centre and health post).

The Mother-Baby Package was used in Uganda, where it was realized that the government was spending about US\$0.50 per capita on maternal and newborn health care. To increase expenditures to correspond with the standards and guidelines set forth in the Mother-Baby Package would cost approximately US\$1.40 per capita, an incremental cost of US\$0.90. The inclusion of capital and overhead costs would raise the cost to approximately US\$1.80 per capita, bringing the incremental cost up to US\$1.30. This study assisted national authorities, donor governments, and other partners at the national level in considering the substantial recurrent cost implications of providing higher-quality maternal and newborn care, and in doing so it has facilitated an important dialogue on maternal and newborn health care financing and sustainability issues.

*For more information:* <http://www.who.int/reproductive-health/economics/intro.html>

Further, there is another aspect of “costing” that estimates the added resources required to scale up key public health interventions to achieve the MDGs. Both developing country governments and donors ask how much additional resources will be required to accelerate progress towards the health MDGs by 2015. There are a variety of methods used to estimate these figures, which has led to debates over the most appropriate and reliable method that should be used for policy dialogue and decision making at the global and country level. Some of these methods include the MDG Needs Assessments Model developed by the United Nations Millennium Project; elasticity estimates through econometric modeling developed by World Bank staff; and Maquette for MDGs developed by DECVP of the World Bank (Gottret, Fang and Brenzel, 2004). One promising approach is the Marginal Budgeting for Bottlenecks tool developed by UNICEF, the World Bank and WHO (Box 9).

### **Box 9: Marginal Budgeting for Bottlenecks**

The Marginal Budgeting for Bottlenecks (MBB) was developed by the United Nations Children's Fund, the World Bank, and the World Health Organization to facilitate countries' preparation of a medium-term national health expenditure plan that is linked to national health outcomes, such as the PRSP targets and the MDGs. The objective of the MBB tool is to estimate the cost of removing country-specific constraints – or bottlenecks – that are identified as inhibiting the effective delivery and utilization of services. Further, it estimates the marginal costs of overcoming those constraints and facilitates a budgeting process for government health expenditures that improves the efficiency of allocations of the newly available resources, providing a basis for policy dialogue and planning.

The MBB helps answer the following questions: What are the major health systems bottlenecks that hamper the delivery of health services and what can be done to address them? How much money is needed to achieve the expected results? And how much can health outcomes be improved by removing the bottlenecks?

When using the MBB tool, the first steps are to evaluate the current level of effective coverage with the specific health intervention, set the target coverage level and identify what and where the bottlenecks exist. The next step is to address the issues of how to remove the bottlenecks by: identifying the inputs related to the planned actions to overcome the bottlenecks, assigning the actions values, determining the quantities, and estimating the cost. More simply put, the model flows from defining the desired coverage of a particular service/intervention, identifying the obstacles to achieving the coverage, establishing an action plan for overcoming those obstacles, and estimating the cost of such actions.

The MBB has often been used for maternal and child health, as it estimates the impact on under five mortality and maternal mortality reduction. As this paper emphasizes, improving maternal health outcomes requires a multisectoral approach. The MBB model takes multisectoral issues into consideration (such as education of mothers, water and sanitation) and allows one to identify what the determinants and thus bottlenecks are to improving maternal health, identify appropriate interventions, and estimate the cost of implementing the intervention.

To date, the tool has been used effectively in the preparation of Medium Term Expenditure Frameworks (MTEF) for Mauritania and Mali, which resulted in a doubling of the health budgets. It has also been used for policy dialogue in Madagascar and India. The process has begun in Benin, Ghana, Sierra Leone, and Ethiopia.

*Sources:* Wagstaff and Claeson, 2004; Knippenberg et al., 2004; Gottret, Fang and Brenzel, 2004; and Yazbeck, 1999.

### **3.2.5 Alternative Health Financing Schemes**

An efficient health system should improve health outcomes and ensure financial protection for the poor, especially during catastrophic illness. The shortage of economic resources, high costs of seeking care, and lack of health financing schemes can affect a family's decision-making process, leading to delays in the use of appropriate medical care. There are numerous ways in which governments, employers, private companies and communities can reduce the amount households have to pay out-of-pocket when using maternal health services. In most cases, some type of health insurance scheme is used to reduce the role of user fees and out-of-pocket payments. Insurance schemes are intended to provide a way of both increasing utilization of health services and reducing the impact

of service utilization on household incomes. For example, government-owned social health insurance has been introduced in several countries, including Bolivia, with considerable impact on the overall use of maternal health services (WHO, 2000). Community financing schemes are another approach to increasing access to health care, and are formed on the basis of mutual aid and collective pooling of financial risk associated with health. These initiatives can help increase access and utilization of maternal health services for vulnerable and marginalized populations who otherwise often face exclusion from these services for financial reasons. A review of community financing approaches from Asia and Africa concluded that they can indeed improve access to care and that broad risk-sharing arrangements in health financing have a considerable impact on health (Preker et al., 2002; Jakab and Krishnan, 2004).

The use of appropriate medical care is especially critical in the event of an obstetric emergency. There is evidence to suggest that the lack of financial resources has a negative effect on utilization of medical care when women develop obstetric complications (Nanda, 2003). The use of loan funds to improve financial access to health care has been developed and documented in several countries, and is particularly relevant in the context of access to emergency obstetric care. Projects carried out by the Prevention of Maternal Mortality (PMM) Network in Africa included the use of community loan funds to increase access to emergency obstetric care (PMM Network, 1996). No prepayment was required for the provision of these loans, but women were required to repay the loan as soon as possible. Findings from the PMM Network studies showed that repayment rates were often not in full, but the use of loans is likely to have influenced the increases in utilization of services that were evident (Fofana et al., 1997; Chiwuzie et al., 1997; Essien et al., 1997).

**Bolivia** One aim of the government's Health Sector Reform Project, supported by the World Bank, was to reduce infant and maternal mortality rates in the country. To do this, the project introduced an infant and maternal public insurance scheme, which helped increase coverage of high priority health interventions. The insurance scheme was financed through a public financing scheme (SBS) for high priority health interventions for infants, pregnant women, and women of reproductive age. The development of the public insurance scheme has had a sustained impact on the role municipalities play in the health sector and on public providers. The establishment of an explicit package of services free-of-charge for the population increased public awareness of health issues and their right to access health services. An evaluation showed that the percentage of births attended by trained personnel was 42% in 1998 and increased to 54% in 2002. The percentage of women who had gone through a complete cycle of antenatal care visits increased from 30% to 34% during the same period. Further, the early neonatal hospital mortality decreased slightly from 9 to 7 per 1000 live births. There was substantial growth in the use of prenatal care and inpatient deliveries because of the insurance program. There was also a 39% increase in prenatal visits in public facilities and the private sector saw a decrease in patients during that time. Finally, when the data were disaggregated by socio-economic status, analysis shows that the poorest segment of the population increased use of skilled birth attendants and of institutional deliveries. [Annex 3]

**Rwanda** The Rwandan MOH, with technical support from Abt Associates Inc., piloted prepayment schemes known as Mutual Health Organizations (MHOs). MHO membership covers a basic health care package that includes a variety of services (e.g., deliveries, essential drugs, curative and preventive services, and selected hospital based services). Households can join the district scheme by paying an annual fee (currently \$4.25). There is a small co-payment per visit to the health center, but none for covered district hospital services. The existence of MHOs provided a mechanism to target subsidies to the very poor, through purchase of memberships by government and local charities. Following the pilot's success and subsequent spontaneous community development efforts, there were 214 MHOs across Rwanda by 2003 covering 1.7 million people, about 21% of the total population. [Annex 3]

**Ghana, Senegal, Mali** Abt Associates Inc., through the USAID-funded Partners for Health Reform plus (PHR*plus*) Project, has been actively involved in the development and promotion of community-based health financing schemes, also known as Mutual Health Organizations (MHOs) in West Africa. Results to date indicate that despite a significant increase in MHOs in Ghana, reproductive health benefits, such as coverage of normal deliveries (covered by 35% of MHOs) and family planning (covered by 5%) could be strengthened, though more than half of the MHOs cover complicated deliveries. In Senegal, approximately one-third of existing MHOs cover family planning, and most cover some reproductive health services. In Mali, while knowledge of maternal health issues is high, actual use of services is low because of perceived lack of need and associated costs. Through PHR*plus*, 4 new MHOs that cover maternal and reproductive health services are now operational in Mali. Forthcoming results of household surveys in all three countries will shed further light on the impact of MHOs on reproductive health utilization. [Annex 3]

### 3.3 ACCESS TO HEALTH SERVICES

Access to maternal health services means that services are within reach of women who need it: women can get to these services easily and are not deterred from using available services. Unfortunately, great disparities in access to maternal health services persist between developing and developed countries, and between poor and rich women, rural and urban women, and uneducated and educated women (AbouZahr, 1997). In the context of maternal health, access to care varies depending on the type of health service considered since it is generally easier to use services for family planning or antenatal care than for delivery care. However, it is during labor, delivery, and the immediate postpartum period that most obstetric complications arise and thus, care is most urgently needed (Maine 1993; AbouZahr, 1997). In many places, the primary mode of transportation for women in labor is walking (WHO, 1998). Hence, care-seeking may be limited by the unpredictability of the situation, fear of delivering en route, and the physical hardships of traveling in such a state (Rose et al., 2001). This makes it especially important for health services to be available and accessible so that women can readily seek care in the event of an obstetric emergency. Sadly, many pregnant women in

developing countries continue to lack access to essential maternal health services, placing these women at risk for maternal death and poor maternal health. Despite the myriad barriers to accessing maternal health services, there is evidence that women and their families do indeed go to great lengths to access care, particularly when obstetric emergencies arise, and under very difficult circumstances; for example, where a woman in labor walks for hours over rugged terrain to try and reach a health facility (McCord and Chowdhury, 2003).

Improving access to maternal health care entails a wide variety of measures to address supply and demand side barriers. The sections below focus on increasing the availability of health services, strengthening the referral system, and reaching hardly reached and marginalized groups.

### **3.3.1 Increasing the Availability of Health Services**

The concept of access includes physical barriers such as the supply and availability of health services. At a minimum level, maternal health services need to be available in order for women to be able to use them. Poor utilization of maternal health services may arise when services are too far away (Rose et al., 2001). Moreover, even when women reach a health center, they may not be able to receive the services they require. Public facilities, especially those serving poor and geographically remote areas, commonly face limited human resources and a shortage of skilled providers. In Asia and sub-Saharan Africa, only one skilled attendant is available for every 300,000 people, resulting in a ratio of one skilled attendant for every 15,000 births (MacDonald and Starrs, 2002).

***Mozambique*** In Mozambique, where there is strong government commitment to improve maternal health, UNFPA, with support from the Averting Maternal Death and Disability (AMDD) Program (Box 10), has implemented a project in the central province of Sofala, in a poor and rural population, to increase utilization of health services by improving availability, accessibility, and quality of EmOC provided at Basic and Comprehensive facilities. The UN Process Indicators<sup>2</sup> used to monitor and evaluate the project have shown positive trends since inception: 130% increase of deliveries in EmOC facilities, 150% increase in Met Need for EmOC, 20% increase in Caesarean sections, and 20% decrease in the obstetric case fatality rate. These findings have encouraged the government to upscale and mobilize resources for sustaining the national strategy in the whole country. [Annex 4]

***Mali, Vietnam*** A similar AMDD-supported project to increase availability, access, quality and utilization of emergency obstetric care services at rural, district, and provincial hospitals was carried out by Save the Children in Mali and Vietnam. UN Process Indicators (the key monitoring and evaluation tools used) showed improvements

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<sup>2</sup> The UN Process Indicators for monitoring obstetric services, issued by UNICEF, WHO, and UNFPA in 1997, describe the major pathway to reducing maternal mortality in terms of the availability, use, and (to some extent) quality of emergency obstetric care. (For more information, see Table 4.)

between 2001 and 2004 in both countries. In Vietnam: 95% increase in deliveries in improved hospitals, 33% increase in Met Need for EmOC, 38% increase in C-sections. In Mali: 130% increase in deliveries in improved hospitals, increase in Met Need from 6% to 23%, 62.5% increase in C-sections, and 50% decrease in the case fatality rate. In addition, there was impact beyond the borders of the project sites at the national level where changes occurred with the adoption of EmOC standards into existing national reproductive health norms and procedures. [Annex 4]

**Box 10: Averting Maternal Death and Disability Program**

The Averting Maternal Death and Disability Program is a 5-year initiative supported by a generous grant from the Bill and Melinda Gates Foundation and based at Columbia University. AMDD seeks to increase the availability, utilization, and quality of emergency obstetric care in developing countries. AMDD works in partnership with United Nations agencies and non-governmental organizations that already have field operations. AMDD-supported projects include 83 projects in 51 countries.

For more information: <http://www.amdd.hs.columbia.edu>

**Burkina Faso, Kenya, Tanzania** Increasing access to skilled care has been a major focus of Family Care International's efforts in Africa through its Skilled Care Initiative (SCI), which aims to increase the number of women who receive skilled care before, during, and after childbirth. The project works to strengthen the capacity of the skilled attendant, as well as the enabling environment, which includes policy and regulatory frameworks; supplies, equipment, and infrastructure; and systems of communication, transportation, and referral. SCI improves services where the need is greatest—in the health centers and dispensaries closest to women. Since the project is not scheduled to end until August 2005, no formal impact evaluation has yet been done. [Annex 4]

**Indonesia** In Indonesia, where many births are at home without a skilled provider, PPH causes an estimated 45% of maternal deaths. To address this problem, JHPIEGO's Maternal and Neonatal Health (MNH) Program conducted a safety, acceptability, feasibility, and program effectiveness study on community-based distribution of misoprostol for prevention of PPH. The study revealed that women who used misoprostol were 24% less likely to report excessive bleeding, 31% less likely to need any emergency referral, and 47% less likely to need an emergency referral for PPH. A large proportion of women reported that they would be willing to use misoprostol in their next pregnancies, pay for it themselves, and recommend it to friends. A resolution incorporating prevention of PPH into the national health strategy has been issued, and the government plans to scale up community-based distribution of misoprostol as an effective strategy for reducing the risk of PPH when skilled care during childbirth is not available. [Annex 4]

**Peru** Ipas worked to improve quality and accessibility of PAC services in 14 public sector rural hospitals and health centers in Ayacucho in 2001–2002 by: training and supervision of providers, including university-trained midwives; introduction of manual vacuum aspiration (MVA); provision of post-abortion family planning; and use of practical computer-based recordkeeping and monitoring tools. At the project's end, PAC-

trained providers were more widely available; all 8 hospitals and 78% of health centers in the state had a trained provider. In the 14 core hospitals and health centers, use of MVA and provision of post-abortion contraception increased, while patient waiting times before treatment decreased. The addition of PAC as a routine health service is not an enormous, high-cost challenge, and existing infrastructure can be used for PAC services. [Annex 4]

**Malawi** To help improve maternal health and improve access to contraceptives in Malawi, the Ministry of Health and Population, with funding from the World Bank, implemented the Population and Family Planning project, which aimed to determine the feasibility of a comprehensive, district-wide community-based distribution approach to the provision of family planning services. Given the shortage of skilled health personnel in Malawi, Community-Based Distribution Agents were trained to provide family planning services and referrals to women and men of reproductive age in the communities. The evaluation showed that contraceptive use doubled in all villages covered in the pilot districts and that women were using modern contraceptives at younger ages and with lower parity. [Annex 4]

**Burkina Faso** JHPIEGO's Maternal and Neonatal Health Program used a variety of strategies to address malaria in pregnancy in Burkina Faso including: interagency collaboration; policy and advocacy; updated skills training in ANC; and community social mobilization educational campaigns. Sixteen months after introducing intermittent preventive treatment (IPT) with sulfadoxine-pyrimethamine (SP) to 23 health centers in the Koupéla district, follow-up data show that 92% of women attending ANC received at least one dose of SP, 64% received two doses, and 40% received three doses. The rate of first-time ANC users rose from 66% in 2000 to 83% in 2003, and for the first quarter of 2004 the rate was 88%. Several countries are now addressing the problem of rising resistance to chloroquine by conducting pilot programs and/or adopting policies to implement IPT using SP based on the Burkina Faso model project. [Annex 4]

### **3.3.2 Strengthening the Referral System**

An essential component of access to health services is a functioning referral system – it is particularly important during pregnancy and delivery for providing access to emergency obstetric care to save women's lives, and for providing backup support to antenatal and delivery care in first line facilities (Maine, 1999; Jahn and De Brouwere, 2001). A functioning referral system requires adequate information and communication between the birth attendant at the household and up through the level of a health facility (Freedman et al., 2003). Therefore, it also implies a transportation system, the existence of health facilities close enough to where women live, and trained providers who are equipped and supported to provide the services appropriate at each level. The specific requirements of an effective referral system may be summed up to include the following: 1) an adequately resourced referral center; 2) communications and feedback systems; 3) designated transport; 4) agreed setting-specific protocols for the identification of complications; 5) personnel trained in their use; 6) teamwork between referral levels; 7) a unified records system; and 8) mechanisms to ensure that patients do not bypass a level

of the referral system (Murray et al., 2001). A functioning referral system is not only important for maternal health, but also for all health emergencies in which such systems can be mobilized to benefit the entire community (Tsu and Shane, 2004).

A well-functioning referral system provides linkages and referrals between women and their families in the community, the peripheral health facility, and the hospital. Thus, for women with obstetric complications, the referral system aims to ensure that women are cared for in the right place with lifesaving treatment provided at the minimum cost (Murray et al., 2001). Related to this concept of referral is a new approach that is under development by Save the Children known as the Household to Hospital Continuum of Care (HHCC) for Maternal and Newborn Care. The HHCC approach to improving maternal and newborn outcomes is a more systematic and comprehensive approach to programming that recognizes the need to respond to complications for the mother and newborn as quickly and as close to home as technically feasible. Specifically, the HHCC approach seeks to develop capacity along a continuum of health promotive and lifesaving care that links households, peripheral facilities, and district referral hospitals in order to improve maternal and newborn health outcomes (Box 11).

**Uganda** In 1996, with support from UNFPA, the Ugandan Ministry of Health launched the RESCUER Project – the Rural Extended Services and Care for Ultimate Emergency Relief Project. This pilot project was launched in Iganga district, Eastern Uganda in order to establish a sustainable and effective referral system to handle emergency obstetric cases. The three main components of the project were: 1) equipping health referral facilities to provide good quality obstetric care including provision of minimum equipment and renovation, and training and posting of nurses and midwives; 2) establishing feasible, reliable, and cost-effective communications systems between referral facilities and traditional birth attendants in selected villages in the catchment areas; and 3) devising an efficient means of transporting women to the facilities using three-wheeled motorized vehicles. An evaluation of the project found that there was a dramatic increase in the number of obstetric referrals and Caesarean sections; improved care-seeking behavior on the part of the community; and an appreciation by the community of the usefulness of the referral system. There was also a reduction in the maternal mortality ratio in Iganga district over the project period from 500 maternal deaths per 100,000 live births in 1996 to 271 deaths/100,000 live births in 1999. The project has been expanded to additional districts. [Sources: Starrs, 1998; Musoke, 2002.]

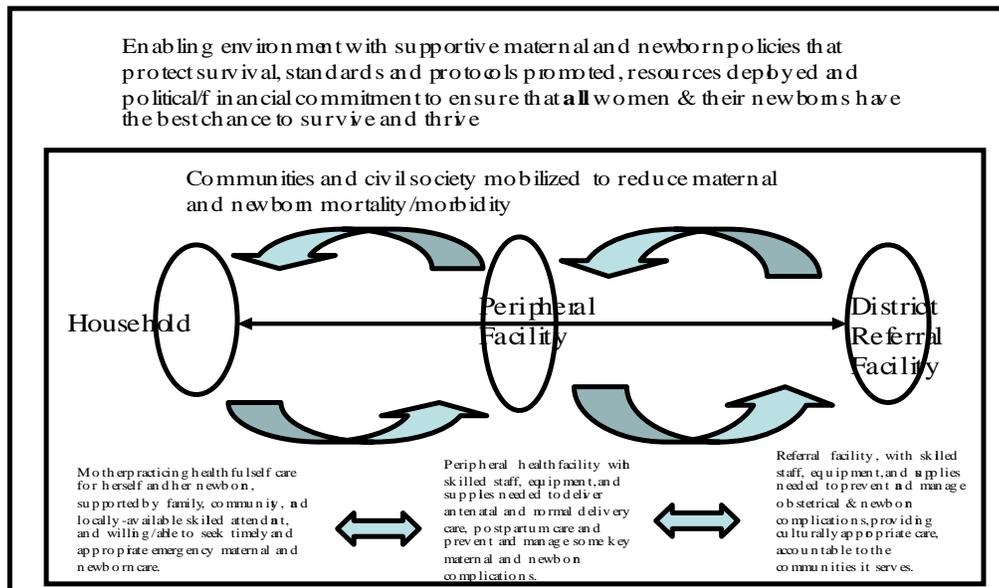
**Box 11: The Household to Hospital Continuum of Care (HHCC) for Maternal and Newborn Care**

The HHCC approach to improving maternal and newborn outcomes seeks to develop capacity along a continuum of health promotive and lifesaving care that links: 1) households; 2) peripheral facilities; and 3) district referral hospitals. In the process, the HHCC approach looks critically at what services and interventions could ideally be provided and by whom at each of these 3 levels, to prevent maternal and neonatal mortality and morbidity. In other words, if effective interventions related to pregnancy, delivery, and postpartum care that we know **could** be implemented at the given level, were **in fact** successfully implemented in the household, at the peripheral health center and at the hospital level, then a greater proportion of the current maternal and newborn mortality and morbidity could be averted at lower cost to the family and possibly to the system.

Strengthening hospitals to provide quality care is critical, but is not sufficient for reducing maternal and newborn mortality. The approach recommends investments to strengthen peripheral facilities and even community health workers to provide at least some elements of quality Basic EmOC and essential newborn care either through skilled birth attendants or trained community-based health workers in the facility or through outreach efforts. These facilities and their staff members are the first point of contact for women and newborns with the formal health system, and are more accessible during the day and even at nighttime when compared to district referral hospitals. Key household practices and behaviors that support healthy pregnancy, newborn care and delivery care are an important component of the approach and should also be strengthened as part of community level continuum of care. Finally, communications, transport and feedback mechanisms need to be established to complete the continuum of care through social mobilization and additional investments.

Putting in place the HHCC approach will require social, political and financial commitment to creating the enabling environment inside and between the home, the peripheral facility and the hospital to influence survival outcomes, and advocacy at all the 3 levels. Below is a simplified diagram of the HHCC Approach for Maternal and Newborn Care:

**The Household to Hospital Continuum of Care**



For more information, contact: Save the Children; Tel: 202.530.4387 or 203.221.4269; Email: [sotchere@dc.savechildren.org](mailto:sotchere@dc.savechildren.org) / [mpowers@savechildren.org](mailto:mpowers@savechildren.org)

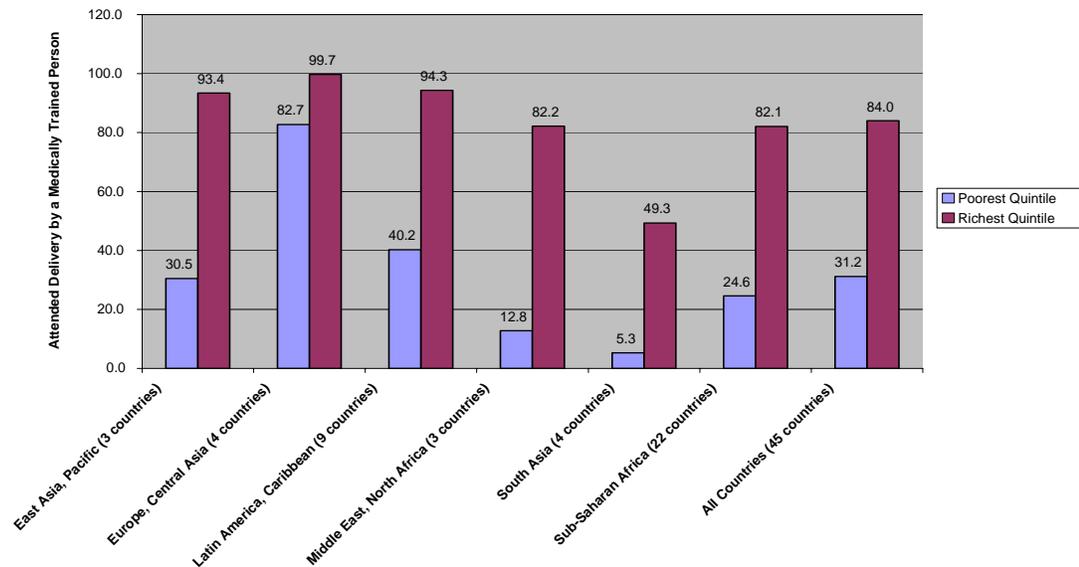
### 3.3.3 Reaching Hard to Reach and Marginalized Groups

The hardly reached and marginalized groups refer to women and men who are the most disadvantaged and underserved by existing maternal health programs (PATH, 2002). Achieving equitable access in maternal health services means reaching out with inclusive programs and policies to hardly reached and marginalized groups, including the poor, refugees and internally displaced persons, rural and remote populations, adolescents, and men. Each of these groups is discussed in more detail below.

#### *Addressing inequities*

Recent evidence suggests that a huge disparity exists by economic status in the use of maternal health services, including the use of skilled delivery attendants, antenatal care, modern contraception, and immunization (Gwatkin et al., 2000a). As seen in Figure 7, in all regions, there is a gap between the poorest and richest quintiles in the proportion of births attended by a skilled attendant. In some regions, the gap is huge. In Zambia, for example, 90 percent of women in the richest quintile used a trained medical professional at delivery compared to just 20 percent in the poorest quintile (Kunst and Houweling, 2001). Similar findings are reported from Rajasthan, India where almost 80 percent of deliveries are attended by a medically trained person for women in the richest quintile compared to only 16 percent for women in the poorest quintile (Oomman, Lule and Chhabra, 2003). Moreover, these poor-rich differences in the use of delivery assistance generally exceed disparities in the use of most other maternal and reproductive health services (for example, use of modern contraception, antenatal care, immunization). Addressing inequities in the provision and utilization of services is critical for meeting the needs of the poor and the vulnerable (Wagstaff, 2002).

**Figure 7: Poorest Women Have the Least Access to a Skilled Attendant at Delivery**



Source: Gwatkin et al., 2000b.

**Mexico** The PROGRESA (Programa Nacional de Educación, Salud y Alimentación) program combines a traditional cash transfer program with financial incentives for families to invest in their own health, education and nutrition. Cash transfers are disbursed (up to 25% of household income to the extremely poor) if: every family member accepts preventive health services; children ages 0–5 and lactating mothers attend nutrition monitoring clinics where their growth is measured, they obtain nutrition supplements, and they receive education on nutrition and hygiene; and pregnant women visit clinics to obtain prenatal care, nutritional supplements, and health education. Further, one woman in each locality is selected by the community to act as the PROGRESA outreach worker. They provide information on program requirements and schedules and procedures for receiving different support. A rigorous evaluation showed that the program significantly increased utilization of public health clinics for preventive care including prenatal care, child nutrition monitoring, and adult checkups. Moreover, there was no reduction in utilization of private providers, suggesting that the increase in utilization at public clinics was not substituting public care for private care. The nationwide program serves 20 million people, and almost 60% of the people reached belong to the poorest 20% of the country’s population. [Sources: Skoufias, 2000; Gertler, 2000.]

**China** The World Bank-assisted Comprehensive Maternal and Child Health Project (Health VI) introduced a Poverty Alleviation Fund in Yunnan province, China that provided vouchers to poor women, which they could use instead of cash to pay for a variety of basic maternal health services at government facilities – for example, antenatal care, hospital delivery, EmOC services, and postnatal care. The service-providing

facilities then forwarded the vouchers received to the project authorities, which reimbursed the facilities. Preliminary data analysis from an evaluation suggests that the Fund has made noteworthy progress toward reaching the poorest 5% of the population. [Source: Kelin, Kaining, and Songuan, 2003.]

### *Rural and remote populations*

An effective strategy to mitigate distance and other problems of accessibility is to take services directly to hard to reach populations, for example, those in rural or remote areas. Services that have used mobile clinics and community health workers to provide antenatal and family planning services have been successful in reaching these populations. For example, in both Sri Lanka and Malaysia, a national network of health centers with government-employed midwives facilitated community outreach in each country (Pathmanathan et al., 2003). In Mexico, a US\$310 million World Bank loan supported the expansion of a basic health services program to reach remote villages – this unprecedented collaboration between the federal and local governments enabled hundreds of mobile units to deliver services such as family planning, health and nutrition information, and delivery care (World Bank, 2000).

**Guatemala** To help reach Guatemalan refugees who were repatriated into poor, isolated regions lacking health services, a mobile team from Marie Stopes Mexico worked to provide comprehensive outreach health services in order to improve access to high quality sexual and reproductive health (SRH) services and to raise awareness of SRH issues. The project team provided non-surgical family planning, maternal and child health services; trained traditional midwives and health promoters; and carried out IEC activities in Spanish and *Kanjobal*, the local indigenous language. Additionally, traditional midwives and health promoters were trained. Evaluation findings show that antenatal and childbirth care by midwives increased from 71% to 89%; knowledge of delivery problems increased from 53% to 67%; and use of modern family planning methods increased from 9% to 30%. [Annex 4]

**Pakistan** The National Program for Family Planning and Primary Health Care created in 1993 established an organization of paid community health workers called Lady Health Workers (LHWs) who were to provide basic primary health care to the community at their doorsteps. The LHWs work predominantly in rural areas in Pakistan and supply some types of family planning and basic curative care, and are trained to identify and refer more serious cases. The extensive network of LHWs allows them to access women who are difficult to reach. An evaluation of the program revealed promising results, which indicated that a substantial impact on the uptake of important preventive health services was due to the LHW program. The population served by the LHWs, particularly those in rural areas, was found to have substantially better health indicators than the control population, including: use of antenatal services (53% versus 38%, respectively); use of family planning (32% versus 23%, respectively); and health knowledge. Further, 51% of women in LHW areas received at least one tetanus toxoid injection during their last pregnancy versus 30% in the control areas. A number of breastfeeding measures were also better. The evaluation found that LHWs play an important and active role in

the provision of services, which they either provide themselves or refer clients to other providers. [Source: Oxford Policy Management, 2001.]

### *Refugees and internally displaced persons*

According to the World Refugee Survey, in the year 2003, there were over 35 million refugees, asylum seekers, and internally displaced persons (IDP) worldwide (USCRI, 2004). Approximately 25 percent of women in this population are of reproductive age and one in five is likely to be pregnant (UNFPA, 2001). An estimated 15 percent of these women will develop life-threatening obstetric complications that require treatment at a health facility. In war-torn southern Sudan, for example, a UNICEF survey found that girls are more likely to die in pregnancy and childbirth than to finish primary school (Save the Children, 2002). Refugee and IDP populations often face precarious living conditions in remote locations where health services are nonexistent or difficult to access, or where aid organizations may opt not to provide comprehensive services. Services may be limited to those provided by traditional birth attendants, and there is a lack of continuum of care that includes management of obstetric complications, provision of safe abortion services where legal, and post-abortion and postpartum care. Furthermore, in some settings, women's mobility may be restricted, requiring that a male relative or an older female accompany women to seek services (Goodyear, 2002).

**Regional** The Reproductive Health Response in Conflict (RHRC) Consortium works to increase access to and availability of EmOC services to populations affected by conflict, and has implemented 12 pilot projects in several countries. The projects focused on the health facility level to improve their capacity to provide high quality EmOC services. Activities included facility renovation, maintenance, provision of equipment and supplies, facility setup, placement of staff and training. The Consortium's experiences show that progress can be made, even under extremely difficult circumstances. The use of process indicators has revealed a number of positive trends at many project facilities, including increases in the number of total deliveries, MVA procedures, new family planning acceptors, and EmOC signal functions being provided. [Annex 4]

### *Adolescents*

Because of physiological and social factors, pregnant adolescent girls are vulnerable to anemia, unsafe abortion and complications (for example, prolonged or obstructed labor which can lead to mortality or long-term injuries such as obstetric fistulae) (Focus on Young Adults, 2001). Complications from pregnancy and childbirth are the leading cause of death and disability in young women aged 15–19 years in developing countries (Save the Children, 2004). It is estimated that 70,000 young mothers die annually because they have children before they are physically ready. Save the Children estimates that one-tenth of all births, approximately 13 million births, are to women below the age of 20; more than 90 percent of these births are in developing countries. Further, babies born to adolescents are 50 percent more likely to die than children born to women in their twenties (Save the Children, 2004).

The utilization of health care by pregnant adolescents has the potential to reduce maternal death and disability. However, socioeconomic and cultural factors limit girls' ability to

access health services, prevent early marriage, and most importantly, prevent early childbearing. The evidence suggests that adolescents are less likely to seek prenatal care and delivery care from a skilled provider (Govindasamy et al., 1993; cited in YouthNet, 2004). Unmarried pregnant adolescents are even less likely to utilize prenatal care than to their married peers (Okonofua et al., 1992; cited in YouthNet, 2004). Moreover, in some countries, barriers to seeking care may be more pronounced for adolescents who are pregnant for the first time and who may have limited ability to make decisions about their own use of medical care (Chowdhury, 2003). Programs that target adolescents should focus on increasing their use of appropriate health services as well as on efforts that offer adolescents the opportunity to develop life skills, to learn about sexual and reproductive health, and be empowered so that they are enabled to protect their own health and their futures.

**India** The Better Life Options Program (BLP) for adolescents has been implemented in India by the Center for Development and Population Activities (CEDPA) through its partner organizations since 1989. The BLP uses an empowerment model that offers adolescent girls a combination of life skills: literacy and vocational training, support to enter and stay in formal school, family life education, and leadership training. An impact study was carried out to compare BLP alumnae who completed the program between 1996–99 (in the peri-urban slums of Delhi, rural Madhya Pradesh, and rural Gujarat) with a similar control group of women (aged 15–26) who had not been exposed to the program, while controlling for confounding variables including girls' education and parents' education/occupation. The study found that BLP alumnae were more likely to marry at age 18 or above and to use contraception. Among those who had experienced a pregnancy, BLP alumnae were more likely than controls to have received antenatal and postnatal care, and to have delivered in a health institution. [Source: CEDPA, 2001.]

### *Reaching Men*

It is now recognized that improving maternal health outcomes requires men to be active participants in the process. Maternal health programs have become increasingly aware of the role of men as important decision-makers in women's care-seeking behavior (WHO, 2003c). In order to support women, men need to understand women's health needs, risks and danger signs of pregnancy, childbirth, and the postpartum period; and where to seek appropriate medical care in the event of an obstetric emergency. Previous research supports the notion that educating male partners and increasing male involvement in women's maternal health can lead to improved antenatal care attendance as well as discourage home deliveries (Raju and Leonard, 2000; Nuwaha and Amooti-Kaguna, 1999). There is also evidence to suggest that men who understand the risks of pregnancy and childbirth may influence whether emergency obstetric care is sought (Roth and Mbizvo, 2001).

**Indonesia** The *Suami Siaga* campaign began in 1998 and was implemented by the Ministry for Women's Empowerment, UNFPA, and Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP). It was the first ever campaign with the primary goal of involving husbands in safe motherhood. A key intervention was a large-scale media campaign with complementary community-level activities that aimed

at positively affecting individual and community behavior surrounding healthy pregnancy and safe delivery as a means of reducing maternal mortality. Results from the impact evaluation found that more than 80% of respondents indicated that the *Suami Siaga* campaign had taught them something new; over 64% of midwives observed a significant increase in husbands accompanying their wives for check-ups and delivery; and that respondents who have been exposed to the campaign are almost 15 percentage points more likely to practice behaviors promoted in the campaign in contrast to their past behavior. [Annex 4]

**Nepal** The SUMATA initiative (a Nepali acronym for Care, Share and Prepare) was designed by the Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs. It aimed to reduce the social barriers affecting maternal mortality by focusing on husbands and mothers-in-law because of their decision-making power in matters relating to all aspects of health care for wives/daughters-in-law. The initiative called on them to care for the wife/daughter in law during her pregnancy, birth and postpartum period. SUMATA used mass media, community-based media and interpersonal communication to disseminate safe motherhood messages in a complementary and reinforcing manner. Among those exposed to SUMATA activities, nearly 95% comprehended the messages; more than 75% of the respondents reported having used the information contained in the SUMATA messages; and nearly 90% acknowledged their intention to do so in the future. Survey results also showed higher levels of awareness of the danger signs during pregnancy, childbirth, and postpartum. [Annex 4]

### 3.4 BUILDING CAPACITY

At the health systems level, one of the biggest challenges to achieving the Millennium Development Goal to improve maternal health is the shortage of human resources and the poor distribution of trained providers. This is particularly an issue in countries implementing health sector reform, which leads to increased requirements for staff capacities in terms of staffing numbers and skills. Human resource shortages are the result of several factors, including the limited training capacity of medical and nursing schools; economic constraints; and migration of health professionals to urban areas, the private sector, and developed countries (Hutton, 2002). Furthermore, in many developing countries, mid-level providers often lack the required knowledge and obstetric skills, and few have received refresher or in-service training in reproductive health or obstetric care, including management of obstetric complications. Thus, ensuring adequate numbers of skilled health care workers remains problematic in many developing countries and will require changes that focus on improving pre-service curricula and in-service training; deployment of personnel to areas where there are poor and vulnerable populations; and support and supervision to ensure good quality care and continuing motivation of health staff.

Shortages and poor accessibility of higher-level medical cadres necessitates changes in policy and management that support mandates for health personnel, other than

specialists, to expand their roles and provide lifesaving interventions for the management of obstetric complications (Lubben et al., 2002). In some countries, legal restrictions prevent midwives from carrying out even basic obstetric procedures. However, such workers can perform many essential obstetric care procedures effectively, if they have received adequate training and work in an environment that has equipment, supplies and supportive supervision. Basic lifesaving obstetric care can be provided by midwives, or doctors and nurses with midwifery training, and can be delivered at home, and in health centers or hospitals. In several developing countries, programs have been set up to upgrade the skills of general practitioners in rural areas. In some places, programs have also successfully trained paraprofessional health staff members to provide a set of surgical and obstetric interventions and anesthesia (Pereira et al., 1996; Vaz et al., 1999).

**Tajikistan** In 2000, CARE began work in Tajikistan on a project supported by the AMDD Program to strengthen the capacity of health providers to deliver quality EmOC services by creating a core training team (CTT) of specialist doctors and midwives from district hospitals in advanced lifesaving skills. Project evaluation conducted in 2003 revealed that trained staff have increased proficiency in key skills (e.g, AMTSL, management of PPH), respond better to emergencies and complications, and report increased confidence. The CTT has expanded its reach outside of CARE and now serves as a training resource for activities sponsored by the Ministry of Health and other NGOs. [Annex 5]

**Nepal** The Nepal Safer Motherhood Project (NSMP), implemented by Options Consultancy Services, aims to bring about a sustainable increase in utilization of and access to good quality emergency obstetric lifesaving care in order to reduce maternal mortality. An innovative approach was introduced by NSMP in 17 project-supported health facilities to incorporate Basic EmOC skills into nurses' six week refresher course. Nurse's job descriptions were revised in light of their expanded roles and their clinical competencies were upgraded to the level of Basic EmOC. Further, an enabling environment was created at the health facility and JHPIEGO provided technical assistance to establish a quality Basic EmOC training site. An evaluation found that more than 70% of obstetric complications arising during all institutional deliveries were being managed by nurses only, safely, competently, and with confidence. [Annex 5]

**Rwanda** Vacuum delivery is the most often missing signal function to be performed at Basic and Comprehensive EmOC facilities in Africa. UNICEF – ESARO carried out a study of vacuum deliveries in Nyanza district hospital, a Comprehensive EmOC facility where midwives and nurses in the labor ward routinely conduct vacuum assisted vaginal deliveries independently.<sup>3</sup> Based on a review of delivery registers over a four-year period, the study found that under adequate supervision and with immediate Caesarean section back-up, vacuum deliveries conducted by competent mid-level providers are safe. Furthermore, the cost savings of using vacuum delivery (US\$5) instead of C-sections (up

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<sup>3</sup> Few countries in Africa legally allow mid-level providers to perform lifesaving functions during obstetric complications, even though the availability of medical doctors is quite limited.

to US\$34) are very large, and makes lifesaving services for obstetric complications more accessible and affordable for low-income households and those living in rural areas in Rwanda. [Annex 5]

**Zambia** Postpartum hemorrhage is a leading cause of maternal death in Zambia. Ninety percent of cases of PPH are due to uterine atony, the failure of the uterus to contract after childbirth, which can be addressed by skilled providers who can provide AMTSL. JHPIEGO's Maternal and Neonatal Health Program in Zambia worked with the General Nursing Council to help standardize AMTSL into national health protocols and standards of practice in pre-service curricula and in-service training. The program used team meetings to gain consensus on the clinical protocols and guidelines for program activities. To identify barriers to the practice of AMTSL, the program collected baseline data in four districts regarding current incidence and management of PPH. A costing study showed that AMTSL resulted in cost savings. As a result of the baseline analysis, all four districts now implement action plans that address barriers to practicing AMTSL. AMTSL is now a standardized protocol for every woman giving birth in Zambia. [Annex 5]

**Sub-Saharan Africa** The Regional Prevention of Maternal Mortality (RPMM) Network is a multidisciplinary network of NGOs and country teams currently operating in 20 countries in Sub-Saharan Africa. RPMM focuses on improving quality of and access to EmOC, and ENC, in district health systems by building the capacity of District Health Management Teams (DHMTs) and local health staff in the design, implementation and evaluation of interventions using UN Process Indicators. At country level, the RPMM national team starts in 1 or 2 districts, and interventions are progressively scaled up nationally on a sustainable basis, as local experience is built and as resources permit. The teams, which act as national catalysts, use intervention results to influence governments to focus on allocation of resources and formulation of policies that address the reduction of maternal and neonatal mortality. [Annex 5]

### 3.5 QUALITY OF CARE

*“The question should not be why do women not accept the service that we offer, but why do we not offer a service that women will accept?”*

Mahmoud F. Fathalla, 1998

The poor quality of maternal health services in many developing countries is often a deterrent to their use, even when services are available. Poor quality of care may result from a variety of factors including insufficient and unqualified staff; clinical mismanagement of patients; insensitive treatment of patients by health staff; chronic lack of essential equipment, supplies, drugs, and blood for transfusion; inadequate management of health facilities; as well as from inadequate functioning of referral systems (Thaddeus and Maine, 1990; 1994). Substandard care contributes adversely to maternal health outcomes. For example, a study in Masavingo, Zimbabwe found that a significant proportion of maternal deaths resulted from a failure to identify women with

severe conditions (including post-abortion complications and sepsis), and refer them for treatment at a higher-level health facility (Fawcus et al., 1996).

Improving the quality of maternal health services is a cost-effective way to save women's lives. Quality improvement depends on appropriate standards and tools, a good information system, and expertise in problem identification and solution. To address the gaps between current practices and desired standards, and to support an accountable and systematic review of maternal and reproductive health programs, there is a need for formalized systems that engage health providers, managers and clients in regularly reviewing processes and outcomes. Quality improvement systems may include licensure and certification of service providers, as well as certification of health facilities and teaching programs.

**Box 12: Elements of Good Quality Maternal Health Services**

- Promotion and protection of health
- Accessibility and availability of services
- Acceptability of services
- Technical competence of health care providers
- Essential supplies and equipment
- Quality of client-provider interaction
- Information and counseling for the client
- Involvement of clients in decision-making
- Comprehensiveness of care and linkages to other reproductive health services
- Continuity of care and follow-up
- Support to health care providers

*Source:* WHO, 1996.

**Kenya** In Kenya, EngenderHealth, in collaboration with the MOH and Ipas, are working to improve the quality of essential obstetric care (EsOC) including PAC services in 4 district hospitals and 1 health center, where services had either not been offered or were of poor quality. The project oriented Provincial Health Management Teams (PHMTs) and District Health Management Teams (DHMTs) on the rationale and benefits of integrated quality EsOC and PAC. Doctors and nurse teams were trained as trainers in EsOC/PAC and quality improvement, who then trained district hospital service providers in these services. An external trainer in EsOC and QI tools worked with each hospital for 5 days in Whole Site Training. All DHMT members reported that the EsOC/PAC intervention helped their facilities, with the most frequent benefit being a reduction in waiting time for clients. Other improvements include: better referral systems; early detection and management of complications; improved staff knowledge; and improved availability and management of emergency supplies. Mid-level providers can offer quality EsOC and comprehensive PAC services safely and effectively. [Annex 6]

**India and Ghana** EngenderHealth and the AMDD Program jointly developed quality improvement (QI) tools for EmOC, which outline a QI process for providers to follow and offer a set of tools for gathering and analyzing information about the quality of

EmOC. The primary focus of this QI process is on tackling solvable problems. The materials were field tested in India and Ghana over a 9-month period, and subsequently revised based on feedback from these field tests. In both countries, about 75% of identified problems were solved by facility staff themselves (the remaining 25% were issues requiring outside resources to resolve). Providers spoke of improved attitudes towards colleagues, better communication among different hierarchy levels, and a new sense of empowerment to take initiatives to improve services. Positive changes to service provision include: improved record keeping; improved infection prevention practices; development of protocols and guidelines; greater degree of privacy in the labor room; improved cleanliness of hospital premises; and improved emergency preparedness and response in some areas. [Annex 6]

**Guatemala** Through implementation of the performance and quality improvement (PQI) process in Guatemala, JHPIEGO's Maternal and Neonatal Health Program helped the MOH, providers and community members to work together to improve the delivery of quality maternal and newborn services. Moving beyond a focus on clinical quality only, the program systematically applied the PQI process to support functions, infection prevention practices, and client preferences as well. A key element of the program is an accreditation component: if the facility achieved a satisfactory percentage of the criteria for quality, it received official MOH accreditation as a quality site for essential maternal and newborn care and recognition through a community event or ceremony. The MNH Program initiated the PQI process in 153 of the 428 health facilities in target health areas in Guatemala. By 2004, the MOH and other donors and cooperating agencies scaled up the PQI process to an additional 222 facilities, covering nearly one-third of all public sector healthcare facilities in the country. [Annex 6]

**Kazakhstan** An innovative Safe Motherhood pilot project focusing on prenatal care and delivery services in Zhezkazgan was carried out with the help of the ZdravPlus project (funded by USAID and implemented by Abt Associates Inc. and John Snow, Inc.). Using a systems perspective, the project worked both in primary health care clinics (FGPs) and hospitals to create improved care and continuity of care across levels of the health system, reached out to women and their partners. The impact of the new approaches on utilization of hospital services was documented. Key evaluation findings after one year of implementation showed that both average length of stay following delivery and number of C-sections performed declined, while the level of new mothers' satisfaction with their care increased. By the end of the pilot, all FGPs in Zhezkazgan had integrated prenatal care into their services, making care accessible to women close to where they live and work. Given the project's success, the Government of Kazakhstan has since adopted a perinatal care program based on the approaches piloted in Zhezkazgan. [Annex 6]

One innovative approach to improving the quality and efficiency of health care that is now being applied to the area of maternal health is the Breakthrough Series Improvement Collaborative, first developed by the Institute for Healthcare Improvement (IHI) in the mid-1990s. IHI has demonstrated significant results with this method, mostly involving health care organizations in the United States, Europe, and Australia. Improvement collaboratives aim to adapt and spread existing knowledge (for example, best practices;

evidence-based guidelines) to multiple settings (Bornstein and Marquez, 2004). According to the Quality Assurance Project, an improvement collaborative comprises 20 – 40 teams from different organizations or geographic regions that are all focused on making rapid incremental improvements in a single technical area and committed to working and learning together intensively for 12 to 18 months (Bornstein and Marquez, 2004). Three important objectives of an Improvement Collaborative are: 1) dramatic improvements in the quality and outcomes of care in a short period of time; 2) sharing of strategies for improving services among teams participating in the Collaborative; and 3) planning for spread of the new model of care from the Collaborative sites to the entire parent organization. Basic principles include the following: a collaborative is organized around a specific topic; expert knowledge about the topic is assembled and made available to participants in a readily usable form; a collaborative uses the same basic tools as traditional quality improvement approaches, such as flow charts to analyze complex health care processes and run charts to track variables over time; emphasis on rapid testing of changes; an improvement collaborative creates a “community of practice” focused on achieving results in a short period of time; collaboratives seek to create a culture among participants where everyone learns and everyone teaches, with friendly competition and urgency to action; collaboratives use several mechanisms for learning and changing current practices, chiefly mutual learning by peers; and, collaboratives are different from traditional quality improvement approaches by virtue of their focus on achieving specific improvements in a single content area by multiple teams and their emphasis on rapid results, documented over time (Bornstein and Marquez, 2004).

**Box 13: Improving the Quality of Obstetric Care through Criterion-Based Clinical Audit (CBCA): A Collaborative Field Trial in Ghana and Jamaica**

The CBCA tool was developed to help health professionals and managers improve the quality of EmOC, at the district hospital level, in order to reduce maternal mortality. CBCA is the “systematic critical analysis of the quality of care, with the aim of improving clinical practice”, and involves data analysis to determine the proportion of patients receiving care. The effectiveness of this form of audit is assessed in terms of changes in the proportion of cases where management met the criteria. The emphasis is not on searching for errors, but on education through reflecting on practice, without generating feelings of blame or guilt. CBCA was adapted from an industrialized country setting for the developing country context. The methodology was designed to be adapted and applied where resources are poor and to incorporate local expert opinion in addition to research evidence.

A CBCA project was implemented in 4 district hospitals in Ghana and Jamaica (1998–2000), and concentrated on the management of five major obstetric complications that contribute to over 80% of direct maternal deaths in developing countries – obstetric hemorrhage, eclampsia, severe genital tract sepsis, obstructed labor, and ruptured uterus. The five steps of the audit cycle were: establish criteria for good quality care (e.g., systematic review; expert panels); observe current practice (e.g., case-note review; labor ward and discharge registers; and staff questionnaire); feedback findings and set local standards; take action to change practice; and reevaluate practice. Case definitions and clinical audit criteria deemed realistic in relation to conditions in the field were established and were used to rate the optimal management of the obstetric complications identified. The senior medical officer at each of the 4 hospitals was to introduce the concept of CBCA and be supported by the hospital’s own records staff.

It was found that CBCA is acceptable and feasible for ensuring quality of care and appears to have improved clinical practice where it was developed and applied. Significant improvements were seen in the management of three of the five major obstetric complications – obstetric hemorrhage, eclampsia and genital tract sepsis. The other two complications, obstructed labor and uterine rupture, also showed improvements but failed to reach statistical significance. The study suggests that CBCA may have a significant impact in developing countries, where its dual function as a means of monitoring and as an educational tool has a particular value given the context.

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**Ecuador, Honduras, Nicaragua** The Quality Assurance Project (QAP) is currently working with partners in Ecuador, Honduras, and Nicaragua to implement an Essential Obstetric Care (EOC) Improvement Collaborative. The goal is to establish fully functioning local EOC systems (defined as a province or region with a referral facility that provides complete EOC to the surrounding health districts in its catchment area, including community-based services) in one or more regions of each of the three countries. Indicators to measure improvement include: 3 coverage indicators; 5 indicators of quality of prenatal, delivery, postpartum, and newborn care; 3 indicators of the management of complications; 2 mortality indicators; and 1 user satisfaction indicator. The EOC Improvement Collaborative is linking teams at the provincial and district levels across countries through meetings, e-mail communication, and the Internet, to facilitate sharing of best practices and innovations. Over a 12–14 month period, teams participating in the Collaborative are expected to make significant gains in the quality and availability of essential obstetric care. The QAP will also work with national officials

to develop and implement strategies to scale up the improvements from the initial collaborative sites to the entire country. [Source: Bornstein and Marquez, 2004.]

### **3.6 COMMUNITY INVOLVEMENT**

While it is crucial to address health systems, it is also important to involve communities in efforts to improve maternal health through complementary strategies such as community mobilization and behavior change interventions. One goal of these activities should be to ensure that appropriate health-seeking behaviors become part of local social and cultural norms. Most women in developing countries continue to deliver outside of health facilities, and thus most maternal deaths occur in the community, and not in health facilities. Women and their families may sometimes fail to recognize serious or life-threatening obstetric complications, or wait too long to seek help when a problem occurs during labor or delivery. Moreover, lack of planning deliveries with skilled attendants for routine births, inadequate preparation in the event of emergencies, and resistance to planning ahead in some cultures all can lead to delays that increase women's chances of dying from maternal deaths. Timely use of appropriate medical care in the event of an obstetric emergency can mean the difference between life and death. Involvement at the community level can have an enormous influence on whether women seek health services.

Community mobilization is important for generating demand for, access to, and use of maternity care services. One area in which community mobilization can be valuable is in increasing birth preparedness (birth planning) and complication readiness, helping a family to know where or from whom to seek help, and providing access to funds or transportation during an emergency, thereby addressing many of the delays (deciding to seek care, and reaching services) that contribute to maternal morbidity and mortality. Increasing community awareness of signs of emergency obstetric complications and motivating families to seek services can also help improve women's chances of survival (Kwast, 1995). Birth preparedness is a key component of globally accepted safe motherhood programs and is widely promoted by international agencies. To ensure the success of such approaches, they should be adapted to specific local contexts with community involvement throughout the entire process.

There is growing evidence that well-designed behavior change interventions can be effective in producing a desired change in order to achieve a health objective (Fishbein, 1995; Middlestadt et al., 2003). These interventions do not focus on increasing knowledge alone, but consider a number of contextual factors such as the behaviors of family and community, that also influence individual behavior change. One type of behavior change intervention is behavior change communication (BCC), which is designed to promote, elicit, support, and stimulate specific behavior change via communication (Fishbein, 1995). In the context of maternal health, BCC strategies can play a key role in promoting certain attitudes, knowledge, skills and capacity. Behavior change communications strategies that use various reinforcing messages through multiple channels that target both men and women can be effective in promoting healthy

behaviors that help improve maternal health outcomes. Community engagement, ownership and empowerment are critical to sustaining behavior change. Although it may take some time to achieve changes, behavior change is an important element of an effective maternal health program.

**Bangladesh** In 1998, CARE with partners (Government of Bangladesh [GOB] and UNICEF) implemented the Dinajpur Safe Motherhood Initiative (DSI) focusing on promoting birth planning, community mobilization and enhancing the social aspects of quality of EmOC services. Women and their families were provided with key information and messages that allowed them to make decisions and take action to ensure healthy outcomes. Results showed an increase in knowledge of pregnancy danger signs among women (44% of women in the intervention area knew 3 or more of the 5 pregnancy danger signs), and a national birth-planning card was adopted by the GOB MOH and is being distributed throughout the MOH program. CARE also worked with communities to develop support systems (CmSS). These groups mobilize collective community action to provide support for pregnant women in accessing EmOC services during obstetric emergencies. At the end of the project, 70% of the villages had established a CmSS. There was a positive correlation between the number of CmSS and the use of obstetric services – as the number of CmSS's grew there was also a rise in use of EmOC services. [Annex 7]

**Guatemala** In Guatemala, the Maternal and Neonatal Health program *Communities and households working together to save lives*, implemented by the Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, is a social and behavioral change (SBC) program aimed to increase maternal health outcomes. Using participatory approaches, households and communities have been able to form emergency response action plans that are proving effective in reducing the barriers men and women faced in accessing maternal/reproductive health care. Using community dialogue, participatory leadership and collective self-efficacy as central to the SBC, the team used the “Community Action Cycle” and the “Communication for Social Change” approaches to build commitment to support evacuation during obstetric emergencies. The SBC approach achieved visible results: 99 communities were involved in the process, over 90% of which have formed committees. Half of the communities have secured transport, 40% have emergency funds, and 33% have emergency plans in place and 11% of the communities have put their plans into action during emergencies. [Annex 7]

**Ethiopia** The Home Based Life Saving Skills (HBLSS) program developed by the American College of Nurse-Midwives is a family-focused, community-based program which aims to reduce maternal and newborn mortality in settings where home birth with unskilled attendants is the norm and mortality is high, by encouraging safe, culturally acceptable, and clinically feasible emergency behaviors in the home setting. Key findings from a review of the Ethiopia field-test site include: successful skills transfer and retention, and appropriate case management of PPH; exposure to HBLSS training in the community was estimated at 38% with strong community support; and large improvement in performance scores for some of the topics presented in the HBLSS training activities (e.g., 129% increase in knowledge and skills on the topic “too much

bleeding after birth”, and 182% increase on the topic “baby is sick”). The program has also helped to establish a lifesaving link between the community and the formal healthcare system. [Annex 7]

### 3.7 MONITORING AND ADVANCING PROGRESS

#### 3.7.1 Measurement Issues

Strengthening maternal health services and improving quality of care depends on good health information systems that include regular surveillance and monitoring of selected key indicators and setting final and interim targets (Goodburn, 2002). The UN Millennium Development Goal to improve maternal health targets the reduction of maternal mortality by three-quarters by 2015; this target assumes that maternal mortality is accurately measured (Graham and Hussein, 2004). Although estimates of maternal mortality have been useful in getting maternal health on the policy agenda, relying on this target to monitor progress in achieving the MDG to improve maternal health is inherently problematic given the difficulty in accurately measuring maternal mortality. In an ideal situation, maternal mortality could be monitored through vital registration (Starrs, 1998). However, in most developing countries, no comprehensive vital registration records are available, and even in developed countries (where good vital registration systems exist), causes of maternal death are often misclassified. There are a variety of other approaches that have been developed to measure maternal mortality including the use of indirect and direct sisterhood methods, reproductive age mortality surveys (RAMOS), and censuses (Box 14). Nonetheless, monitoring the progress of maternal health programs by measuring change in maternal mortality levels has proved challenging over the years. Maternal deaths are frequently underreported, misclassified, and are relatively rare events (WHO, 1999; Wardlaw and Maine, 1999). Measuring a significant change in maternal mortality in the short-term is difficult, since the method would require following a large population, can be expensive, and can take several years to show an effect (i.e., to determine if fluctuations are due to interventions or to chance).

#### **Box 14: Reproductive Age Mortality Study (RAMOS)**

The Reproductive Age Mortality Study (RAMOS) is an approach to measuring maternal mortality and involves identifying and investigating the causes of all deaths of women of reproductive age. This method has been applied effectively in countries with good vital registration systems to calculate the extent of misclassification and in countries without vital registration of deaths, such as Egypt, Honduras, and Jamaica. Successful studies in countries lacking complete vital registration data use multiple and varied sources of information to identify deaths of women of reproductive age, as no single source identifies all the deaths. Subsequently, interviews with household members and healthcare providers, along with reviews of facility records, are used to classify the deaths as maternal or otherwise. The RAMOS approach is considered to provide the most complete estimation of maternal mortality; however it is quite complex and time-consuming to undertake, particularly on a large scale.

*Source:* AbouZahr and Wardlaw, 2003a.

The demand for data and indicators to monitor and evaluate the progress of maternal health programs has led to increasing reliance on alternative methods to address the measurement issue. For example, WHO and UNICEF have developed a model to estimate levels of maternal mortality using country data and adjusting for underreporting and misclassification (AbouZahr and Wardlaw, 2003a). These methods cannot be used to measure short-term trends given their wide margins of uncertainty. Consequently, another proposed method for tracking maternal health is the use of process indicators, which has received growing support within the international community. Process indicators, most of which can be built into the health information system, reflect changes in key activities or “processes” that ultimately have an effect on the maternal outcome. Compared to outcome indicators, data for process indicators are generally easier to collect and more readily available (MEASURE Evaluation Project, 2003). For example, monitoring and evaluation of maternal health programs may also be accomplished with the use of data routinely recorded in facility-based birth registers (e.g., maternity, surgery, and discharge registers). Studies from Guatemala and Benin have shown that data routinely collected from birth registers in health facilities are a potentially important source of existing information that may be used to estimate maternal health and facility-based quality of care indicators (Valladares et al., 2003; Kodjogbé, Fourn and Stanton, 2003).

The set of six UN Process Indicators for monitoring obstetric services, issued by UNICEF, WHO, and UNFPA in 1997, were developed based on an understanding that most maternal deaths could be prevented if women were to receive prompt, adequate treatment for major obstetric complications. The indicators describe the major pathway to reducing maternal mortality in terms of the availability, use, and (to some extent) quality of emergency obstetric care (Table 4). Many programs now rely on the UN Process Indicators for program monitoring and where they have been used, the findings have often demonstrated how poorly health services meet the needs of pregnant women (UNICEF/WHO/UNFPA, 1997; Goodburn, 2002). These findings can be used to mobilize governments, development partners, and communities to act to address maternal health. Additionally, the use of process indicators can have a major influence on a country’s policy. For example, surveys using the UN Process Indicators in Morocco showed that the availability of Comprehensive EmOC facilities in rural areas was below the minimum acceptable level recommended by the United Nations (Goodburn, 2002). As a result of the survey findings, the Moroccan government began to train surgeons in obstetric procedures in order to address the unmet need for EmOC. Because dramatically reducing maternal mortality and meeting the MDG target is contingent upon ensuring that EmOC is available, accessible, and properly utilized, Freedman and others (2003) have argued that measuring progress towards achieving this MDG must also use the first of the UN Process Indicators to assess EmOC coverage: number of functioning Comprehensive and Basic EmOC facilities per 500,000 population (Freedman et al., 2003).

**Table 4: The Six UN Process Indicators**

Process Indicator	Minimum Acceptable Level
1. Amount of essential obstetric care <ul style="list-style-type: none"> <li>▪ Basic EmOC facilities</li> <li>▪ Comprehensive EmOC facilities</li> </ul>	For every 500,000 population: At least 4 Basic EmOC facilities At least 1 Comprehensive EmOC facility
2. Geographic distribution of facilities	The minimum level for indicator 1 should be met in sub-national areas (i.e., facilities must be well distributed at the provincial or district levels)
3. Proportion of all births in basic EmOC and comprehensive EmOC facilities	At least 15% of all births in the population should take place in either basic or comprehensive EmOC facilities
4. Met Need	All women (100%) estimated to have obstetric complications should be treated at EmOC facilities
5. Caesarean sections as a percentage of all births	Caesarean sections should account for not less than 5% and not more than 15% of all births in the population
6. Case fatality rate	CFR among women with obstetric complications in EmOC facilities should be less than 1%

Source: UNICEF/WHO/UNFPA. 1997.

**Tanzania, Peru** To strengthen monitoring of EmOC services using UN Process Indicators, CARE worked with health facilities in Tanzania and Peru to improve the accuracy of data collection and analysis. The project helped facility staff to develop or review existing obstetric registers to ensure they capture key information. In Peru, before project interventions, about 20 different registers were used for data collection, whereas all health care facilities in the district now use only 3 registers. In Tanzania, at baseline, registers and client records were poorly maintained and very few complications were recorded in the Operations Room register. With project support, the staff improved their data collection approaches and developed one logbook to collect information on complications. Project interventions are still ongoing in both countries. [Annex 8]

**Kenya, Rwanda, Southern Sudan, Uganda** Baseline needs assessments on EmOC service availability and utilization carried out by UNICEF – ESARO showed that in all 4 countries, coverage of Basic EmOC was well below UN recommended levels. These findings have been useful in influencing governments and donor program policies and priorities in reducing maternal mortality. The Uganda national EmOC roll-out plan prioritizes ‘fixing the missing EmOC signal functions’. In NEP Kenya, results guided EmOC program implementation in one of the poorest provinces. The UN Process Indicators have been added to the Kenya Service Provision Assessment 2004 as a way to institutionalize them into the regular information system. In Rwanda, the priorities are to upgrade district hospitals and selected health centers. In Southern Sudan, EmOC will be one of the key elements in rehabilitation of the health system after peace. [Annex 8]

Another useful approach to monitoring maternal mortality using process indicators has been carried out by the Unmet Obstetric Needs Network. In this approach, the concept of unmet obstetric need (UON) refers to the discrepancy between what the health care system should do to deal with the obstetric problems in a given population and the care it actually provides. The measure of UON estimates the number of women needing a major

obstetric intervention for life-threatening complications who did not have access to appropriate care. These estimates can be useful in comparing need and availability in different geographic regions (using mapping), identifying regions where UON is highest, and targeting expenditures on service improvements. The UON indicator also enables program planners to monitor progress in service development and impact on maternal health (UON Network website, 2005). The UON Network, which was launched in 1997, brought together ministries of health, development agencies, scientific institutions, and practitioners who want to map unmet need for “major obstetric interventions for absolute maternal indications” as a starting point in improving maternal health care and the overall functioning of health care systems (Dubourg et al., 2000).

***Mali*** A national retrospective survey on the unmet need for major obstetric surgery using the Unmet Obstetric Need Approach was carried out in Mali in 1999. In Koutiala, the district health team decided to carry on monitoring met need for several years in order to assess their progress over time. The first prospective study (1999) estimated that more than 100 women in need of obstetric care never reached the hospital and probably died as a consequence. This surprising result shocked the district health team and the resulting increased awareness of service deficits triggered operational measures to tackle the problem. The Unmet Obstetric Need study in Koutiala district was implemented without financial support and only limited external technical back-up. The appropriation of the study by the district team for solving local problems of access to obstetric care may have contributed to the success of the experience. Used as a health service management tool, the study and its results started a dialogue between the hospital staff and both health center staff and community representatives. This had the effect of triggering consideration of coverage, and also of the quality of obstetric care. [Source: Guindo et al. 2004.]

Monitoring the status of maternal health goes beyond measuring the level of the problem. Given the limitations of quantitative indicators of maternal health, it is also important for policy makers and program managers to understand why maternal deaths occur, what can be done to prevent them, where things are going wrong, and what can be done to rectify them (WHO, 2004a). An understanding of the underlying factors that lead to maternal deaths in a particular setting is necessary for designing appropriate maternal health programs. WHO recently published a manual designed to help gather such information using methods such as community-based maternal death reviews (verbal autopsies); facility-based maternal death reviews; confidential enquiries into maternal deaths; surveys of severe morbidity (near misses); and clinical audits (WHO, 2004a) (Table 5).

**Table 5: Approaches for Generating Information on Maternal Health**

Name	Operational definition	Prerequisites
Community-based maternal death reviews (verbal autopsies)	A method of finding out the medical causes of death and ascertaining the personal, family or community factors that may have contributed to the deaths in women who died outside a medical facility.	Requires co-operation from the family of the woman who died and sensitivity is needed in discussing the circumstances of the death.
Facility-based maternal death reviews	A qualitative, in-depth investigation of the causes of and circumstances surrounding maternal deaths occurring at health facilities. Deaths are initially identified at the facility level but such reviews are also concerned with identifying the combination of factors at the facility and in the community that contributed to the death, and which ones were avoidable.	Requires co-operation from those who provided care to the woman who died, and their willingness to report accurately on the management of the case.
Confidential enquiries into maternal deaths	A systematic multi-disciplinary anonymous investigation of all or a representative sample of maternal deaths occurring at an area, regional (state) or national level. It identifies the numbers, causes and avoidable or remediable factors associated with them.	Requires existence of either a functioning statistical infrastructure (vital records, statistical analysis of births and deaths, human resources, recording clerks, etc.) or nominated professionals in each facility to regularly report maternal deaths to the enquiry.
Surveys of severe morbidity (near misses)	The identification and assessment of cases in which pregnant women survive obstetric complications. There is no universally applicable definition for such cases and it is important that the definition used in any survey be appropriate to local circumstances to enable local improvements in maternal care.	Requires a good-quality medical record system, a management culture where life-threatening events can be discussed freely without fear of blame, and a commitment from management and clinical staff to act upon findings.
Clinical audit	Clinical audit is a quality-improvement process that seeks to improve patient care and outcomes through systematic review of aspects of the structure, processes, and outcomes of care against explicit criteria and the subsequent implementation of change. Where indicated, changes are implemented at an individual, team or service level and further monitoring is used to confirm improvement in health care delivery.	It must be possible to identify relevant cases from facility registers and retrieve the case notes. Health care personnel must feel able to openly discuss case management and be willing to envisage the application of revised protocols of care.

Source: World Health Organization, 2004a.

### 3.7.2 Research Efforts

Finally, progress in maternal health requires ongoing research that continually strives to help improve programming and policies. Many lifesaving technologies are already available to save women's lives. Nevertheless, to achieve greater public health impact and improve health outcomes, it is important to continue research efforts that concentrate on gathering evidence and identifying the most effective and cost-effective approaches that work in settings with resource-constraints. Such research is important for policy reforms and for setting program priorities, especially because data related to maternal

health are scarce. In addition, more emphasis should be given to identifying strategies that improve maternal health based on proven effectiveness rather than on theory alone. Adequate evaluation of the effectiveness of strategies, in real-life conditions, may be a cost- and time-efficient way to select approaches for large-scale program implementation and replication, thereby accelerating progress towards improving maternal and reproductive health (Miller et al., 2003; Better Births Initiative, 2002). The results of updated systematic reviews of research can help policymakers, health professionals, and users of maternal health services make more informed decisions about the best care that is appropriate for a particular problem (Better Births Initiative, 2002).

**Box 15: The Initiative for Maternal Mortality Program Assessment (IMMPACT)**

IMMPACT is a global research initiative whose ultimate goal is to improve maternal health and survival in developing countries by providing evidence of the effectiveness and cost-effectiveness of safe motherhood intervention strategies and their implications for equity and sustainability. Improving the evidence base for decision-making will enable health gains for women, babies and families; social and economic gains for the wider community; and enhanced methods and capacities for vigorous evaluation of health programs. In the absence of a stronger evidence-base, decision-makers in poor countries will continue to allocate scarce resources to safe motherhood initiatives without proven benefits for the world's poor.

The main phase of IMMPACT, which began in September 2002, is an extensive seven-year program of primary and secondary research with three core objectives: 1) development of methods and tools for measuring and attributing health outcomes; 2) evidence of effective and cost-effective strategies; and 3) capacity strengthening for evidence-based decision-making and rigorous evaluation. The outputs are interdependent and constitute the building blocks for the seven-year program. The tools developed by IMMPACT can be used to provide a continuous source of evidence, so IMMPACT itself will not need to be replicated. Providing realistic methods for measuring trends and differentials of safe motherhood strategies will allow policy makers to track the effects of initiatives within and beyond the health sector. Further, stronger in-country capacity will ensure that this evidence, together with the enhanced methods and tools, are utilized both within and well beyond the duration of IMMPACT.

IMMPACT is currently working in Burkina Faso, Ghana, and Indonesia. Activities will ultimately be in up to eight developing countries across three continents. IMMPACT is coordinated by the Dugald Baird Centre for Research on Women's Health at the University of Aberdeen, in the United Kingdom. Funding for IMMPACT comes from the Bill and Melinda Gates Foundation, DFID, USAID, and the European Commission.

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*Bangladesh, Ghana, Jamaica, Malawi, Mexico* The SAFE (Skilled Attendance for Everyone) International Research Partnership, coordinated by the University of Aberdeen, aims to improve skilled attendance at delivery by providing new knowledge on skilled attendance in developing countries. As part of the study (September 2000–February 2003), a strategy development tool was formulated as a resource document for program managers to systematically gather and interpret information and to plan for strategies to increase the proportion of skilled attendance. A secondary analysis of demographic and health survey data indicated that delivery care appeared to be improving in the countries studied, although national trends mask substantial variations among different groups of women, and inequity may be increasing. Studies on women’s reports of their birth attendant show potential for incorrect identification, documenting the need for methodological developments in this area. A new composite measure of skilled attendance (the skilled attendance index) was developed and revealed that few deliveries may meet the many criteria required for skilled care. [Annex 8]

**Box 16: Better Births Initiative – Improving Health through Evidence-Based Obstetrics**

The Better Births Initiative (BBI) aims to ensure that clinical policies and procedures used in essential obstetric services are grounded in reliable research evidence. The initiative is targeted at health care providers and assists them in understanding research evidence, making decisions about best practice, and establishing implementation procedures to assure change. The BBI is aimed at middle and low-income countries, where resources for health care are limited and where better services will help reduce maternal mortality. Good quality obstetric care needs good infrastructure, trained staff, equipment and drugs. Many governments and donors are striving to establish and maintain these services. The Better Births Initiative complements these efforts, and helps to ensure that the procedures staff use are based on the most reliable research evidence. Policymakers, managers, midwives and doctors all have a role to play in effecting change towards evidence-based practice. The Better Births Initiative focuses on particular areas of obstetric practice which are frequently deficient, where it is reasonable to expect people to change, and where any resource implications of the change are probably realistic and affordable.

*Source:* Better Births Initiative, 2002.

### **3.8 PARTNERSHIPS AND COLLABORATIONS**

The challenge of achieving the Millennium Development Goal to improve maternal health requires commitment, support, coordination, and inputs from a range of partners, including donor agencies, governments, non-governmental organizations, international assistance agencies and health providers. Key players should work together to promote maternal health, sharing their diverse strengths and skills.

Partnerships that focus on advocacy efforts are central to raising awareness on the high human and economic costs associated with poor maternal health. Strong advocacy can help set priorities, stimulate research, mobilize resources, and share information. Advocates can use information to increase knowledge and motivation, and build capacity. Furthermore, advocates can use data to hold governments accountable for government-signed documents such as the 1994 ICPD Program of Action. Although advocacy efforts

have been successful in family planning, there are relatively fewer networks working specifically to improve maternal health (POLICY Project and MNH Program, 2003).

In January 2004, the *Partnership for Safe Motherhood and Newborn Health* was established as an expanded initiative to promote the health and survival of women and newborns in the developing world. The Partnership aims to reinvigorate and expand the global Safe Motherhood initiative to address maternal death and disability. Building on the opportunity provided by the Millennium Development Goals, the Partnership will create synergy among stakeholders working to ensure all women and newborns enjoy the right to safe pregnancy outcomes. The Partnership will aim to strengthen and expand maternal and newborn health efforts within the broader goals of poverty reduction, equity, and human rights, and in particular, will address the enormous health disparities that exist between urban and rural populations and between rich and poor. Two key priorities of the Partnership will be: 1) ensuring that safe motherhood and newborn health are addressed in national development plans, sector-wide approaches, Poverty Reduction Strategy Papers, and other resource allocation mechanisms at the country level; and 2) advocating for greater attention to, funding for, and action on safe motherhood and newborn health at the global level. General membership is open to any/all groups active in safe motherhood and/or newborn health who work nationally, locally, regionally, or globally in one or more of the following areas: advocacy; country-level implementation; strengthening capacity (i.e., training, research, policy development, technical assistance); and resource mobilization/allocation. [For more information on the Partnership for Safe Motherhood and Newborn Health, visit their website at: <http://www.safemotherhood.org>.]

*The White Ribbon Alliance for Safe Motherhood (WRA)* unites individuals, organizations, and communities to build public awareness and act as a catalyst for action to promote safe motherhood and ensure that women do not have to die during pregnancy and childbirth. This grassroots movement builds alliances, strengthens capacity, harnesses resources, and inspires action to save women's and newborns' lives worldwide. WRA members are a diverse group including U.N. organizations, local and international NGOs, medical practitioners, government representatives, community and faith-based organizations, students and individuals committed to the health and well being of women and their families. All Alliance members are committed to promoting safe motherhood and to making pregnancy and childbirth safe for all women worldwide through innovative partnerships and collaborations and sharing resources and information. [Annex 9]

*FIGO Save the Mothers Initiative.* The International Federation of Gynecology and Obstetrics (FIGO) is the only world-wide organization representing national societies of obstetricians and gynecologists. In 1997, FIGO established the *Save the Mothers Initiative* to expand its activities in the area of safe motherhood. The aim is to mobilize the obstetric and gynecological community in developed and developing countries to work in partnership to demonstrate the most cost-effective way to save mothers' lives. The initiative focuses on the following four elements to reduce maternal mortality: 1) skilled attendance at all births; 2) basic EmOC at peripheral units; 3) comprehensive

EmOC in referral hospitals; and 4) rapid transport of all women in need of special care. *Save the Mothers Initiative* is the first concerted effort on the part of obstetricians, collectively as a profession, to address the issue of safe motherhood (Benagiano and Thomas, 2003). [For more information on the Save the Mothers Initiative, visit their website at: <http://www.figo.org/sav-moth.asp>.]

## 4. CONCLUDING REMARKS

This paper brings together a wide array of promising approaches to improve maternal health that are being carried out by a range of organizations with extensive knowledge and impressive program experience in the field. Readers are encouraged to contact the various agencies and organizations for more detailed information on the promising approaches. While the collection of promising approaches is not exhaustive, it portrays the importance of sharing experiences of what works. What is clearly reflected in these approaches is that success in addressing maternal health issues and strengthening the supply-demand nexus requires support and involvement from stakeholders at all levels – from women themselves, their families, communities, nongovernmental organizations, governmental organizations, medical institutions, bilateral and multilateral agencies, other development partners, and policymakers. This paper also reflects the enormous enthusiasm and support that exists among these stakeholders to give high priority to maternal health, and to strive towards improving health outcomes for women.

Achieving the MDG to improve maternal health will remain elusive until there is political will and action to implement programs that are based on proven and effective interventions and strategies. More investments by governments are necessary to strengthen weak health systems, expand coverage, ensure adequate human resources, improve program management, address supply chain issues, and institute better monitoring and evaluation. It is especially critical that these maternal health programs reach the poorest households and reduce the existing inequalities in utilization of services. Governments need to provide safety nets for the poor and target poor regions in order to achieve universal coverage. Such efforts will take time, and there are no quick fixes and easy solutions (WHO, 2004b). The challenge faced by maternal health programs is to implement programs where resources are low and capacity is weak. Commitment from national and local authorities, and larger predictable support from donor agencies, is essential for implementing programs on a large scale to achieve public health impact. Where local projects have been successful, they should be scaled up to national programs (Donnay, 2000). It is hoped that this paper will provide an impetus by showing what can be done and catalyze rigorous impact evaluation to strengthen the evidence base, so that the next generation of maternal health programs reach women more effectively, and lead to real and sustained progress in improving maternal health outcomes and saving women's lives.



## REFERENCES

- AbouZahr C. 1997. "Improve access to good quality maternal health services." In A. Starrs (Ed.) *The Safe Motherhood Action Agenda: Priorities for the Next Decade*. Report of the Safe Motherhood Technical Consultation. New York: Family Care International, 1998.
- AbouZahr C. 1998. "Antepartum and postpartum hemorrhage". In C.J.L. Murray and A.D. Lopez (Eds.) *Health Dimensions of Sex and Reproduction*. Boston: Harvard University Press.
- AbouZahr C. and Wardlaw T. 2003a. *Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF, and UNFPA in 2000*. Geneva: World Health Organization.
- AbouZahr C. and Wardlaw T. 2003b. *Antenatal Care in Developing Countries: Promises, achievements and missed opportunities*. Geneva: World Health Organization.
- Aitken I.W. 1998. *Decentralization and Reproductive Health*. Department of Population and International Health, Harvard School of Public Health.
- Ashford L. 2003. *Unmet Need for Family Planning*. MEASURE Communication Policy Brief. Washington: Population Reference Bureau.  
<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=8212>
- Benagiano G. and Thomas B. 2003. "Saving mother's lives: the FIGO Save the Mothers Initiative". *International Journal of Gynecology and Obstetrics* 80: 198–203.
- Bergström S. and Goodburn E. 2001. "The role of traditional birth attendants in the reduction of maternal mortality". In V. De Brouwere and W. Van Lerberghe (Eds.) *Safe Motherhood Strategies: a Review of the Evidence*. Antwerp: ITG Press.
- Bergsjø P. 2001. "What is the evidence for the role of antenatal care strategies in the reduction of maternal mortality and morbidity?" In V. De Brouwere and W. Van Lerberghe (Eds.) *Safe Motherhood Strategies: a Review of the Evidence*. Antwerp: ITG Press.
- Better Births Initiative. 2002. *Better Births Initiative Concept Document*. Liverpool: Liverpool School of Tropical Medicine.  
<http://www.liv.ac.uk/lstm/download/bbiconceptdoc.pdf>
- Bicego G., Curtis S., Raggars H., Kapiga S., and Ngallaba S. 1997. *Sumve Survey on Adult and Childhood Mortality, Tanzania, 1995: In-depth study on estimating adult and childhood mortality in settings of high adult mortality*. Calverton, Maryland: Macro International Inc.

Bornstein T. and Marquez L. 2004. Improvement Collaboratives: An Approach to Spreading Best Practices. Quality Assurance Project, University Research Co., LLC.  
<http://qaproject.org/news/ImprovementCollaboratives.pdf>  
<http://qaproject.org/news/CollaborativesSept2004.pdf>

Brinkerhoff D. and Leighton C. 2002. “Decentralization and Health System Reform”. *Insight for Implementers* No. 1. Bethesda: Partners for Health Reformplus, Abt Associates Inc.

Carroli G., Rooney C., and Villar J. 2001. “How effective is antenatal care in preventing maternal mortality and serious morbidity? An overview of the evidence.” *Paediatric and Perinatal Epidemiology*, 15(Suppl. 1): 1–42.

Center for Development and Population Activities (CEDPA). 2001. *Adolescent Girls in India Choose a Better Future: An Impact Assessment*. Washington: CEDPA.

Chiwuzie J., Okojie O., Okolocha C., Omorogbe S., Oronsaye A., Akpala W., Ande B., Onoguwe B., and Oikeh E. 1997. “Emergency loan funds to improve access to obstetric care in Ekpoma, Nigeria.” *International Journal of Gynecology and Obstetrics* 59 (Suppl. 2): S231–S236.

Chowdhury S.N.M. 2003. “Pregnancy and postpartum experience among first time young parents in Bangladesh: preliminary observations.” In S. Bott, S. Jejeebhoy, and I. Shah et al. (eds.) *Towards Adulthood: Exploring the Sexual and Reproductive Health of Adolescents in South Asia*. p. 59–61. Geneva: WHO.

Claeson M., Griffin C., Johnston T., McLachlan M., Soucat A., Wagstaff A., and Yazbeck A. 2001. *Poverty Reduction Strategy Sourcebook*. Washington: The World Bank.

Darney, P.D. 2001. “Misoprostol: a boon to safe motherhood...or not?” [commentary]. *Lancet* 358(9283): 682–683.

Daulaire N., Leidl P., Mackin L., Murphy C., and Stark L. 2002. *Promises To Keep: The Toll of Unintended Pregnancies on Women’s Lives in the Developing World*. Washington: Global Health Council.

Dayaratna V. et al. 2000. *Reproductive Health Interventions: Which Ones Work and What Do They Cost?* Washington: POLICY Project.

Dmytraczenko T., Rao V., and Ashford L. 2003. *Health sector reform: how it affects reproductive health*. Measure Communication/PHRplus Policy Brief. Washington: Population Reference Bureau.  
<http://www.phrplus.org/Pubs/HealthSectorReformColor.pdf>

Donnay F. 2000. "Maternal survival in developing countries: what has been done, what can be achieved in the next decade." *International Journal of Gynecology and Obstetrics* 70: 89–97.

Dubourg D., De Brouwere V., Van erberghe W., Richard F., Litt V., and Derveeuw M. 2000. *The Unmet Obstetric Needs Network Final Report Part 1: Synthesis*. Antwerp: Institute of Tropical Medicine.

Elder L. 2000. *Issues in Programming for Maternal Anemia*. Washington: USAID/MotherCare.

Essien E., Ifenne D., Sabitu K., Musa A., Liti-Mu'azu M., Adidu V., Golji N., and Mukaddas M. 1997. "Community loan funds and transport services for obstetric emergencies in northern Nigeria". *International Journal of Gynecology and Obstetrics* 59 (Suppl. 2): S237–S244.

Family Care International and Safe Motherhood Inter-Agency Group. 1998a. *Address unsafe abortion* (Factsheet). New York: Family Care International.

Family Care International and Safe Motherhood Inter-Agency Group. 1998b. *Improve access to maternal health services* (Factsheet). New York: Family Care International.

Family Care International and the Safe Motherhood Inter-Agency Group. 2001. *Saving Lives: Skilled Attendance at Childbirth*. Report on the International Conference Organized by the Safe Motherhood Inter-Agency Group, 13 – 15 November 2002, Tunis, Tunisia. New York: Family Care International.

[http://www.safemotherhood.org/resources/pdf/skilled\\_care/Saving\\_Lives\\_ConfReport\\_Eng.pdf](http://www.safemotherhood.org/resources/pdf/skilled_care/Saving_Lives_ConfReport_Eng.pdf)

Fawcus S., Mbizvo M., Lindmark G., and Nystrom L. 1996. "A community-based investigation of avoidable factors for maternal mortality in Zimbabwe". *Studies in Family Planning* 27(6): 319–327.

Fishbein M. 1995. "Developing effective behavior change interventions: some lessons learned from behavioral research." In T.E. Becker, S.L. David, and G. Saucy (Eds.) *Reviewing the behavioral science knowledge base on technical transfer*. NIDA Research Monograph 155. Rockville: National Institute on Drug Abuse.

Focus on Young Adults. 2001. *Advancing Young Adult Reproductive Health: Actions for the Next Decade. End of Program Report*. Washington: Pathfinder International.

Fofana P., Samai O., Kebbie A., and Sengeh P. 1997. "Promoting the use of obstetric services through community loan funds, Bo, Sierra Leone". *International Journal of Gynecology and Obstetrics* 59 (Suppl. 2): S225–S230.

Fortney J.A. and Smith J.B. 1999. "Measuring maternal morbidity." In M. Berer and T.K.S. Ravindran (eds.) *Safe Motherhood Initiatives: Critical Issues*. London: Blackwell Science Limited.

Freedman L., Wirth M., Waldman R., Chowdhury M., and Rosenfield A. 2003. *Background Paper of the Task Force on Child Health and Maternal Health*. Millennium Project. Commissioned by the UN Secretary General and supported by the UN Development Group. <http://www.unmillenniumproject.org/documents/tf04apr18.pdf>

Ganatra B.R., Coyaji K.J., and Rao V.N. 1996. *Community Cum Hospital Based Case Control Study on Maternal Mortality*. Pune: KEM Hospital Research Center.

Gertler P. 2000. *Final Report: The Impact of PROGRESA on Health*. International Food Policy Research Institute, Food Consumption and Nutrition Division.

Global Health Council. 2002. "Getting a grip on the supply chain: increasing program impact by ensuring product availability." *Global HealthLink* #114, March-April 2002. <http://www.globalhealth.org/publications/article.php3?id=712>

Goodburn E.A. 2002. "Using process indicators to monitor and evaluate obstetric services in developing countries". *Journal of the American Medical Women's Association* 57(3): 145–148.

Goodyear L. 2002. "Reaching refugees and internally displaced persons". In E.M. (ed.) *Reproductive Health and Rights – Reaching the Hardly Reached*. Washington: PATH.

Gottret P., Fang Q., and Brenzel L. 2004. *Review of Alternative Approaches for Costing the Health MDGs at Country Level*. (DRAFT) Washington: World Bank.

Graham W. and Hussein J. 2004. "The right to count." *Lancet* 363: 67–68.

Guindo G., Dubourg D., Marchal B., Blaise P., and De Brouwere V. 2004. "Measuring unmet obstetric need at district level: how an epidemiological tool can affect health service organization and delivery." *Health Policy and Planning*, 19(Suppl. 1): i87–i95.

Gwatkin D.R., Rutstein S., Johnson K., Pande R.P., and Wagstaff A. 2000a. *Socioeconomic differences in health, nutrition and population in [country name]*. Washington: World Bank, HNP/Poverty Thematic Group.

Gwatkin D., Rutstein S., Johnson K., Pande R., and Wagstaff A. 2000b. *Socio-Economic Differences in Health, Nutrition, and Population – 45 Countries* (Tables and Figures). World Bank PovertyNet website: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/0,,menuPK:336998~pagePK:149018~piPK:149093~theSitePK:336992,00.html>

Hutton G. 2002. *Decentralization and the sector-wide approach in the health sector*. Berne: Swiss Agency for Development and Cooperation.

<http://www.sti.ch/pdf/swap274.pdf>

Jahn A. and De Brouwere V. 2001. “Referral in pregnancy and childbirth: Concepts and strategies”. In V. De Brouwere and W. Van Lerberghe (Eds.) *Safe Motherhood Strategies: a Review of the Evidence*. Antwerp: ITG Press.

Jakab M. and Krishnan C. 2004. “Review of the strengths and weaknesses of community financing”. In A.S. Preker and Carrin G. (Eds.) *Health Financing for Poor People*. Washington: The World Bank.

JHPIEGO. 2004. Post-abortion Care: Skilled Care and Comprehensive Services. Maternal and Neonatal Health Program – Best Practices Brief.

<http://www.mnh.jhpiego.org/best/pac.pdf>

John Snow, Inc. 2005. *The Importance of Logistics: No Product? No Program*. DELIVER Project On Track Policy Brief.

[http://deliver.jsi.com/pdf/on\\_track/ontrack\\_newpolicy.pdf](http://deliver.jsi.com/pdf/on_track/ontrack_newpolicy.pdf)

Jowett M. 2000. “Safe motherhood interventions in low-income countries: an economic justification and evidence of cost effectiveness.” *Health Policy* 53: 201–228.

Kelin D., Kaining Z., and Songuan T. 2003. *Summary of a draft report on a MCHPAF study in China*. <http://poverty.worldbank.org/library/view.php?topic=3438&id=9909>

Knippenberg R., Soucat, A., and Vanlerberghe W. 2004. *Marginal Budgeting for Bottlenecks: A Tool for Performance Based Planning of Health and Nutrition Services for Achieving the Millennium Development Goals*. (Concept Note) Washington: World Bank.

Koblinsky M.A. 1995. “Beyond maternal mortality – magnitude, interrelationship, and consequences of women’s health, pregnancy-related complications and nutritional status on pregnancy outcomes.” *International Journal of Gynecology and Obstetrics* 48(Suppl.): S21–S32.

Koblinsky M.A. 2003. *Reducing Maternal Mortality: Learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica, and Zimbabwe*. Washington: The World Bank.

Kodjogbé N., Forun L., and Stanton C. 2003. “Content, completeness, and use of maternity register data in two departments in Benin.” In MEASURE Evaluation Bulletin 7: *Strengthening Monitoring and Evaluation of Maternal Health Programs*. Chapel Hill: Carolina Population Center. <http://www.cpc.unc.edu/measure/publications/pdf/bu-04-07.pdf>

Kunst A.E. and Houweling T. 2001. "A global picture of poor-rich differences in the utilization of delivery care". In V. De Brouwere and W. Van Lerberghe (Eds.) *Safe Motherhood Strategies: a Review of the Evidence*. Antwerp: ITGPress.

Kwast B. 1995. "Building a community-based maternity program". *International Journal of Gynecology and Obstetrics* 48(Suppl.): S67–82.

Lakshminarayanan R. 2003. "Decentralization and its implications for reproductive health: the Philippines Experience". *Reproductive Health Matters* 11(21): 96–107.

Lawn J.E., Cousens S., and Zupan J. 2005. "Neonatal survival 1: 4 million neonatal deaths: When? Where? Why?", 365(9462): 891–900.

Lubben M., Mayhew S.H., Collins C., and Green A. 2002. "Reproductive health and health sector reform in developing countries: establishing a framework for dialogue." *Bulletin of the World Health Organization* 80(8): 667–674.

Lule E., Oomman N., Epp J., and Ramana G.N.V. 2003. *Achieving the Millennium Development Goal of Improving Maternal Health: Determinants, Interventions and Challenges*. World Bank HNP Discussion Paper (Draft).

MacDonald M. and Starrs A. 2002. *Skilled care during childbirth information booklet: Saving women's lives, improving newborn health*. New York: Family Care International.

Maine D. 1993. *Safe Motherhood Programs: Options and Issues*. New York: Center for Population and Family Health, Columbia University.

Maine D. 1997. "The strategic model for the PMM Network." *International Journal of Gynecology and Obstetrics* 59 (Suppl. 2): S23–S25.

Maine D. 1999. "What's so special about maternal mortality?" In M. Berer and T.K.S. Ravindran (eds.) *Safe Motherhood Initiatives: Critical Issues*. London: Blackwell Science Limited.

Maine D., Akalin M.Z., Ward V.M., and Kamara A. 1997. *The Design and Evaluation of Maternal Mortality Programs*. New York: Center for Population and Family Health, Columbia University.

Maine D. and Chavkin W. 2002. "Maternal mortality: global similarities and differences." *Journal of the American Medical Women's Association*, 57(3): 127–130.

McCord C. and Chowdhury Q. 2003. "A cost effective small hospital in Bangladesh: what it can mean for emergency obstetric care." *International Journal of Gynecology and Obstetrics* 81: 83–92.

MEASURE Evaluation Project. 2003. *Strengthening Monitoring and Evaluation of Maternal Health Programs*. MEASURE Evaluation Bulletin 7. Chapel Hill: Carolina Population Center.

Merrick T. 2004. *Background paper to Achieving the MDGs: Poverty Reduction, Reproductive Health, and Health Sector Reform Course*. Turin, Italy.

Middlestadt S.E., Pareja R., Hernandez O., Maguire S., Jimerson A., and Randell J. 2003. *The Catalyst Behavior Change Diagnostic Framework*. Washington: Academy for Educational Development.

Miller S., Sloan N., Winikoff B., Langer A., and Fikree F.F. 2003. "Where is the 'E' in MCH? The need for an evidence-based approach in safe motherhood." *Journal of Midwifery and Women's Health* 48(1): 10–18.

Mills S. and Bertrand J.T. 2005. "Use of health professionals for obstetric care in northern Ghana." *Studies in Family Planning* 26(1): 45–56.

Murray S.F., Davies S., Phiri R.K., and Ahmed Y. 2001. "Tools for monitoring the effectiveness of district maternity referral systems". *Health Policy and Planning* 16(4): 353–361.

Musoke M.G.N. 2002. "Maternal health care in rural Uganda: leveraging traditional and modern knowledge systems." *IK Notes No. 40*. Washington: World Bank.

Nanda G. 2003. *Utilization of Professional Delivery Care among Rural Women with Intrapartum Complications in Karnataka, India*. Ann Arbor, MI: Proquest Information and Learning Company (UMI Number: 3117906).

Nanda P. 1999. "Women's participation in rural credit programs in Bangladesh and their demand for formal health care: is there a positive impact?" *Health Economics and Econometrics* 8: 415–428.

Nuwaha F. and Amooti-Kaguna. 1999. "Predictors of home deliveries in Rakai District, Uganda". *African Journal of Reproductive Health* 3(2): 79–86.

Oomman N., Lule E., and Chhabra R. 2003. *Rajasthan, India: Inequalities in Health, Nutrition, and Population*. Washington: World Bank.

Oxford Policy Management. 2001. *External Evaluation of the National Program for Family Planning and Primary Health Care*.

Panos London. 2001. *Birth rights: New approaches to safe motherhood*. London: Panos and the London School of Tropical Hygiene and Medicine.

Pathmanathan I., Liljestrand J., Martins J.M., Rajapaksa L.C., Lissner C., de Silva A., Selvaraju S., and Singh P.J. 2003. *Investing in Maternal Health: Learning from Malaysia and Sri Lanka*. Washington: The World Bank.

Paxton A., Maine D., Freedman L., Fry D., and Lobis S. 2005. "The evidence for emergency obstetric care." *International Journal of Gynecology and Obstetrics* 88: 181–193.

Payne L. and Afenyadu D. 2003. *Safe Motherhood Initiative in Ghana: Endline Studies*. Washington: CEDPA.

Pereira A., Bugalho A., Bergstrom S., Vaz F., and Cotiro M. 1996. "A comparative study of caesarean deliveries by assistant medical officers and obstetricians in Mozambique". *British Journal of Obstetrics and Gynecology* 103: 508–512.

Policy Project and Maternal and Neonatal Health Program. 2003. *Networking for Policy Change: An Advocacy Training Manual Maternal Health Supplement*. Washington: Policy Project, Maternal and Neonatal Health Program, and USAID.

Preker A.S., Carrin G., Dror D., Jakab M., Hsiao W., and Arhin-Tekorang D. 2002. "Effectiveness of community health financing in meeting the cost of illness". *Bulletin of the World Health Organization* 80(2): 143–150.

Prendiville W.J., Elbourne D., McDonald S. 2004. "Active versus expectant management in the third stage of labor (Cochrane Review)". *The Cochrane Library* Issue 2, 2004. Chichester: John Wiley and Sons, Ltd.

Prevention of Maternal Mortality Network. 1996. *PMM Results Conference: Abstracts*. New York: Center for Population and Family Health, Columbia University.

Prevention of Maternal Mortality Network. 1996. *PMM Results Conference: Abstracts*. New York: Center for Population and Family Health, Columbia University.

Program for Appropriate Technology in Health (PATH). 2002. *Reproductive Health and Rights – Reaching the Hardly Reached*. Washington: PATH.

Program of Action (Paragraph 7.2), Report of the International Conference on Population and Development (A/CONF.171/13). 1994. New York: United Nations.

Raju S. and Leonard A. (Eds.) 2000. *Men as Supportive Partners in Reproductive Health: Moving from Rhetoric to Reality*. Population Council South and East Asia Regional Office.

Ransom E.I. and Yinger N.V. 2002. *Making Motherhood Safer: Overcoming Obstacles on the Pathway to Care*. Washington,,: Population Reference Bureau.

Ripley D.L. 1999. "Uterine emergencies: atony, inversion and rupture". *The Obstetrics and Gynecology Clinics of North America. Emergent Care* 26(3): 419–433.

Rose M., Abderrahim N., Stanton C., and Helsel D. 2001. *Maternity Care: A Comparative Report on the Availability and Use of Maternity Services*. MEASURE Evaluation Technical Report Series, No. 9. Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill.

Rosen J.E. 2000. *Contracting for Reproductive Health Care: A Guide*. Health, Nutrition, and Population Thematic Group. Washington: World Bank.  
<http://siteresources.worldbank.org/INTPRH/Resources/contractingreproh.pdf>

Rosenfield A. and Maine D. 1985. "Maternal mortality – a neglected tragedy. Where is the M in MCH?" *Lancet*, July 13.

Ross J.A. and Winfrey W.L. 2003. "Unmet Need for Contraception in the Developing World and the Former Soviet Union: An Updated Estimate." *International Family Planning Perspectives* 28(3): 138–143.

Roth D. and Mbizvo M. 2001. "Promoting safe motherhood in the community: The case for strategies that include men." *African Journal of Reproductive Health* 5(2): 10–21.

Save the Children. 2002. *State of the World's Mothers 2002: Mothers and Children in War and Conflict*. Westport: Save the Children.

Save the Children. 2004. *State of the World's Mothers 2004: Children Having Children*. Westport: Save the Children.  
[http://www.savethechildren.org/mothers/report\\_2004/images/pdf/SOWM\\_2004\\_final.pdf](http://www.savethechildren.org/mothers/report_2004/images/pdf/SOWM_2004_final.pdf)

Shali T., Singh C., and Goindi G. 2004. "Prevalence of anemia amongst pregnant mothers and children in Delhi." *Indian Journal of Pediatrics* 71(10): 946.

Shulman C.E. and Dorman E.K. 2003. "Importance and prevention of malaria in pregnancy". *Transactions of the Royal Society for Tropical Medicine and Hygiene* 97(1): 30–35.

Skoufias E. 2000. *The Education, Health and Nutrition Program (PROGRESA) of Mexico*. International Food Policy Research Institute, Presentation. Education and Poverty: Including the Excluded, World Bank LCSHD Conference, May 29–31, 2000, Madrid, Spain.

Starrs A. 1998. *The Safe Motherhood Action Agenda: Priorities for the Next Decade*. Report of the Safe Motherhood Technical Consultation, Sri Lanka, 18–23 October 1997. New York: Family Care International.

Steketee R.W. et al. 1996. "Impairment of a pregnant woman's acquired ability to limit plasmodium falciparum by infection with human immunodeficiency virus type-1". *American Journal of Tropical Medicine and Hygiene* 55: 42–49.

Stoltzfus R.J. 2001. "Iron-deficiency anemia: reexamining the nature and magnitude of the public health problem. Summary: implications for research and programs." *Journal of Nutrition* 131: 697S–701S.

Strong MA. 1992. "The health of adults in the developing world: the view from Bangladesh." *Health Transition Review* 2(2): 215–230.

Thaddeus S. and Maine D. 1990. *Too Far to Walk: Maternal Mortality in Context. Findings from a Multidisciplinary Literature Review*. New York: Columbia University, Center for Population and Family Health.

Thaddeus S. and Maine D. 1994. "Too far to walk: maternal mortality in context." *Social Science and Medicine* 38(8): 1091–1110.

Thonneau P.F. 2001. "Maternal mortality and unsafe abortion: a heavy burden for developing countries". In V. De Brouwere and W. Van Lerberghe (Eds.) *Safe Motherhood Strategies: a Review of the Evidence*. Antwerp: ITGPress.

Tsu V.D. and Shane B. 2004. "New and underutilized technologies to reduce maternal mortality: call to action from a Bellagio workshop." *International Journal of Gynecology and Obstetrics* 85(Suppl. 1): S83–S93.

Tsu V.D., Langer A., and Aldrich T. 2004. "Postpartum hemorrhage in developing countries: is the public health community using the right tools?" *International Journal of Gynecology and Obstetrics* 85(Suppl. 1): S42–S51.

United Nations. 2000. *United Nations Millennium Declaration*. A/RES/55/2, Section II. New York: United Nations.

UNFPA. 2001. *Reproductive Health for Communities in Crisis: UNFPA Emergency Response*. New York: UNFPA.

UNFPA. 2003. *State of World Population 2003 Making 1 billion count: Investing in adolescents' health and rights*. New York: UNFPA.

UNICEF. 2003. "Every day, 1400 girls and women die giving birth." Women's Day Press Release.

UNICEF/WHO/UNFPA. 1997. *Guidelines for Monitoring the Availability and Use of Obstetric Services*. New York: UNICEF.

<http://www.unicef.org/health/files/guidelinesformonitoringavailabilityofemoc.pdf>

Unmet Obstetric Need (UON) Network. 2005. UON website: <http://www.itg.be/uonn/eng/home1b.html>

US Committee for Refugees and Immigrants (USCRI). 2004. *World Refugee Survey 2004*. Washington: USCRI.

Valladares R., Barillas E., Hileman S.B., Fonseca-Becker F., Rose M., and Buekens P. 2003. "Maternity registers in Guatemalan facilities: a potential source of data for monitoring obstetric care." In MEASURE Evaluation Bulletin 7: *Strengthening Monitoring and Evaluation of Maternal Health Programs*. Chapel Hill: Carolina Population Center. <http://www.cpc.unc.edu/measure/publications/pdf/bu-04-07.pdf>

Van Lerberghe W. and De Brouwere V. 2001. "Reducing maternal mortality in the context of poverty". In V. De Brouwere and W. Van Lerberghe (Eds.) *Safe Motherhood Strategies: a Review of the Evidence*. Antwerp: ITG Press.

Vaz F., Bergstrom S., da Luz Vaz M., Langa J., and Bugalho A. 1999. "Training medical assistants for surgery". *Bulletin of the World Health Organization* 77(8): 688–691.

Wagstaff A. 2002. "Poverty and health sector inequalities". *Bulletin of the World Health Organization* 80(2): 97–105.

Wagstaff A. and Claeson M. 2004. *The Millennium Development Goals for Health: Rising to the Challenges*. Washington: World Bank.

Wardlaw T. and Maine D. 1999. "Process indicators for maternal mortality programs". In M. Berer and TKS Ravindran (Eds.) *Safe Motherhood Initiatives: Critical Issues*. Oxford: Blackwell Science Ltd.

White Ribbon Alliance for Safe Motherhood/India (WRAI). 2002. *Saving Mothers' Lives: What Works. A Field Guide for Implementing Best Practices in Safe Motherhood*. New Delhi: WRAI.

Widdus R. 2001. "Public-private partnerships for health: their main targets, their diversity, and their future directions". *Bulletin of the World Health Organization* 79(8): 713–720.

World Bank. 1993. *World Development Report 1993: Investing in Health*. New York: Oxford University Press.

World Bank. 1998. "Using microcredit to advance women." *PREMnotes*, November 1998, Number 8. Washington: World Bank.

World Bank. 1999. *Safe motherhood and the World Bank: Lessons from 10 years of experience*. Washington: World Bank.

World Bank. News and Broadcast. September 18, 2000. Fighting poverty in Latin America and the Caribbean: Five examples of how World Bank projects improve the lives of the poor.

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20020919~menuPK:34460~pagePK:64003015~piPK:64003012~theSitePK:4607,00.html>

World Bank. 2002. *Reproductive Health* (at a glance series).

<http://wbIn0018.worldbank.org/HDNet/HDdocs.nsf/0/d004067c850d9036852569a600719b85?OpenDocument#section8>

World Health Organization. 1996. *Mother-Baby Package: Implementing Safe Motherhood in Countries*. (WHO/FHE/MSM/94.11) Geneva: World Health Organization.

World Health Organization. 1998. *Improve Access to Maternal Health Services*. Geneva: WHO, Division of Reproductive Health (Technical Support). World Health Day – 7 April 1998: Safe Motherhood; WHD98.7.

World Health Organization. 1999. *Reduction of Maternal Mortality: A Joint WHO/UNFPA/UNICEF/World Bank Statement*. Geneva: World Health Organization.

World Health Organization. 2000. *The World Health Report 2000 Health Systems: Improving Performance*. Geneva: World Health Organization.

World Health Organization. 2003a. *Safe abortion: technical and policy guidance for health systems*. Geneva: World Health Organization.

World Health Organization. 2003b. *The Abuja Declaration and the Plan of Action: An Extract from the African Summit on Rollback Malaria Abuja, 25 April 2000*. (WHO/CDS/RBM/2000.17) Geneva: Rollback Malaria/World Health Organization.

World Health Organization. 2003c. *Working with Individuals, Families and Communities*. Geneva: World Health Organization.

World Health Organization. 2004a. *Beyond the Numbers: Reviewing maternal deaths and complications to make pregnancy safer*. Geneva: World Health Organization. <http://www.who.int/reproductive-health/publications/btn/index.html>

World Health Organization. 2004b. *Making pregnancy safer: the critical role of the skilled attendant. A joint statement by WHO, ICM, and FIGO*. Geneva: Department of Reproductive Health and Research, World Health Organization.

World Health Organization. 2004c. *Proportion of births attended by skilled health personnel. 2004 global estimates*. Geneva: Department of Reproductive Health and Research, World Health Organization.

World Health Organization and UNICEF. 2003. *The Africa Malaria Report 2003*. (WHO/CDES/MAL/2003.1093) Geneva: World Health Organization.

Yazbeck A. 1999. *But How Much Does It Cost?* Foreground Paper for World Bank Institute Course entitled “Achieving the Millennium Development Goals: Poverty Reduction, Reproductive Health and Health Sector Reform”. Washington: The World Bank.

YouthNet. 2004. *Maternal Health Care among Adolescents*. YouthLens on Reproductive Health and HIV/AIDS, number 11. Arlington: YouthNet.

Yuster E.A. 1995. “Rethinking the role of the risk approach and antenatal care in maternal mortality reduction.” *International Journal of Gynecology and Obstetrics*, 50 (Suppl. 2): S59–S61.

## ANNEXES

**Government Policies and Actions (Annex 2)**

Name of Approach	Organization	Contact Information
Advocacy for Reducing Maternal Mortality	Academy for Educational Development	Luann Martin <a href="mailto:lmartin@aed.org">lmartin@aed.org</a> 202.884.8977 (tel)

**Health Systems and Health Financing (Annex 3)**

Name of Approach	Organization	Contact Information
India Family Welfare Urban Slums Project	World Bank	GNV Ramana <a href="mailto:gramana@worldbank.org">gramana@worldbank.org</a>
Improving Maternal and Reproductive Health Services through a Public-Private Partnership Model in Sindh, Pakistan	Marie Stopes Society – Pakistan	Muhammad Siddiq Kiyani <a href="mailto:Siddiq.Kiyani@mssp.org">Siddiq.Kiyani@mssp.org</a> 00.92.21.5889876/5389125-8 (tel) 00.92.21.5803262 (fax)
Family Welfare Program, India	World Bank	Sadia Afroz Chowdhury <a href="mailto:schowdhury7@worldbank.org">schowdhury7@worldbank.org</a> 202.473.1984 (tel)
Scaling Up Primary Level Post-abortion Care in Kenya Using Private-Sector Nurse-Midwives	IntraHealth International Inc. and Prime II Project	Maureen R. Corbett <a href="mailto:mcorbett@intrahealth.org">mcorbett@intrahealth.org</a> 919.313.9155 (tel) 919.313.9106 (fax)
Contracting with Private Hospitals to Improve Continuity of Maternal Health Care in Jordan	Abt Associates Inc.	Dwayne Banks <a href="mailto:Banks573@aol.com">Banks573@aol.com</a> 962.6.567.5507 (tel)
Safe Motherhood Program, Indonesia	World Bank	Puti Marzoeki <a href="mailto:pmarzoeki@worldbank.org">pmarzoeki@worldbank.org</a>
Improving Maternal Health through PMTCT Programs, Zambia	The LINKAGES Project, Academy for Educational Development	Jean Baker <a href="mailto:jbaker@aed.org">jbaker@aed.org</a> 202.884.8845 (tel) 202.884.8977 (fax)
Seguro Basico de Salud (Basic Health Insurance) in Bolivia	World Bank	Juan Pablo Uribe <a href="mailto:juribe@worldbank.org">juribe@worldbank.org</a> 202.458.2256 (tel)
Supporting Mutual Health Organizations to Improve Access to Maternal Health Services in Rwanda	Abt Associates Inc.	Francois Diop <a href="mailto:fdiop@sentoo.sn">fdiop@sentoo.sn</a>
Improving Access to Maternal Health Services in West Africa through Mutual Health Organizations	Abt Associates Inc.	Caroline Quijada <a href="mailto:Caroline.Quijada@abtassoc.com">Caroline.Quijada@abtassoc.com</a> 301.913.0500 (tel) 301.652.3916 (fax)

## Access to Health Services (Annex 4)

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Emergency Obstetric Care in Sofala Province, Mozambique	UNFPA / AMDD / Ministry of Health (Sofala Provincial Health Directorate)	Petra Lantz <a href="mailto:lantz@unfpa.org">lantz@unfpa.org</a> 258.149.4469 (tel) 258.149.3577 (fax)  Vincent Fauveau <a href="mailto:fauveau@unfpa.org">fauveau@unfpa.org</a> 41.22.9178574 (tel) 41.22.917.8016 (fax)
Strengthening Emergency Obstetric Care in Mali and Vietnam	Save the Children/USA	Susan Otchere <a href="mailto:sotchere@dc.savechildren.org">sotchere@dc.savechildren.org</a> 202.530.4387 (tel) 202.637.9362 (fax)  Mary Beth Powers <a href="mailto:mpowers@savechildren.org">mpowers@savechildren.org</a> 203.221.4269 (tel) 203.221.4056 (fax)
The Skilled Care Initiative	Family Care International	Ellen Themmen <a href="mailto:ethemmen@familycareintl.org">ethemmen@familycareintl.org</a> 212.941.5300 (tel) 212.941.5563 (fax)
Preventing Postpartum Hemorrhage in Homebirths in Indonesia through Community Education and Distribution of Misoprostol	JHPIEGO Maternal and Neonatal Health Program	Harshad Sanghvi <a href="mailto:hsanghvi@jhpiego.net">hsanghvi@jhpiego.net</a> 410.537.1800 (tel)
Expanding Access to Post-abortion Care in Ayacucho, Peru	Ipas	Janie Benson <a href="mailto:bensonj@ipas.org">bensonj@ipas.org</a> 919.960.5594 (tel) 919.929.7687 (fax)
Population and Family Planning Project, Malawi	World Bank	Ramesh Govindaraj <a href="mailto:rgovindaraj@worldbank.org">rgovindaraj@worldbank.org</a> 202.473.2948 (tel)
Preventing and Treating Malaria during Pregnancy: Increasing the Survival of Mothers and Newborns in Burkina Faso	JHPIEGO Maternal and Neonatal Health Program	Patricia Gomez <a href="mailto:pgomez@jhpiego.net">pgomez@jhpiego.net</a> 410.537.1800 (tel)
Reducing Maternal Mortality among Repatriated Populations along the Guatemala – Mexico Border	Marie Stopes Mexico	Laura Miranda <a href="mailto:laura.miranda@mariestopes.org.mx">laura.miranda@mariestopes.org.mx</a> 52.967.674.5812 (tel) 52.967.678.0178 (fax)

Improving Availability of and Access to Emergency Obstetric Care for Conflict-Affected Populations	Women's Commission for Refugee Women and Children and the Reproductive Health Response in Conflict (RHRC) Consortium	Sandra Krause <a href="mailto:Sandra@womenscommission.org">Sandra@womenscommission.org</a> 212.551.3110 (tel)
Involving Husbands in Safe Motherhood: the Suami SIAGA (alert husband) Campaign, Indonesia	JHU Center for Communication Programs	Anne Palmer <a href="mailto:apalmer@jhuccp.org">apalmer@jhuccp.org</a> 410.659.6300 (tel) 410.659.6266 (fax)
SUMATA Campaign, Nepal	JHU Center for Communication Programs	Diane Summers <a href="mailto:dsummers@nfhpc.org.np">dsummers@nfhpc.org.np</a> 9771.5.524313 (tel)

**Building Capacity (Annex 5)**

<b>Name of Approach</b>	<b>Organization</b>	<b>Contact Information</b>
Building Technical Capacity of Providers for EmOC Service Delivery in Tajikistan	CARE – USA	Milly Kayongo <a href="mailto:mkayongo@care.org">mkayongo@care.org</a> 404-979-9542 (tel) 404-589-2624 (fax)
Expanding the Role of Nurses to Increase Access to Good Quality Emergency Obstetric Care, Nepal	Options Consultancy Services	Indira Basnet <a href="mailto:indira@nsmp.org.np">indira@nsmp.org.np</a> 977.1.262110/248991 (tel) 977.1.248989 (fax)  Melissa Cole <a href="mailto:M.Cole@Options.co.uk">M.Cole@Options.co.uk</a>
Mid-level Providers Provide Lifesaving Functions –in Nyanza District Hospital, Rwanda	UNICEF – ESARO	Luwei Pearson <a href="mailto:lpearson@unicef.org">lpearson@unicef.org</a> 254.722.713091 (tel)  Rumishael Shoo <a href="mailto:rshoo@unicef.org">rshoo@unicef.org</a> 254.20.622664 (tel)
Preventing Postpartum Hemorrhage: Active Management of the Third Stage of Labor Saves Lives in Zambia	JHPIEGO Maternal and Neonatal Health Program	Donna Vivio <a href="mailto:dvivio@jhpiego.net">dvivio@jhpiego.net</a> 410.537.1800 (tel)
Creating an Enabling Environment for EmOC Interventions in order to Achieve the 5 <sup>th</sup> Millennium Development Goal in Africa	Regional Prevention of Maternal Mortality (RPMM) Network	Angela Sawyerr-Kamara / Edmund Browne <a href="mailto:rpmm4ak@africaonline.com.gh">rpmm4ak@africaonline.com.gh</a> 233.21.763284 (tel) 233.244.314116 (tel) 233.21.763285 (fax)

**Quality of Care (Annex 6)**

<b>Name of Approach</b>	<b>Organization</b>	<b>Contact Information</b>
Integrated Training to Improve the Quality of Maternal Care Services including Post-abortion Care: Lessons from Kenya	EngenderHealth with Ipas and Kenyan MOH	Mary Nell Wegner <a href="mailto:mwegner@engenderhealth.org">mwegner@engenderhealth.org</a> 203.797.9659 (tel) 212.561.8067 (fax)
Quality Improvement for Emergency Obstetric Care Processes and Tools	EngenderHealth and AMDD Program	Mary Nell Wegner <a href="mailto:mwegner@engenderhealth.org">mwegner@engenderhealth.org</a> 203.797.9659 (tel) 212.561.8067 (fax)
Performance and Quality Improvement : Facility and Performer Accreditation in Guatemala	JHPIEGO Maternal Neonatal Health Program	Oscar Cordon <a href="mailto:ocordon@jhpiego.net">ocordon@jhpiego.net</a> 410.537.1800 (tel)
Making Pregnancy and Delivery a Better Experience in Zhezkazgan, Kazakhstan	Abt Associates Inc. / John Snow Inc.	Mark McEuen <a href="mailto:Mark_mceuen@abtassoc.com">Mark_mceuen@abtassoc.com</a> 301.913.0500 (tel) 301.652.3618 (fax)

**Community Involvement (Annex 7)**

<b>Name of Approach</b>	<b>Organization</b>	<b>Contact Information</b>
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Community support systems contribution to use of EmOC services in Bangladesh	CARE – USA	Jahangir Hossain <a href="mailto:jahangir@carebangladesh.org">jahangir@carebangladesh.org</a> 880.2.811.4195/96/97/98 (tel)  Milly Kayongo <a href="mailto:mkayongo@care.org">mkayongo@care.org</a> 404.979.9542 (tel) 404.589.2624 (fax)

Communities and Households Working Together to Save Lives in Guatemala	JHU Center for Communication Programs	Anne Palmer / Patricia Poppe <a href="mailto:apalmer@jhuccp.org">apalmer@jhuccp.org</a> 410.659.6300 (tel) 410.659.6266 (fax)
Home Based Lifesaving Skills	American College of Nurse-Midwives	Sandra T. Buffington <a href="mailto:stbuff@aol.com">stbuff@aol.com</a> 240.485.1834 (tel)

### Monitoring and Advancing Progress (Annex 8)

Name of Approach	Organization	Contact Information
Monitoring of Maternal Health Programs Using UN Process Indicators: CARE's Experiences in Tanzania and Peru	CARE – USA	Milly Kayongo <a href="mailto:mkayongo@care.org">mkayongo@care.org</a> 404.979.9542 (tel) 404.589.2624 (fax)
Emergency Obstetric Care Needs Assessment – Generating Evidence to Facilitate Policy Changes	UNICEF – ESARO	Luwei Pearson <a href="mailto:lpearson@unicef.org">lpearson@unicef.org</a> 254.722.713091 (tel)  Rumishael Shoo <a href="mailto:rshoo@unicef.org">rshoo@unicef.org</a> 254.20.622664 (tel)
SAFE (Skilled Attendance for Everyone)	University of Aberdeen (and others)	<a href="mailto:immpact@abdn.ac.uk">immpact@abdn.ac.uk</a> 44.1224.553429 (tel) 44.1224.553708 (fax)

### Partnerships and Collaborations (Annex 9)

Name of Approach	Organization	Contact Information
White Ribbon Alliance (WRA) for Safe Motherhood	White Ribbon Alliance	Theresa Shaver <a href="mailto:tshaver@whiteribbonalliance.org">tshaver@whiteribbonalliance.org</a> 202.775.9680 (tel) 202.775.9699 (fax)

## Advocacy for Reducing Maternal Mortality

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### Academy for Educational Development

#### Short description

REDUCE is an advocacy process to stimulate policy dialogue and strategic planning on maternal health and safe motherhood. The REDUCE process uses computer models to estimate the human and economic consequences of poor maternal health and maternal mortality. REDUCE projects the survival, health, and economic impact of maintaining the status quo versus implementing known interventions that result in reductions in mortality and morbidity. The data provide sound arguments for giving higher priority to maternal health in policy formulation, strategy development, and resource allocation. The outcome is a country-specific advocacy presentation and communications strategy.

#### Goals/Objectives

1. To increase the awareness of policymakers and program planners of the causes and consequences of maternal mortality, morbidity, and disabilities.
2. To stimulate policy dialogue and strategic planning on maternal and neonatal health.
3. To generate commitment at national, regional, and district levels to invest resources.
4. To develop tools that can be used for advocacy with various audiences.
5. To engage partners in a collaborative effort to address maternal and newborn deaths.

#### Background

In 2000, AED developed a safe motherhood advocacy and policy development process called REDUCE to raise awareness of the high human and economic costs of inadequate attention to the problem of maternal mortality. To date, the process has been used in nine countries: Ethiopia, Ghana, Mali, Mauritania, Mozambique, Nigeria, Senegal, Uganda, and Viet Nam.

#### Design and implementation

The REDUCE process begins with a 2-week participatory workshop organized by the MOH and key stakeholders. The country offices of the WHO have worked closely with the MOH in planning and coordinating activities in several African countries. The workshop focuses on the following six elements: 1) formation of a multidisciplinary team of local experts; 2) collection and review of local and international information on health and obstetric factors contributing to maternal mortality, morbidity, and disabilities; 3) use of computer models to estimate the consequences of poor maternal health and care; 4) consensus-building among team members on priorities and strategies for safe motherhood; 5) training of the team in the use of computer models, advocacy planning, and the development of computer-generated presentations with persuasive scripts; and 6) advocacy with government officials and representatives from donor agencies, civil society, and the media. Once the resources are lined up, the actual organizing of the workshop may take about two months.

The advocacy plan developed during the workshop should indicate key messages, priority audiences, format and venues for presentation, activity timelines, and parties responsible for implementation. The plan may include a national dissemination workshop, advocacy events for different audiences, the creation of materials (videos and booklets), translation of materials into different languages, and district-level advocacy activities. A core working group of qualified and interested local experts (and their institutions) should coordinate the advocacy process in their country using the REDUCE analytical tools.

#### Results and evaluation

In 2003, AED, the Africa Regional Office of the WHO (WHO/AFRO), and the Commonwealth Regional Health Community Secretariat developed a questionnaire for monitoring the effect/impact of advocacy activities undertaken in the country/district to improve maternal and neonatal health. The monitoring tool includes questions about the existence and implementation of a maternal health advocacy plan, activities planned for the next reporting period, REDUCE presentations/adaptations/follow up, lessons learned, and results. The results include changes in policies, plans, programs, guidelines and protocols, resource allocation, and social mobilization.

The tool was tested in Uganda and Nigeria. The first application of REDUCE was in Uganda in 2000. The field test showed that REDUCE had limited use after the workshop due to lack of resources, coordination, and leadership. In Nigeria, however, REDUCE mobilized those involved in the MPS initiative, with the Division of Reproductive Health in the MOH working closely with WHO/AFRO. REDUCE was presented to five State Assemblies, the First Lady, and the Federal Minister of Health. The Minister of Health championed REDUCE and directed his ministry to embark on a national program on maternal mortality reduction. REDUCE was used in Nigeria during the training of reproductive health managers in MPS sites and the training of public health nurses, midwives, and post-graduate students of public health and obstetrics/ gynecology at Lagos University. A REDUCE monograph and video (in six languages) were produced. The consultant who reviewed the REDUCE experience in Nigeria identified the following factors accounting for the successful application of the REDUCE tool and process: clear leadership role taken by the Reproductive Health section of the Federal MOH and the state and local governments; synergy and partnership of the maternal advocacy initiative using REDUCE and the MPS initiative; and consultative process among the individuals and institutions involved in REDUCE and their responsiveness to the request to adapt REDUCE to increase its reach and access

#### **Challenges and lessons learned**

- Some of the major challenges are coordination and funding for follow-on activities, dissemination of REDUCE at the district level, and the creation of user-friendly tools for a wider audience.
- Team formation is critical to a successful country application. A multidisciplinary team shows that safe motherhood is not the sole responsibility of the health sector. Linking REDUCE with ongoing efforts, such as the Making Pregnancy Safer initiative and the Saving Newborn Lives initiatives, provides a basis from which to launch activities.

#### **Sustainability and scaling up**

- Sustainability is more likely ensured if several partners take ownership for the REDUCE process and assign clear roles to each partner.
- REDUCE should be integrated into program work plans. More people need to be trained in computer modeling to expand the pool of people who can guide REDUCE teams through the process.

#### **Resources**

The following is an illustrative budget for implementing the REDUCE process: in-country workshop expenses – approximately \$15,000; technical assistance of a computer modeling/maternal health specialist and an advocacy specialist during the workshop (travel, time, expenses)– \$40,000; national dissemination meeting – \$1,500 - \$13,000; advocacy materials – \$2,500; district-level dissemination activities (2 districts) – \$6,000. Funding for REDUCE activities has been provided by the World Bank, the Africa Regional Office of the World Health Organization, USAID, and Saving Newborn Lives.

#### **Contact information**

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## India Family Welfare Urban Slums Project

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**World Bank**

### Short description

The Family Welfare Urban Slums Project in India aimed to improve health outcomes for the urban poor by supporting new partnerships between local communities, municipalities and NGOs. The key strategy was to decentralize the program management to municipalities and empower the slum communities through a network of women mobilizers. The project assisted local municipalities in improving access to basic community outreach and facility based services for women and children dwelling in urban slums. The project was implemented during 1994 – 2002 under the stewardship of the Ministry of Health and Family Welfare.

### Goals/Objectives

The project aimed to:

1. Improve access and demand for family planning services.
2. Improve maternal and child health by decreasing maternal and infant mortality rates among slum residents.

### Background

The present level of infant and maternal mortality in India remains unacceptably high, particularly in urban slums. Slum dwellers are reluctant to visit the hospitals and other health facilities for a number of reasons: ignorance of the services available, the cost of traveling to these institutions, and the negative attitude of the health workers to the urban slum clientele. The design and delivery of health services is “top-down”, which has meant that the recruitment of staff and location of facilities are determined with little reference to the needs and preferences of the urban slum dweller. There are four types of Private Voluntary Organizations (PVOs) operating in the slums of the metropolitan cities in India: grassroot PVOs which usually lack technical, managerial and financial resources and are therefore limited to micro-projects; community-initiated PVOs, which are government funded; State-aided PVOs which are project-specific and hence lack flexibility; and national/- international groups such as the Red Cross and Lions which have an established range of services.

By 2030, India’s urban population is expected to reach 297 million. In 1982, India began addressing the urban poor by developing a policy framework for urban primary health care. Two years later, there was increased focus on improving the linkages of primary healthcare and family planning services with other basic urban services. The World Bank has supported an urban primary care project, in addition to the Family Welfare Urban Slums project.

### Design and implementation

The Family Welfare Urban Slums project was multidisciplinary in that it aimed to address multiple levels of the system with the ultimate goal of improving maternal health. The main strategy of the project was to increasingly decentralize the program management to municipalities and empower the slum communities through a network of women mobilizers. This was accompanied by a steady supply of basic services through strategic public-private partnerships. The project assisted local municipalities in improving access to basic community outreach and facility based services for women and children dwelling in urban slums. Partnerships and service delivery contracts were utilized to involve community-based organizations and the private sector, which mobilized communities and delivered services. The innovative partnerships and contracts were complemented by activities to improve quality of services, such as skill-building training to the providers, improved management of commodity supplies, and building health posts and maternity homes closer to urban slums. Concurrently, “Honorary Health Workers/Link Volunteers/Basti Sevikas” were trained to mobilize the poor communities for safe motherhood, family planning and other basic health services. They also were involved in women’s empowerment initiatives, including reproductive health education for young women. Their pay was determined by the municipalities: most cities preferred to pay a monthly fee, some preferred not to pay and instead give the volunteers identity and recognition for their services. The scope of the project covered about 11.3 million urban poor from four cities: Bangalore, Delhi, Hyderabad, and Kolkata. Ninety-four smaller towns and cities were included from the States of Andhra Pradesh, Karnataka, and West Bengal.

**Results and evaluation**

Independent agencies conducted surveys at the beginning of the project, midline and closure. The results indicated a significant decline in fertility among slum dwellers and improved maternal and child health outcomes, evidenced by a decrease in child mortality and an increase in the use of essential reproductive health services. These improvements are more marked in Kolkata, Bangalore, and Hyderabad; there was less improvement in Delhi. Under the project, nearly 17,000 neighborhood workers were trained as Honorary Health Workers/Link Volunteers/Basti Sevikas, 720 existing health facilities were rehabilitated, and 614 new facilities were built closer to the slums. Public-private partnerships were established with doctors and specialists and were used to provide clinical services at the health centers and maternity homes. Service Delivery contracts were established with 192 CBOs to provide RCH services to the poor.

**Challenges and lessons learned**

- There was a need to decentralize the program and engage local governments in the process of reforms. Local municipality ownership is critical.
- A lot of potential was realized the partnerships with community based organizations and the private sector.
- Empowering women about their reproductive rights and making them more economically independent worked well when improving physical access to RCH services simultaneously.
- No single agency can effectively address the growing health needs of urban poor.
- Standardized service delivery models will not work. Flexibility, that depends on local needs, is critical.
- Interventions that actively engage local communities, elected representatives and technical staff are more sustainable but take longer to institutionalize.
- Inadequate coordination between multiple agencies providing RCH services, such as the tertiary and secondary hospitals, can cause ineffectiveness.
- Weak management and technical oversight capacities of municipal health departments and the inadequate alignment of health interventions with slum development and relocation programs caused difficulties.
- Frequent transfers of crucial project staff and the dependency of most Municipalities on other agencies for staff recruitment interrupted the project flow.

**Sustainability and scaling up**

Sustainability of the project initiatives is likely. Allocations were made in the FY 2003 budget by all the project cities to continue the activities generated by the project. More important, these activities have been institutionalized and integrated with the respective city municipal corporations and urban family welfare bureaus in Bangalore and Hyderabad. In Kolkata, the management has been decentralized to local urban bodies, and the Chair Persons/Mayors of the 40 local bodies are now managing the program with technical oversight from KMDA. Kolkata set up facility level Health Development Fund out of user fees – including higher fees from those above the poverty line – and contributions from the community. Following this example, project teams in other cities are also exploring the options to generate additional resources in partnership with representatives of local communities, NGOs and elected representatives of municipalities.

**Resources**

The total project loan was US\$79 million.

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## **Improving Maternal and Reproductive Health Services through a Public-Private Partnership Model in Sindh, Pakistan**

### **Marie Stopes Society– Pakistan**

#### **Short description**

A partnership has been formed between Marie Stopes Society (MSS), an NGO with a reputation for providing high quality and affordable reproductive health (RH) services, and a government Rural Health Center (RHC) in Sindh, Pakistan, to upgrade the center as a referral facility for Emergency Obstetric Care (EmOC). The recent political devolution to the district level provides a new opportunity for local accountability in health provision, which is the lynchpin of this intervention. Simultaneously, with investment in physical infrastructure, equipment and training, the NGO is helping to set up community management teams (CMTs) to act as a local watchdog. The public-private partnership (PPP) is an innovative way of responding to the current state of maternal health and a chance to develop a model which can be replicated district- or province-wide, and even nationally.

#### **Goals/Objectives**

The overall goal of this PPP is to upgrade, in a sustainable way, all aspects of the Thari Mirwah RHC, which impinge on the provision of effective EmOC services in order to reduce maternal morbidity and mortality in the sub-district.

#### **Background**

A needs assessment on EmOC from April to July 2003 in Khairpur district found that women do not have access to appropriate care because of lack of trained staff; existing services were under-funded, poorly managed and of poor quality; six out of eight sub-districts do not have 24-hour EmOC; referrals by the government cadre of lady health workers (LHWs); and traditional birth attendants (TBAs) were the most utilized providers in pregnancy/ delivery. MSS had the capacity to undertake a pilot initiative in one sub-district as part of the “Sindh Reproductive Health Service Project” funded by the UK government’s Department for International Development (DFID). Thari Mirwah sub-district, with a population of a quarter of a million, was selected since the current lack of EmOC was forcing women to travel long distances to access care at Khairpur district hospital. MSS had an existing clinic and infrastructure in Thari Mirwah and a good relationship with the Government RHC. Thus, MSS entered into a PPP with the district government, targeting the RHC. The proposed intervention would upgrade existing infrastructure, and ensure availability of skilled providers for delivery care, including Caesarean section (C-section).

#### **Design and implementation**

Pre-intervention, the Thari Mirwah RHC provided basic obstetric care and conducts 5 to 7 normal deliveries per month. The RHC operating theater was in bad condition - the air-conditioner was not functioning and there was no back-up power supply. The center did not provide C-section as the surgeon did not have the necessary training.

The following program components are in the process of being implemented: 1) training of key staff at the RHC in surgery and anesthesia; 2) physical upgrading of the RHC building in general and operating theatre; 3) provision of essential equipment for comprehensive EmOC; 4) provision of a vehicle equipped with life support to be used as an emergency ambulance; 5) creation of a CMT to oversee the PPP; 6) creation of a revolving fund for financial sustainability; 7) development of community referral mechanisms including local TBAs and LHWs; and 8) community awareness raising of available services and when to seek care.

An MSS consultant supervises the renovations and installation of equipment, and makes training arrangements. RHC doctors have been sent to Karachi hospitals for training in C-section surgery and anesthesia. Local community based organizations (CBOs) are already involved in the initiative. An initial large consultation workshop will discuss the composition and terms of reference of the CMT which should include a diverse representation of local health officials, female union councilors, senior TBAs and CBOs including the active Patient Welfare Society. Three training sessions will follow to develop the capacity of the CMT. Training of TBAs and LHWs will be coordinated with other NGOs who have specialized in this type of training. A total Quality Management approach has been adopted in the RHC.

**Results and evaluation**

- Due to the early stage of PPP implementation, a formal impact assessment has not yet taken place. However, the following indicators relating to the PPP have been set up and will be in operation by March 2005:
  - The Thari Mirwah pilot PPP initiative will be completed (RHC upgraded for EmOC, emergency transport available, staff trained, management arrangements made, referral system in place) and 500 clients would have been treated at the RHC for EmOC or other RH services.
  - 20 TBAs in Thari Mirwah will be trained in safe delivery care to be included in the PPP referral system.
  - Five health staff from the RHC will be trained in EmOC, including a surgeon for C-sections and an anesthetist.

**Challenges and lessons learned**

- There is a risk that trained staff could leave MSS to set up a private clinic or be transferred to another facility, etc. To reduce the risk of transfer, good communication channels have been established with provincial/district health managers to ensure they feel ownership of the initiative and commitment to its success. There may already be community dissatisfaction with some staff members, making them less attractive candidates for training. Community views were sought about whether it would be acceptable for a male to perform C-section – the majority thought it was acceptable in a life or death situation, as long as a female was available to conduct any vaginal examinations. This finding allowed greater flexibility in selecting appropriate staff for training.
- A three-pronged approach has been used to ensure that recurring budget problems do not lead the RHC to fall into disrepair again: 1) community mobilization to demand a higher level of service; 2) training of community management teams; and 3) providing seed funding for revolving funds to pay for cleaning, repairs, etc.
- Only one year remains of the Sindh Project, which means that success of the PPP will depend on a fast rate of implementation – all parties are responding to this challenge and action is underway.
- Expectations can be very easily raised when doing needs assessments. Given that only one year remains in the project timeframe, it will be difficult to achieve everything in the community that is demanding. The lesson might be “under promise and over perform” rather than vice versa.

**Sustainability and scaling up**

- Investments in the government RHC funded under this PPP are designed to be protected well after the project timeframe by the following means: 1) the creation of a revolving fund for some of the recurring expenses; 2) increased community involvement to help avoid misuse of resources; and 3) advocacy with government and health managers to allocate sufficient resources for maintenance costs.
- The MSS clinic in Thari Mirwah sub-district will continue to operate, working towards sustainability. This will allow MSS to maintain a degree of oversight of the RHC and to continue to play a vital facilitative role.
- Donors such as DFID are currently allocating large programmatic grants for safe motherhood through which it is envisaged that NGOs would assist the government in the delivery of public services. At this stage, the best chance of replication would be through large-scale mechanisms of this sort.

**Resources**

Approximately \$225,000 will be spent on the PPP in direct and indirect costs until the end of the formal project period in March 2005. The funding source is DFID. Technical back-stopping is provided by MSS and Marie Stopes International Support Offices. Some management time from the RHC Director is required, as well as the time of community members who are involved in the CMT.

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## Family Welfare Program, India

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**World Bank**

### Short description

The Family Welfare (FW) Project aimed to strengthen and improve the performance of the Government of India's (GOI) Family Welfare Program in three states: Assam, Rajasthan, and Karnataka. The aim was to improve maternal health and reduce maternal and child mortality. One of components of this project was implementing public-private partnerships, particularly to make reproductive and maternal health information and services more available to people in hard to reach areas. NGOs and PVOs were contracted to conduct IEC campaigns, social marketing of contraceptive supplies, training of auxiliary nurse midwives, and management of service delivery in remote areas. The partnerships made between the GOI and the NGOs/PVOs was deemed successful and is being scaled up.

### Goals/Objectives

The project's goal was to provide support to the Government of India's national Family Welfare Program in three states: Assam, Rajasthan, and Karnataka. The project supported improved access to, demand for, and quality of family welfare services, particularly among poor, remote, and tribal peoples.

The overall objectives were to strengthen and improve the functioning of the Family Welfare programs and to lower fertility levels and maternal and child mortality. The specific aims were to strengthen family welfare service delivery, including establishment of first-referral units; improve the quality of family welfare service; strengthen demand-generation activities through improved information, education, and communications planning and activities; strengthen program management and implementation capacity; and provide funds for innovative schemes to improve service delivery.

### Background

India had recognized the threat of rapid population growth early on and adopted policies to address the issues. The Family Welfare Program, which was launched in 1951 contributed greatly to improving maternal and child health, as well as to family planning services. Since then, child mortality and fertility rates improved significantly as did contraceptive prevalence rates. However, the national Family Welfare Program suffered substantially, due to inadequate financing, weak and over centralized management, insufficient supervision, low quality of training and inadequate attention to activities for generating demand of health services. There had been efforts to restructure the Family Welfare Program issued by the Ministry of Health and Family Welfare, with support from the World Bank, which included a strategy for improving the performance and impact of the entire program. This led to the creation of a national population commission aimed at addressing these issues in the population sector. This particular project was under the auspices of the restructuring and aimed to support the State action plans and increase outreach and coverage to the underserved and rural communities in Assam and the most underserved districts in Rajasthan and Karnataka.

### Design and implementation

The component highlighted here is the implementation of public-private partnerships between the government and non-governmental organizations (NGOs) and private voluntary organizations (PVOs) to implement innovative schemes to improve access to maternal health information and services. During the project preparation, this was left loosely defined so states would have the flexibility to develop activities appropriate within their. In all three states, a detailed program to enhance the involvement of PVOs/NGOs was developed and implemented, which varied greatly in each state. In Rajasthan, where a large number of NGOs were already operating in partnership with the Health Department, 24 NGOs expressed interest in participating in the project in the following activities: management of and participation in service delivery in remote areas, expanding community based distribution of contraceptive supplies, social marketing of contraceptives, and IEC programs. The program in Rajasthan was managed using the Grant-in-Aid procedures for funding NGO schemes.

In Karnataka and Assam, where the presence of PVOs is not as widespread, the program started by identifying PVOs with potential for collaboration. In Karnataka, the NGO program was managed at the district level. Areas of involvement attempted included: FW service delivery and IEC, as well as the management of an innovative scheme to recruit and post tribal girls as auxiliary nurse midwives in tribal areas. In Assam, PVOs were selected with ability to participate in the following areas: IEC, and community-based distribution and social marketing of contraceptive supplies.

### **Results and evaluation**

Karnataka was able to implement several innovative schemes through partnership with the private sector—contracting of NGOs in order to provide access to services in remote and tribal areas. It contracted with a private communication firm to implement an IEC strategy in the districts with poor health status. Two NGOs were contracted to provide family welfare services through 2 public health centers and 10 sub-centers in tribal areas, which increased the access to family welfare services in remote and underserved areas. Assam contracted 10 NGOs to work in seven remote tribal districts. The NGOs created greater awareness of contraception, antenatal care, institutional deliveries and full immunization coverage. In Rajasthan, 14 NGOs were funded to provide information on contraception, birth spacing and pregnancy related care to community members.

### **Challenges and lessons learned**

Political commitment at both the state and GOI level was critical for project ownership and sustainability. Strategic choices regarding the roles of the public and private sectors need to be made based on core strengths and capacity of the sectors and the institutional needs. The use of PVOs/NGOs may not be the answer for everything, as they may not have the expertise to deliver the types of services required by the community.

### **Sustainability and scaling up**

The contracting of public health clinics to NGOs in the tribal areas of Karnataka was extremely successful and has been extended by the Government of Karnataka for an additional 10 years and was scaled up to other poorer performing districts. Further, the existing Reproductive and Child Health Project is continuing and expanding some of the contracting activities initiated by the Family Welfare Program.

### **Resources**

The total cost of the seven-year project was estimated at US\$103.8 million, US\$88.6 million of which was financed by an IDA Credit and US\$15.2 million by the GOI. At closing, GOI estimated the expenditures were 87% of the original project cost estimates.

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## Scaling-up Primary-Level Post-abortion Care in Kenya Using Private-Sector Nurse-Midwives

**IntraHealth International Inc. and  
the Prime II Project**

### Short description

Sanctioned by the Ministry of Health and supported by the Nursing Council of Kenya (NCK) and the National Nurses Association of Kenya (NNAK), the PRIME Project developed a pilot program in 1998 to train private-sector nurse-midwives in PAC services. The program was scaled-up in the three pilot provinces in 2000 and expanded to a fourth province in 2003. Expanding PAC services to the primary level of health care in Kenya brings these lifesaving services closer to communities where women and adolescent girls live and work.

### Goals/Objectives

1. To increase the availability and use of PAC services, and contribute to reducing maternal death and disability resulting from unsafe and incomplete abortion

### Background

Studies in Nairobi have shown that at least half of gynecological hospital admissions and more than a third of pregnancy-related deaths are due to unsafe abortion – this doesn't take into account the thousands of women and adolescent girls who are treated elsewhere or never seek care. A recent report indicates that about 300,000 abortions are performed yearly, causing an estimated 20,000 women to be hospitalized with related complications. This translates into a daily 'abortion rate' of about 800 procedures – and the death of 2,600 women every year.

### Design and implementation

Private nurse-midwives (PNMs) are an ideal cadre for scaling-up PAC services as they are the major source of ANC, FP, and other RH services in many parts of Kenya. Their role at the primary level meshes with the Government's strategy to decentralize health care and expand the role of the private sector in the delivery of health services. Because many PNMs own their own facilities, they represent the potential for a national, financially sustainable base of non-hospital PAC services. Perhaps most importantly, they are experienced providers who must spend ten years in public, private or mission institutions before being licensed for private practice.

PRIME partnered with NCK, NNAK, and the Ministry of Health/Department of Reproductive Health and the Division of Nursing. The criteria established for PNMs to participate included NCK-certification. PNMs must already be providing a range of FP and other RH services, and their facilities must meet minimum standards. Sustainability is factored into the approach through working with small groups of nurse-midwives (ten at a time in groups from the same geographic areas) to encourage providers to continue to support one another as peers following the group training experience, and to build, strengthen and expand provider networks. Training concentrated on 13 key components: values; client-provider interaction and counseling; management of complications; MVA procedures; infection prevention; pain management; post-abortion FP counseling/services; STI/HIV management; record keeping; legal aspects of PAC; peer supervision; community outreach; and performing practical procedures under supervision. Cost-sharing by the providers was an important part of the scale-up approach, with PNMs paying for their transportation to the training site and accommodation; purchasing MVA kits at a subsidized rate; and in Norplant training, with PNMs paying a tuition fee. During the pilot project, providers received the MVA kits free of charge.

### Results and evaluation

Pilot project results (1998 – 1999): Of 44 facilities with PAC trained PNMs, 24 facilities reported for three of the five months of data collection and generated the data reported here. A total of 366 women were treated in 24 facilities, with 72% receiving treatment with MVA; 87% were counseled about FP; 74% were provided with a FP method before they left the facility; and 13% of the women were referred to another facility for services, including other RH services.

Initial scale-up results (2000 – 2002): Records from 155 PAC-trained PNMs in 120 facilities provide the following information about 1603 women treated for abortion-related complications at those facilities.

1. 93% of women were treated by PNMs using MVA, 3% were managed without MVA, and 4% were referred to other facilities for complications that midwives felt should be treated in more advanced facilities
2. 81% of women were counseled for FP; 56% either left the facility with a method or agreed to return for one.
3. Three-quarters were counseled on STI/HIV prevention and/or treatment. Around half received counseling and screening for breast cancer and nearly 40% received counseling about the need to screen for cervical cancer. Also, half of the women received nutrition counseling.

### **Challenges and lessons learned**

- Providers' ongoing access to equipment, as needed, is of great concern for ensuring availability of services and increasing the potential for sustainability. Packard Foundation is funding what is called the MVA Drawdown Account (access to MVA kits), and it is currently managed by Ipas.
- Appropriate selection of providers for PAC training and support can be challenging
- PNMs can and do deliver comprehensive PAC services. Women with abortion complications will access and use the private sector for PAC services and they will accept FP at the treatment visit. This is essential to both preventing subsequent unintended pregnancies and unsafe abortion and increasing contraceptive use.
- PAC can be a sensitive issue. Thus, it is essential to build community support and awareness, especially since PAC services have the potential to become controversial or even confused with abortion itself. Best if efforts to ensure community support highlight a range of services provided by the providers, not only PAC.
- Follow-up and post-training support to providers at their facility is important to ensure high-quality PAC services. Providers may need help incorporating PAC elements into their ongoing range of services, or may need assistance in reorganizing services. Peer support networks, in which providers share information, problem-solve and/or appraise and review each other, are promising options either in the absence of external supervision or to supplement inadequate supervision. More research in this area is ongoing.
- Community advocacy for PAC is key to the success of PAC scale up. Prior to launching pilot project, PRIME conducted focus groups with community members served by PNMs to ensure their support for PNMs as PAC providers. POLICY Project carried out advocacy activities as a means of addressing death and disability from unsafe abortion. Extra effort on community outreach for PAC was made at provider trainings during scale-up, with some positive results. Future PAC work should pursue additional community outreach strategies to ensure maximum access to FP services to prevent unwanted pregnancies, as well as access to treatment services for women with abortion-related complications and other priority RH/HIV services.

### **Sustainability and scaling up**

- Scale up is well under way in four provinces: three provinces included in the pilot project plus Coast Province, where private clinical officers are trained as well as nurse-midwives. A study of factors contributing to or hindering sustainability of private providers of PAC services was conducted in April 2004. Results are expected to have implications on future scale-up efforts for PAC and other RH services with private sector providers.

### **Resources**

Financial costs focus on training and equipping providers (with MVA kits and equipment) to offer PAC services, then supporting them by monitoring their activities, assisting with problem solving as needed.

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## Contracting with Private Hospitals to Improve Continuity of Maternal Health Care in Jordan

Abt Associates Inc.

### Short description

Through the USAID funded Partners for Health Reform *plus* (PHR*plus*) project, Abt Associates has been working with the MOH Health Insurance Directorate (HID) in Jordan to develop a financing mechanism for contracting with private hospitals that would contain better financial incentives for care as well as improve continuity of care for MOH beneficiaries. As a first step, PHR*plus* concentrated on maternity care services. In collaboration with local partners, Abt designed a new contracting system that would have expectant women enroll with a participating private hospital, which would be paid a single amount for the entire bundle of necessary services, including prenatal, delivery, and postpartum care. A schedule of a dozen set payment rates was established, ranging from early miscarriage, to normal pregnancy and uncomplicated vaginal delivery, to c-section delivery. After conducting a comprehensive assessment of private hospitals in Amman, the MOH plans to launch a pilot project to contract with three private hospitals to provide maternity care for 250 MOH beneficiaries. As part of the design work, local panels of leading Jordanian OB/GYN physicians developed a set of clinical practice guidelines, the first of its kind in Jordan. Participating contracted hospitals will be required to comply with these quality guidelines. Abt also developed a computer system for managing enrollment, billing, and clinical oversight.

### Goals/Objectives

The USAID strategic objective is to:

1. Improve access to and quality of reproductive and primary health care.

The specific objectives of the pilot are to:

1. Assess the ability of the private sector to provide quality maternity care services.
2. Promote continuity of maternity care in private hospitals for 250 MOH beneficiaries.

### Background

Although the maternal mortality rate in Jordan is fairly low (41 deaths per 100,000 live births), the country's health expenditures are quite high (11% of GDP) and continuity of care is poor. The health system is also plagued by inefficiencies. For example, the major public hospital in the capital, Amman, is overcrowded, yet nearby private hospitals are operating at 40 percent occupancy. The Ministry of Health (MOH) has been responding to this situation by contracting with private hospitals on an as-needed basis, allowing insured MOH beneficiaries to seek care in private hospitals. The MOH pays the hospitals on a fee-for-service basis. This approach has encouraged hospitals to provide high volumes of services to MOH patients, creating a financial burden on the government. In addition, the fee-for-service payment mechanism has encouraged last minute referrals, extra charges, and unnecessary interventions, including C-sections. As a result the MOH decided to contract with private hospitals to perform deliveries.

### Design and implementation

Abt is helping Jordan establish the pilot contracting system in which a small group of MOH insured pregnant women will be able to receive all their prenatal and maternity health services at one of three private hospitals in Amman. In July of 2002, Abt conducted a comprehensive assessment of 30 hospitals in Amman to provide a baseline on services offered by private hospitals and determine the capacity and willingness of these hospitals to participate in the pilot project. The survey ascertained whether the hospitals currently offer comprehensive maternity care services, and also assessed hospital staffing, satisfaction with current contracts with MOH, and willingness to comply with clinical guidelines and participate in the health information system envisioned for the project.

Over 80% of the hospitals in Amman responded to the survey, and a majority of these offer comprehensive maternal and child health services consistent with the proposed basic package of benefits. About 90% of the hospitals provide

OB/GYN services, whereas 70% provide pediatric care. Although all the hospitals provide neonatal care, only a handful has the capability to care for critically ill newborns. The C-section rate (14%) was fairly uniform across the hospitals with no significant variation. Nearly all the hospitals had recent experience with MOH contracts, and 60% expressed dissatisfaction related to delayed reimbursement, disputes over diagnosis, and perceived MOH distrust of the private sector. The results indicate that the infrastructure exists for private hospitals to provide continuous maternity care, and all hospitals expressed an interest in participating in the pilot as long as contracting concerns are addressed. However, only half the hospitals were willing to comply with clinical practice guidelines or establish a computerized link with MOH to monitor performance.

Based on survey results, Abt and the MOH have developed the Health Insurance Pilot Program (HIPP), which will initially cover 250 women. The new contract design will bundle broader reproductive health services so the patient can be followed by the same provider throughout her pregnancy, delivery, and postnatal care to improve the continuity of care. The contracted services will include: hospital stay, prenatal care and necessary diagnostic tests, delivery, postnatal care for mother and baby, pharmaceuticals, and clinical lab services. For the first time, the MOH will use a competitive process to select hospitals for contracting. The MOH and selected private hospitals will negotiate a fee schedule for the bundle of services. The payment will vary by the type of pregnancy and delivery; complicated pregnancies or deliveries will be billed at a higher rate than simpler pregnancies. Private hospitals will receive advance partial payment for each patient enrolled.

### **Results and evaluation**

The pilot has not been launched, so results are not yet available. However, the monitoring and evaluation plan will measure patient satisfaction with services and hospital compliance with quality. Patient surveys during and at the end of the episode will be used to solicit consumer satisfaction information. To monitor hospital performance and compliance with clinical guidelines, all participating hospitals will be required to submit electronic information to the MOH, including data on enrollment, invoices for each visit of the woman and her infant, a description of the delivery and hospital stay, and a summary of all services provided and date of discharge.

### **Challenges and lessons learned**

- The project has been slow to implement as a result of delays within the MOH due to staff and ministerial turnover.

### **Sustainability and scaling up**

The prospect of scaling up this pilot program has been an important objective from the beginning. The MOH is also considering subsequent scale-up priorities such as end-stage renal disease, where extensive and expensive outsourcing is already done with the private sector, and where opportunity exists for more disciplined contracting and payment methods. The private hospitals have continued to show strong support for the contracting concept in the pilot, and for extending the outsourcing program to other clinical services. The management information system was designed so that it could be easily adapted to other types of diagnostic bundles for contracting with private hospitals.

### **Resources**

USAID has funded the technical assistance for design of the new contracting mechanism and related information systems.

### **Contact information**

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## Safe Motherhood Program, Indonesia

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**World Bank**

### Short description

In 1997, the World Bank financed a Safe Motherhood Project (SMP), launched by the National Family Planning Coordinating Board (BKKBN) and the Ministry of Health. The project, which was built on other Bank-supported projects, was designed to meet the needs of the poor and underserved and attempted to assist the Government of Indonesia to improve maternal health status and reduce mortality and morbidity in selected districts in East and Central Java. SMP offered Indonesia the opportunity to address supply of and demand for family planning and maternal health services, strengthen partnerships between the public and private sectors, as well as between the MOH and BKKBN, test innovative activities to develop effective and sustainable SM programs, and address diversity in local needs and conditions by adopting interventions appropriate to the communities' needs. A unique aspect of the project, which is highlighted below, is the Targeted Performance-based Contracts (TPC) program that used privately trained village midwives (BDD) to provide reproductive health services.

### Goals/Objectives

The goals of the project are to improve maternal health status and reduce mortality and morbidity in East and Central Java. The objectives of the SMP are to:

- Improve demand for and utilization of quality maternal health services
- Strengthen the sustainability of maternal health services at the village level
- Improve quality of family planning services, and
- Prepare adolescent to lead a health reproductive life

### Background

Complications of pregnancy and childbirth are the leading cause of death and disability among women of reproductive age in Indonesia. While great strides have been made in reducing infant mortality and fertility and increasing contraceptive prevalence rates and antenatal care, the majority of women still deliver at home without the assistance of a skilled provider and maternal mortality remains unacceptably high. The medical reasons for maternal mortality in Indonesia are hemorrhage infection and hypertensive diseases. However, there exists extensive social causes, such as families and those attending deliveries fail to recognize complications or delay seeking care during complications. Furthermore, health centers in Indonesia are severely under-utilized due to low quality of service and inadequate access.

In response to poor maternal health in the country, in 1988, the Indonesian president announced the Safe Motherhood Initiative, which was followed by a national strategy to accelerate the reduction in maternal mortality in 1991 by the Ministry of Health. Post-ICPD, the Indonesian delegation launched new initiatives for comprehensive services for women to improve maternal health. SMP was initiated in 1997 to provide comprehensive maternal health services that captured issues addressed at ICPD.

### Design and implementation

The overall SMP components were grouped into the provincial components and the central level components and include: improving maternal health status, utilization and sustainability of maternal health services; increasing demand for and access to high quality family planning services; preparing adolescents for health reproductive life; technical support and training; policy, research and evaluation; and project administration. A key feature of the project was the piloting of the performance based contracting of the village midwife, which incorporated an incentive mechanism to increase demand for services.

Trained village midwives (BDD) were used in a pilot to provide reproductive health services in rural areas, as part of a pilot Targeted Performance-based Contracts (TPC) Program. The BDDs are on public sector contracts and receive a flat monthly fee for assisting with the health center's village-level health program and for helping out the

health center a few days a month. When they are not in the health center, the TPC BDD were to function as private providers. The Government contracts are unlimited and can be extended.

To ensure equity amongst poorer women receiving maternal health services and to enhance the TPC BDD's revenue-earning potential in poor villages, poor women who qualify under a certain set of criterion, received booklets of printed vouchers. The vouchers were used to pay for a basic package of safe motherhood services from the TPC BDD. The TPC BDD then submitted the coupons they received from their clients to the local government for reimbursement at fixed rates. Currently, the SMP project funds finance the reimbursements. The TPC BDD are free to charge non-coupon holders the standard fees as private providers.

The obstetric skills of village midwives are improved through competency-based training to ensure that normal deliveries are safe and complications are appropriately managed.

### **Results and evaluation**

The TPC pilot has successfully demonstrated that performance-based contracts for private healthcare providers, in combination with demand side intervention strategies such as the vouchers that reach and empower the poor, is a suitable, practical and sound model for continued use by the district health systems. The performance-based nature of the program also provides incentives to deliver quality health services. The TPC BDD pilot has demonstrated sustainability in some areas and is being replicated in other areas.

### **Challenges and lessons learned**

- Demand-side intervention schemes can be effective in reaching and empowering the poor
- The best way to make service providers respond to the needs of their customers is to place resources in the customers' hands and let them choose
- High-level of political commitment is crucial to program success
- Understanding the labor market structure as well as the motivations and incentives of health care workers is critical to improving the sustainability of village midwives and creating incentives for them to provide services to the poor
- Obstacles such as low retention rates for midwives and weak demand for midwife services keep the program from becoming self-sustaining. Therefore, programs need to simultaneously address supply and demand factors in health care services.

### **Sustainability and scaling up**

The TPC project was a pilot project that demonstrated an innovative mechanism to improve quality and accessibility to maternal health services. The lessons learned are paramount to the modification of the program to achieve greater success. The introduction to the voucher, however, has exemplified a successful demand-side intervention that can help increase the number of women seeking care from a trained provider.

### **Resources**

The World Bank loan to the Government of Indonesia for support to the Safe Motherhood Project was \$42.5 million. The sub-component *improving maternal health status, utilization and sustainability of MH services*, under which the TPC program was executed, was \$22.6 million shared between East and Central Java.

### **Contact information**

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## Improving Maternal Health through PMTCT Programs, Zambia

### The LINKAGES Project Academy for Educational Development

#### Short description

The *LINKAGES Project*, managed by AED and funded by USAID, integrates PMTCT services with MCH services by providing a comprehensive clinical and community care package in order to improve the care and health outcomes of all pregnant women, regardless of HIV status. The comprehensive package includes training of health workers and community service providers in PMTCT and infant feeding counseling, safe delivery practices, universal HIV counseling as part of routine antenatal services, short-course antiretroviral prophylaxis for HIV-infected women and their infants, and referrals to family planning, child health, and community services.

#### Goals/Objectives

1. To reduce MTCT of HIV while improving the health and care of all pregnant women and their infants.

#### Background

In Zambia, an estimated 25% of pregnant women are HIV-infected. In Ndola District, the number of HIV-infected women is 1.4 times greater than the number of infected men. Since roughly 96% of mothers report receiving ANC from a trained provider, antenatal visits offer an opportunity to reach many women at risk of HIV.

#### Design and implementation

In 1999, the Zambian government requested LINKAGES' assistance in setting up a demonstration project in Ndola District that integrated infant and young child feeding and HIV testing and counseling into routine ANC services and linked MCH clinic sites to surrounding community networks. The assessment and design phase took about 6 months. In 2000, the package of services was expanded with introduction of Nevirapine. Expansion to other sites began in 2002 and continues.

The project works with the national government, district health management teams (DHMTs), and local partners. The main components in the design/implementation process include: facility assessments to collect data on counseling space/services, health education, staffing, client populations, and clinic attendance; community assessment to identify existing resources, services, and referral links; and behavioral assessments to determine level of knowledge about HIV and MTCT and attitudes toward HIV testing and counseling among parents, providers, and TBAs.

A number of other activities included: formative research on infant and young child feeding and HIV/AIDS knowledge, attitudes, and practices; improved quality of care in MCH services and infrastructure; policy advocacy for women's nutrition and infant and young child feeding in the context of HIV; improved quality of and access to health education, HIV testing, and counseling services; single dose antiretroviral prophylaxis for mother and infant; training and capacity building for health workers/community service providers; community mobilization for infant and young child feeding, HIV testing and counseling, and care and support; promotion of male involvement; development of BCC strategies, messages, and media; and monitoring/evaluation using clinic and population survey data and follow-up.

#### Results and evaluation

Horizons, a USAID-funded global HIV and AIDS operations research project implemented by the Population Council, conducted a baseline survey and a midterm and final round of data collection. Results showed that community knowledge of MTCT improved, but knowledge of prevention methods remained incomplete; mothers increasingly adopted the safer practice of exclusive breastfeeding and discontinued the riskier practice of mixed feeding; HIV testing/counseling increased but uptake remained low; routine ANC services needed additional resources, particularly to overcome logistical obstacles; and improved collaboration and linkages between clinics and NGOs would help provide continuity of care and support.

In response to these findings, LINKAGES and partners developed a BCC strategy to increase the demand for HIV testing and counseling and awareness of risk reduction methods. Between January and June 2002, there were 6,737 new ANC attendees in the project's catchment area clinics, 8% of whom tested for HIV. For the same period of time in 2003, there were 8,752 new ANC attendees, 58% of whom tested for HIV. LINKAGES realized that program effectiveness would improve if certain MCH services were strengthened. In 2004, USAID provided \$400,000 to LINKAGES to improve these services in 3 districts. Thus, LINKAGES will track a number of additional maternal health indicators as part of this initiative.

#### **Challenges and lessons learned**

- Limited space for confidential counseling, high staff turnover, lack of PMTCT-specific BCC materials, insufficient staff incentives to take on "additional" work, low male acceptance of services, stigma, stock-outs, weak linkages.
- Innovative approaches are needed to reach men with information and services.
- Increasing the number of peer counselors could reduce burden on staff and provide links with the community.
- Integrated PMTCT approach permits more rapid expansion and opportunity to make PMTCT routine.
- Policy advocacy is needed to build consensus, develop guidelines, and ensure consistency throughout programs.
- Need to understand local beliefs/practices before designing PMTCT programs.
- Messages need to be consistent among clinics and between clinics and communities.
- Community involvement and support for activities is essential for achieving maximum coverage and impact.
- BCC strategies are needed to help create demand for PMTCT services.
- Universal pre-counseling in ANC increases HIV test rates. Health providers' encouragement and availability of Nevirapine, care, and support affect uptake of HIV testing and counseling services.
- Training – pre-service, in-service, and refresher – needs to be ongoing and followed by on-the-job mentoring.
- Partnerships should be formed across formal and informal health sectors.
- Gender inequality is a major issue – women must be empowered to decide whether or not to accept HIV testing/counseling, make an informed infant feeding choice, and negotiate safer sex during pregnancy/lactation.
- All PMTCT interventions must safeguard the breastfeeding practice and support a woman's feeding choice.

#### **Sustainability and scaling up**

- In 2002 the PMTCT program expanded from the demonstration site to three other districts. By September 2004, the integrated PMTCT approach was in place in 48 sites in 9 districts in 3 provinces. Rapid scale-up is possible because of the existence of training curricula, teams of trainers, and earlier PMTCT sites that can mentor new sites and provide technical assistance to strengthen services.
- The integrated approach has been adapted and implemented in Malawi and introduced in Ethiopia, Haiti, Kenya, Swaziland, and Tanzania.

#### **Resources**

- Illustrative financial costs: health facility assessment, \$2,500–\$3,500; behavioral assessment, \$10,000–\$12,000; 2-week residential course for 30 participants, \$25,000–\$28,000; development of IEC materials, \$15,000; creation of private rooms for counseling and laboratory equipment, \$44,000.
- Human resources: DHMTs implement activities in the LINKAGES PMTCT sites in Zambia. With funding from USAID, LINKAGES supports a resident advisor, technical program officer, financial and administrative officer, and two trainers. A BCC specialist and an M & E specialist serve Zambia as well as the region.
- Physical resources: In Ndola, LINKAGES provided support to enlarge a clinic to provide more ANC waiting room, counseling rooms, and a new laboratory.

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## Seguro Basico de Salud (Basic Health Insurance) in Bolivia

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World Bank

### Short Description

The objective of the World Bank's Adjustable Program Loan<sup>4</sup> under the Health Sector Reform Project in Bolivia was to reduce the infant and maternal mortality rates in the country. The project succeeded in introducing an infant and maternal public insurance scheme, which helped increase coverage of high priority health interventions. The development of the public insurance scheme has had a sustained impact on the role municipalities play in the health sector and on public providers. The establishment of an explicit package of services free-of-charge for the population increased the awareness of the public on health issues and their rights to access health services. This was followed by increased utilization of basic maternal and child services. The project was approved in June 1999 and closed in December 2003.

### Goals/Objectives

The main objective of this project was to reduce the infant and maternal mortality rates in Bolivia. The strategies used to attain this objective were to:

1. Increase coverage and quality of health services and related programs to improve the health status of the population and empower communities to improve their health.
2. Strengthen local capacity to respond to health needs.

### Background

The population of Bolivia was approximately 8.8 million in 2002. The leading causes of maternal mortality were all preventable: hemorrhage (39%), eclampsia (21%), abortion (10%) and infections (4%) and adequate access to health services was a significant barrier to health care in Bolivia. At the time of conception, only 30-35% of the population had access to social security or private health insurance. The majority of the population, mainly the poor and rural, traditionally paid user fees for health services, even in public facilities, which caused major obstacles to accessing the public health sector in Bolivia. Political unrest has also added to a fragmented decentralized system, creating a bottleneck in the efficient procurement of services.

### Design and implementation

The Basic Health Insurance (BHI), which was an augmentation of a previous insurance program (the National Maternal and Child Health Insurance [MCHI]), was intended to increase the level of coverage that was offered. The BHI had explicit coverage of complications of pregnancy, delivery and post-partum, including post-abortion care, in addition to coverage of complications of the newborn, sexually transmitted infections, malaria, tuberculosis and cholera. In total, 76 services are covered by the BHI, an increase from the previous 26. Furthermore, BHI covers transfer or referred patients during cases of obstetric emergencies, regular visits by health personnel to rural communities without health facilities, and some laboratory tests. It also extends coverage beyond the public health sector to selected NGOs and faith-based facilities.

The BHI was financed through a public financing scheme (SBS) for high priority health interventions for infants, pregnant women, and women of reproductive age. SBS originated as a system by which 5.4% of the tax revenue was set aside by the Central Government and transferred to all the municipalities to finance the drugs and supplies necessary to deliver the initial 26 maternal and child interventions, by any health care provider, without any patient contribution. During the second phase of the reform, the benefits were expanded to 90 interventions and the earmarked revenues were increased to 6.4% of the tax revenue. The funds are provided on a per capita basis and deposited into the Local Compensatory Health Fund, a special BHI account at the municipality level. SBS was

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<sup>4</sup> Adaptable program loans (APLs) provide phased support for long-term development programs. They involve a series of loans that build on the lessons learned from the previous loan(s) in the series. APLs are used when sustained changes in institutions, organizations, or behavior are key to successfully implementing a program.

significant in reducing the economic barrier of access to health services. Key features of the reform making SBS possible include: (1) modifying the financing and payment mechanisms of high priority services within the public health sector; (2) introducing performance agreements with the municipalities identifying specific output and process targets; and (3) continuity through different political periods.

### **Results and evaluation**

The evaluation indicated that there was an increase in demand for services provided by the public sector. The percentage of births attended by trained personnel was 42% in 1998 and increase to 54% in 2002. The percentage of women who had gone through a complete cycle of antenatal care visits increased from 30% to 34% during the same period. Further, the early neonatal hospital mortality decreased slightly from 9 to 7 per 1000 live births. An evaluation of the initial insurance (MCHI) showed that there was substantial growth in the use of prenatal care and inpatient deliveries because of the insurance program. Further, there was a 39% increase of prenatal visits in public facilities and the private sector saw a decrease in patients during that time. Finally, when the data was disaggregated by socio-economic status, analysis shows that the poorest segment of the population increased the use of skilled birth attendants and of institutional deliveries. However, there is much room for improving the disparity between rich and poor that exists regarding utilization of services.

### **Challenges and lessons learned**

- The use of well-defined indicators linked to expected outcomes helped to improve project design and implementation.
- The project began to bridge the cultural barriers with the use of specific activities such as focus groups on maternal health services with indigenous women, dialogue with indigenous organizations, and culturally adapting services to indigenous needs.
- Developing partnerships and reaching a strong consensus with donors was initially difficult, but ultimately proved to be very useful for the success of the project.
- A focused, gradual approach helped in identifying realistic and appropriate objectives. The project focused on a few priority activities and emphasized capacity building, recognizing the multiplicity of needs, and the limits of the institutions.

### **Sustainability and scaling up**

During the second phase of the reform, beginning in 1999, the benefits were expanded to 90 MCH interventions and the earmarked revenues from the government taxes for the SBS were increased.

### **Resources**

The Adaptable Program Loan was in the amount of US\$17.8 million. Approximately 83.2% was used for coverage and quality improvements of health services and empowerment of communities; 11.4% was used for strengthening local capacity to respond to health needs; and 5.4% was used for coordination, monitoring and evaluation.

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## Supporting Mutual Health Organizations to Improve Access to Maternal Health Services in Rwanda

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**Abt Associates Inc.**

### Short description

In response to low utilization of health services, the Rwandan Ministry of Health decided to pilot test prepayment schemes – known as *mutuelles* or Mutual Health Organizations (MHOs). Abt Associates provided technical support through the USAID funded Partners for Health Reform (PHR) Project during the pilot phase (1998-2000) and continued support to activities to strengthen sustainability and scale up through the USAID funded PRIME II and ACQUIRE Projects. Though slightly different in each district, MHO membership covers a basic health care package including deliveries, essential drugs, and curative and preventive care services provided by nurses in public or NGO health centers as well as selected hospital based services with a health center referral: curative consultations, overnight stays, Cesareans, malaria treatment, pediatric care, and ambulance transfer to the district hospital. Households can join the district scheme by paying an annual fee (currently \$4.25) and a small co-payment per visit to the health center. There is no co pay for covered district hospital services.

### Goals/Objectives

1. Improve financial access to health care for impoverished populations
2. Improve financial sustainability of primary health services
3. Strengthen management capabilities at the district, facility, and community level
4. Strengthen community participation in health

### Background

The 1994 genocide in Rwanda did considerable damage to the health and human resources infrastructure of the country. After the genocide, user fees for health services were re-imposed by the new government because of lack of public resources and health care visits averaged only .25 per capita. In combination with these factors, the impact of HIV/AIDS epidemic has contributed to the fact that many key health indicators in 2000 had yet to rebound to pre-genocide levels, maternal mortality remained exceptionally high, only 10 percent of women had the recommended prenatal care visits during pregnancy, and women in the lower four socioeconomic quintiles were considerably less likely to receive skilled attendance at birth than those in the highest quintile.

### Design and implementation

In conjunction with the MOH, Abt used a highly participatory approach, with active citizen involvement, to design, implement, and manage the MHO pilot. A central level steering committee, headed by the MOH Director of Health Care, coordinated planning. The steering committee selected three of the country's 40 health districts – with three hospitals and 54 health centers serving a rural population of about one million – to participate in the pilot. In the three districts, representatives from the communities and the health sector met in 28 workshops, while citizens met in a series of community gatherings to discuss and design the benefit package, pre payment amounts, organizational structure, and legal, contractual, financial, and administrative tools needed to manage a health insurance fund. At the end of the four-month design phase, local citizen committees, MHO management bureaus at the health center level, and an MHO Federation at the district level had been established in each district. Each MHO bureau had entered into a partnering contract with a preferred health center and the Federations had established contracts with the participating district hospitals. With these structures in place, the district population started to enroll in the prepayment plan associated with their preferred health center.

### Results and evaluation

Abt worked with the MOH to put in place a monitoring and evaluation plan from the start of the 3 districts' pilots, based on routine data from the national health information system and MHO management data, as well as a baseline household survey. After a year of operation, these data and a follow up household survey indicated that:

- Enrollment rates ranged from 10-40 percent of district populations.
- Use of preventive services for women and children was 4 times higher for MHO members than non-members.

- Women who were MHO members were much more likely to have skilled attendance at delivery compared to non-members. Forty-five percent more women who were members in 2 of the 3 districts delivered at the health center than non-member women. While 48 percent of women members were attended by a medical professional at birth, only 24 percent of non member women were.

By 2003,

- In one of the pilot districts with 47,000 members, MHOs were covering 15,000 thousand indigents, widows, orphans and PLWAIDS. Various local NGOs and community groups had purchased MHO membership for these vulnerable groups.
- Members of all income quintiles use services early and at a higher rate than non members (1.6 visits per year compared with less than .5 visits/year).
- For RH services, 60 percent of member women used prenatal care and 18 percent had their delivery at the health center instead of alone or with a family member or TBA. About 26 percent of the highest income member women had deliveries at health centers.

### **Challenges and lessons learned**

- In a very poor rural environment that lacks access to formal insurance, a prepayment scheme managed and owned by its members can be an effective mechanism to reduce financial barriers to health care services. Whereas formal insurance often excludes poor people from decision making, the poor can use MHO premiums as a tool to negotiate with health care providers for better quality care, shorter waiting times, more staff, and better equipped health facilities.
- Substantial technical assistance is needed to build community and provider administrative capacity.
- MHOs provide a mechanism to target subsidies to the very poor, through the purchase of memberships by government and local charities.
- The proportion of health services financed by out-of-pocket payments from patients at the time of using health care declines dramatically, thus reducing one of the main financial barriers to care. MHO membership shifts the bulk of patient health care payments to a one-time annual amount that can be paid during harvest season when cash is available. Pooling all the prepayment amounts from many members makes it possible to fund quality care at prices that the population can afford.

### **Sustainability and scaling up**

- Participatory design processes helped ensure sustainability by building local capacity to plan and manage insurance, providing a forum for low-income citizens to express their health needs and negotiate benefits, and increasing accountability among insurers, providers and the insured.
- Since the initiation of MHOs in the 3 pilot districts in 1999, the MOH and Abt have provided technical assistance to two additional districts, developed plans for expansion of district MHOs to other health districts, and formulated policies to integrate this financing mechanism with the larger government health financing system.
- Following the successes of the pilot and subsequent spontaneous community development efforts, there were 214 MHOs across Rwanda by 2003 covering 1.7 million people, about 21 percent of the total population.

### **Resources**

USAID provided funding for technical assistance. All funding of health services to MHO members is paid by a combination of funds from members, the MOH, and local charitable groups who purchase memberships for the very poor.

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## Improving Access to Maternal Health Services in West Africa through Mutual Health Organizations

Abt Associates Inc.

### Short description

In developing countries, maternal deaths could be prevented by improved access to and use of reproductive health (RH) services. Reducing barriers and ensuring access to care, particularly among poor communities, is a key issue for policy-makers and communities alike. Community-based health financing (CBHF) schemes have been proposed as one way of reducing economic barriers to care, and have emerged as a promising means of increasing utilization. Abt Associates, through the USAID funded Partners for Health Reform*plus* (PHR*plus*) Project, has been actively involved in the development and promotion of CBHF schemes, or Mutual Health Organizations (MHOs) as they are known in West Africa. MHOs have the potential to increase access to RH services by offering these services in their benefit packages and promoting activities that encourage members to use these services.

### Goals/Objectives

1. Decrease financial barriers to utilization of priority health services.
2. Improve access to and use of reproductive health services.

### Background

While varying in detail from country to country and scheme to scheme, CBHF schemes share the goal of finding ways for communities to meet their health financing needs through pooled revenue collection and resource allocation decisions made by the community. CBHF schemes are a form of insurance: they allow members to pay small premiums on a regular basis to offset the risk of needing to pay large health care fees upon falling sick. However, unlike many insurance schemes, CBHF schemes are typically based on the concepts of mutual aid and social solidarity. In West Africa, MHOs vary in size, but are rarely organized on a district-wide basis.

### Design and implementation

Abt has used a step-by-step procedure with community partners in West Africa to set up CBHF schemes, including informing the population about the concept of CBHF schemes, establishing a community working group to oversee the process of starting a scheme, conducting a feasibility study with technical assistance providers and the working group, establishing several benefits package options, and disseminating results of the study to the target population. General assemblies are then convened to agree on the benefits package, premiums, and operational modalities. During this period, the scheme conducts a membership campaign, continues member education, and enters into contracts with providers. Members enroll, with a required waiting period before they can use benefits to avoid people enrolling only when they are sick. Following these steps the CBHF begins full operation. Abt has assisted numerous MHOs in Ghana, Senegal, and Mali for the past 6 years. In addition, in the Ashanti region of Ghana, Abt is also working with the MOH to establish a regional fund that would provide ongoing technical assistance to MHOs and potentially subsidize membership for the poorest and/or expand members' access to tertiary care.

### Results and evaluation

In Ghana, an Abt PHR*plus* survey of MHOs conducted in 2001 found that a majority (71%) covered the full cost of complicated deliveries but only 29% covered normal deliveries and none covered family planning (FP). It is important to note that in Ghana, FP services are offered free of charge through the public health care system which may explain why these services are not included in the benefits package. The number of MHOs in Ghana had grown from 47 in 2001 to 159 in 2002. Among this larger group, 53% of MHOs covered complicated deliveries, 35% covered normal delivery, and 5% covered FP.

In Senegal many existing MHOs cover some RH services, such as pre- and post-natal care and deliveries. In Thiès, 9 of 27 MHOs cover FP. Through PHR*plus*, Abt carried out a qualitative study in Thiès to better understand the factors involved in the inclusion (or exclusion) of RH services in MHO schemes. Findings show that: 1) women's groups are the initiators of many MHOs that offer FP services and products in their benefit packages, and 2) many MHO members would like to see more RH and FP benefits added, but acknowledge that financial constraints limit

expansion of benefits. Abt has also supported innovations in Senegal such as the decentralization of MHO management, improved marketing of MHOs, models for MHO design and training, and development of generic regional feasibility study techniques to reduce both the cost and time it takes to launch well-designed new MHOs.

In Mali, an Abt survey indicated that while knowledge of maternal health issues was high among men and women, actual use of services, such as deliveries with a skilled attendant at a health facility and pre- and post-natal care, was low because of perceived lack of need and the costs associated with such care. With Abt assistance through PHR, 4 new MHOs are now operational in one urban and one rural site. These MHOs all cover maternal and RH services.

Comparative household surveys currently underway (Nov 2004) in all 3 countries will shed further light on the impact of MHOs on RH utilization. These surveys will provide data on: 1) the impact of MHO membership on utilization of RH services; 2) differences in RH service utilization patterns by the type of MHO (provider- vs. community-owned, women run, donor supported or not, etc.); 3) utilization patterns of MHO members and non-members by geographic locations (rural, peri-urban, urban, distance to providers). Results are anticipated to be available in early 2005

### **Challenges and lessons learned**

- Most members prefer a select package of priority services that keep payments low, rather than a comprehensive service package that would require higher premiums.
- MHO managers may be reluctant to add services that are not a high priority for a majority of members. For example, when use of modern contraception is low among the target market, demand to include family planning services in the MHO benefits package is also low.
- If RH services are offered free of charge at government facilities (as is the case in Ghana), there is no incentive to include the service in the MHO benefits package.
- Well designed MHOs have much greater chances for success and growth and substantial technical assistance is often needed to ensure that.
- Many community initiated MHOs have a small pool of insured, unexpectedly high use of services can occur, members may fail to make their contributions, and other factors can undermine long-term viability of these schemes. As a result, PHR*plus* is exploring *reinsurance* (that is, the insuring of MHOs themselves by larger insurance providers) as a way to cushion MHOs from these additional challenges.

### **Sustainability and scaling up**

The biggest challenges to sustainability include design flaws, poor management, problems with dues collection, and lack of institutional maturity. PHR*plus* experience indicates that sustainability can be improved by:

- Providing training and TA to scheme managers on setting realistic packages and premiums, and using information systems to manage data;
- Better marketing and communicating the value of MHO membership;
- Contracting with providers that offer high quality care; and
- Exploring reinsurance or developing larger risk pools.

### **Resources**

USAID has funded technical assistance through PHR*plus*. All costs of MHOs and health care services are covered by MHO members.

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## Emergency Obstetric Care in Sofala Province, Mozambique

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UNFPA/AMDD/MOH  
(Sofala Provincial Health Directorate)

### Short description

In spite of recently documented progress, Mozambique still has an unacceptably high maternal mortality ratio, due to a combination of high rate of poverty, low education, poor resources and infrastructure, high load of disease (malaria, malnutrition, HIV), and low utilization of health services. However, a strong government commitment to improve maternal health has permitted the initiation of a series of promising approaches, including the one described here. The project is funded by the AMDD Program, executed by UNFPA, and has been implemented since 2000 in the central province of Sofala, in a poor and rural population – it consists of increasing utilization of maternal health services through improving availability, accessibility, and quality EmOC provided at basic and comprehensive facilities. The approach is monitored and evaluated through UN process indicators that are easy and cheap to collect (relative to measuring maternal mortality ratio), relevant, and sensitive to quick changes. These indicators have all showed a positive trend since the inception of the project, encouraging the government to upscale and mobilize resources for sustaining the national strategy in the whole country.

### Goals/Objectives

To demonstrate that maternal mortality and morbidity can be reduced in a rural poor population, this being measured by a combination of process indicators collected at district and provincial levels.

### Background

Sofala is a central province in Mozambique, with a population of 1.5 million, 70% of which is rural, a TFR of 6.3 children per woman, a maternal mortality ratio estimated at around 1000 per 100,00 live births, and about 30 expected severe obstetric complications per day (with less than 10% of them being seen at health facilities). The under utilization of maternal health services, due to a combination of unavailability, inaccessibility and poor quality of care, is a crucial factor responsible for the high maternal mortality and morbidity in the province.

The project, jointly initiated by UNFPA and AMDD, implemented by the provincial health authority, is part of a long standing effort by the Ministry of Health and its partners (FIGO, UN agencies, bilateral donors), to improve maternal health by increasing the utilization of public health facilities and the quality of the obstetric care provided. The National Strategy for Maternal and Perinatal Mortality Reduction provides the policy framework for the project.

### Design and implementation

The needs assessment to identify detailed conditions of maternal health care and measure baseline indicators at district level took place in 1999, in the whole country. The report was published in 2000. Based on the findings, the outputs were identified as: 1) increased availability of basic and comprehensive EmOC facilities; 2) improved referral; 3) improved technical skills of maternal health providers; 4) improved capacity to manage EmOC interventions; and 5) strengthened monitoring and evaluation capacity. A continuous system to measure the EmOC process indicators allows six-monthly monitoring of progress. A technical adviser paid by the project has been placed at the MOH Family Health Department, while a provincial technical adviser was placed at the Provincial Health Department in Beira the capital of Sofala Province.

The main components of implementation were: upgrading of infrastructure in basic and comprehensive EmOC facilities; procurement, installation, and maintenance of EmOC equipment; establishment and publication of standards of care for EmOC; training and supportive supervision of maternal health workers; installation of radio communication and ambulances for referral system; improved data collection and analysis using EmOC process indicators; and periodic monitoring by provincial health department, UNFPA office, and external project monitors, using EmOC process indicators and maternal death audits. These interventions started in 2001 and were progressively extended until 2004.

### Results and evaluation

Monitoring and evaluation was performed through the use of the UN process indicators to monitor the provision of EmOC services. A formal impact evaluation using maternal mortality ratios has not been planned nor conducted, in view of the relatively small size of the population. However the use of EmOC process indicators has demonstrated a positive impact of this initiative over time, with a 130% increase of deliveries in EmOC facilities, a 150% increase in obstetric Met Need, a 20% increase of C-sections, and a 20% decrease of obstetric case fatality rate. In addition, the government of Mozambique has decided to replicate the Sofala model of provincial decentralization and program implementation in all other provinces of the country, using the technical guidelines and health information systems tested in Sofala.

### Challenges and lessons learned

- Some of the challenges and pitfalls faced in the development and implementation of the promising approach were: delays and problems in the logistics of procurement and distribution of equipment and drugs; delays and problems in physical upgrading and rehabilitation of facilities; problems in the quality of data collected and delays in their analysis; cultural, educational and geographical barriers to utilization of public health facilities.
- The critical success factors and lessons learned for the promising approach, in spite of constraints, were: the support of the MOH to maintain maternal health on top of national priorities (e.g. issuance of the National Strategy for Reduction of Maternal and Perinatal Mortality); the commitment of the Sofala Provincial health authorities: the institutionalization of the successful lessons, for example of the delegation of authority to non-doctors for performing emergency obstetric care functions (e.g. surgical technicians trained and authorized to perform C-sections).

### Sustainability and scaling up

Once initial funding stops, this initiative will be sustained through the intervention of bilateral donors and other UN agencies, according to a pre-established plan organized by the MOH in a SWAp-style approach, that also addresses the issue of scaling up to the whole country.

### Resources

The project was funded by the AMDD Program at Columbia University through the UNFPA country office for US\$ 1 million, plus the approximate equivalent input from the UNFPA country program and the provincial health department (for salaries and general support). Thus, the total was US\$ 2 million for 6 years.

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## Strengthening Emergency Obstetric Care in Mali and Vietnam

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Save the Children/USA

### Short description

Save the Children has worked in many developing countries to improve prenatal care, clean delivery practices for delivery at home and child health leading to improvements in child survival. These interventions have not, however, focused on quality health care services that respond to complications related to the pregnancy and childbirth period. Through the AMDD Program the opportunity presented itself for Save the Children to work in partnership with the Ministry of Health to improve the availability, access to, quality and utilization of emergency obstetric care services at rural, district and provincial hospitals in Mali and Vietnam. Using the UN Process Indicators as the key monitoring and evaluation tools, improvement in availability, access to, quality and utilization of emergency obstetric care services was realized, between 2001 and 2004. In addition, project impact beyond the borders of the project sites was achieved at national level where changes occurred with the adoption of EmOC standards into existing national reproductive health norms and procedures.

### Goals/Objectives

To improve the availability, access to, quality and utilization of emergency obstetric care (EmOC) services.

### Background

Mali has a national maternal mortality ratio (MMR) estimated at 577 for every 100,000 live births. The government of Mali strives to provide basic maternal and child health care to rural communities through promising approaches such as the Bamako Initiative and the one described here. Maternal mortality ratios in rural districts in Mali are even higher, estimated at 720 per 100,000 live births in the 2 project districts, Bougouni and Yanfolila, located in Sikasso Region with a combined population of 450,000. Less than 40% of all births in the districts are conducted with the assistance of a skilled health professional and 70% of all deliveries are carried out at home. In the late 90's, UNICEF helped to establish a referral system for obstetric emergencies in Bougouni district comprising an ambulance and radio installation at each community clinic and at the district hospital. However, hospital improvements and case management training was not undertaken to position the district hospital to receive and effectively manage referred patients. Yanfolila district had even less outside assistance. Through the Averting Maternal Deaths and Disability (AMDD) Program, an opportunity presented itself for Save the Children to improve the management of obstetric complications in the two district hospitals, by improving the availability, access to, quality and utilization of emergency obstetric care (EmOC) services. Similarly, in Vietnam, the government's commitment to reducing the MMR of 130 per 100,000 live births by half by the year 2010 is a top priority. This is reflected in the National Reproductive Health Strategy in addition to support of programs geared to improving maternal survival. Sharing a common vision, the goal again was to improve the availability, access to, quality and utilization of emergency obstetric care services in selected district and provincial hospitals in Thanh Hoa region with a population of 3.7 million and Quang Tri region with a population of 550,000.

### Design and implementation

A situational analysis was conducted in 2000 comprising health facility assessments and community interviews to identify maternal health needs and in particular in relation to treatment of obstetric complications. Based on the analysis, strategies were developed under the following key measurable results (a) availability and access, (b) demand, (c) quality and (d) utilization of EmOC services. The main strategies used to improve availability and access to services included use of walkie-talkies and establishment of community based referral and communication systems. Strategies to enhance demand creation and community support included community mobilization efforts including radio jingles about maternal and newborn health, blood drives, obstetric complications and prompt care. Strategies to improve quality included development of EmOC treatment protocols, improving staff capacity and readiness to manage obstetric complications through training, improving health information systems and development of monitoring tools, provision of essential equipment and supplies, and use of quality assurance processes such as criterion-based audits and client-oriented provider efficient methods.

Institutional arrangements in Mali comprised two midwives based in each of the district hospitals working side-by-side regular MOH staff, while a program officer supervised the day to day monitoring and evaluation of the project. In Vietnam, two program officers were in charge of the project and worked hand in hand with staff in the obstetric departments of MOH hospitals. In both countries, the program officers worked with their MOH colleagues to evaluate improvements in services and care provision on a continuous basis through the UN Process Indicators, patient interviews and through team meetings.

### Results and evaluation

The main monitoring and evaluation indicators used were the UN Process Indicators. No impact evaluation has been conducted given timeline of project implementation, 2001-2004. However, the critical success factors for the promising approach are:

- (a) the positive trend in utilization of EmOC improved hospitals over the implementation period, in all the 2 country projects. Results from one region in Vietnam and one district hospital in Mali are presented here. In **Vietnam** the results from Thanh Hoa region showed a 95% increase of deliveries in improved hospitals, a 33 % increase in Met Need for emergency obstetric services, and a 38% increase in Cesarean Sections. Only one death was recorded over the implementation period. In **Mali**, the results from Bougouni district hospital showed a 130% increase of deliveries in improved hospitals, an increase in Met Need for emergency obstetric services from 6% to 23%, a 62.5% increase in Cesarean Sections and a 50% decrease in case fatality rate.
- (b) the broader impact at national level with the adoption of EmOC protocols and standards into existing national reproductive health norms and procedures.

### Challenges and lessons learned

- Some of the challenges in implementation of the promising approach were the unavoidable bureaucratic processes of procurement of equipment and supplies, improving the challenges of data collection and analysis and whether an NGO such as Save the Children could in partnership improve EmOC services in facilities and influence national norms.
- One of the most important lessons learned and critical steps in development and implementation of the promising approach is improving capacity of midwives to manage some complications, 24/7 availability of emergency obstetric drugs in maternity wards and 24/7 availability of EmOC services, advocacy and establishment of long-lasting partnership with the Ministry of Health from the inception of the project.

### Sustainability and scaling up

When funding stops, it is hoped that the MOH partners at provincial and national will sustain the initiative through national resources and ensure the adoption of national EmOC standards by each district hospital and referral facility. In addition the MOH will sustain and scale up the initiative by them encouraging bi-lateral donors and/or other UN agencies to invest in the initiative.

### Resources

The funding source for the project was the AMDD Program through Save the Children. The financial costs for implementing the promising approach in Mali and Vietnam was an approximately \$200,000 per year for 3 years. This amount covered salaries of program officers, project inputs and some overhead costs of in-country offices.

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## The Skilled Care Initiative

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### Family Care International

#### Short description

The Skilled Care Initiative (SCI) is an innovative, 5-year project launched in April 2000 that aims to save women's lives by increasing rates of skilled care during childbirth by at least 10% in 4 rural, underserved districts in Africa (Ouargaye district, Burkina Faso; Homa Bay and Migori districts, Kenya; and Igunga district, Tanzania). The project is implemented district-wide in close collaboration with District Health Management Teams (DHMTs). It is comprehensive – combining advocacy, service delivery, community mobilization, and behavior change interventions – to make sure that appropriate management of pregnancy/delivery, and high-quality essential obstetric care, are available where women need it most, in the health centers and dispensaries closest to them.

#### Goals/Objectives

1. To develop strong national policies, programs, and guidelines in support of skilled care.
2. To offer high quality, accessible skilled care as close as possible to where women live.
3. To mobilize communities to plan for, and use, routine and emergency maternal health services.

#### Background

The impact of a comprehensive, district-level approach that goes beyond emergency care to ensure a package of skilled care during pregnancy, delivery, and the immediate postpartum period has not yet been assessed in developing countries. SCI uses a matrix of “process indicators” to measure progress towards the project's goals and objectives. Each district was selected based on urgent need (as related to human development indicators) and potential for improvement. All of the project areas are rural, and suffer from inadequacies in community services such as housing, health, education, and clean water. In each area, DHMTs are committed to the project, and an adequate health infrastructure exists to provide services, though some facilities needed significant improvement.

#### Design and implementation

Baseline research including: a comprehensive review of national- and district-level policies, programs, and a search for existence of clinical protocols and guidelines related to skilled care; comprehensive assessments of facilities in intervention and comparison districts; extensive qualitative research; and household surveys in intervention and comparison districts. The four main implementation areas are: 1) Advocacy – strengthen national commitment and help draft new national RH and SM strategies and guidelines; 2) Service delivery – upgrade facilities and improve knowledge and skills of providers; 3) Behavior change interventions – identify and address the wide range of barriers that prevent women from using skilled care; and 4) Global information sharing – identify lessons and communicate them to broad national and international audiences, develop and distribute reports, newsletters, technical papers, and program resources to colleagues in several languages, and participate regularly in international meetings. The project is being implemented primarily by the DHMTs, with close collaboration, capacity-building, and technical assistance from FCI. Collaborators at the national level include the MOH, advocacy groups such as national chapters of the White Ribbon Alliance, research institutes and national Bureaus of Statistics, and professional associations of midwives, nurses and doctors. At the international level, FCI worked with partners to develop technically accurate tools for the SCI (including Abt Associates, Blancroft Inc, EngenderHealth, and The Change Project/Manoff Group).

#### Results and evaluation

Since the project is not scheduled to end until August 2005, no formal impact evaluation has been done. Baseline research has been completed, and the results have been used to develop project activities and refine indicators for evaluation, and also to come up with a detailed matrix of behavior change strategies and indicators. National policies and tools have been developed, and strong commitment has been secured at policy, program, and community levels. Significant progress has been made in improving the enabling environment in health facilities. Other strategies focused on empowering health workers to improve care at facilities; identifying simple, low cost ways to improve client satisfaction and enhance quality of care. FCI strengthened training for providers in lifesaving skills, and developed process indicators to measure impact and progress. The core indicator is proportion of births assisted by a skilled attendant. Selected facility indicators include: proportion that offer basic and comprehensive

EsOC, and antenatal, normal delivery, and postpartum care; proportion with referral systems; proportion staffed by skilled attendants around the clock; proportion with guidelines/protocols for obstetric management. Other indicators include CFRs for direct obstetric complications; rates of knowledge about where to seek care; and Met Need.

### **Challenges and lessons learned**

- Shortage of skilled attendants is a key challenge – strong policies and programs need to be in place to ensure availability of appropriate numbers of competent skilled attendants.
- Weak enabling environment – health facility assessments show serious deficiencies, particularly at lower level health facilities. It is essential all equipment, supplies, infrastructure, and referral mechanisms are in place.
- Communication and transportation problems – projects can donate ambulances and radio-calls, but many districts without this support are unable to afford these expenses, or related maintenance costs.
- The health center level is an important, accessible entry point into the national health care system – SCI aims to ensure that basic essential lifesaving obstetric care is available 24/7 at this level.
- Chronic service delivery problems often result from weak national structures to provide commodities, thus FCI forged partnerships between national-level procurement partners and service delivery managers on the ground.
- DHMTs have been central to galvanizing project support and conducting district-level activities – strengthening their management capacity in program planning / implementation is key in decentralized contexts.
- Continuing in-service and refresher training is a high priority, especially at primary care levels where skilled attendants also serve as multi-purpose health providers.
- Strong norms and service delivery guidelines – high quality practical health service delivery guidelines are essential for effective service provision and referral.
- Facility providers have shown eagerness and interest in improving their practice and attitudes towards patients. It is encouraging to see providers come to realize that many improvements lie within their own power.
- Sustained high-level advocacy is crucial for sustainability and scaling-up – FCI involved national MOHs from start, and is working with national partners.
- Sociocultural barriers prevent women from accessing skilled care. Sociocultural aspects of use of skilled care have often been neglected, underestimated, or addressed by weak IEC efforts.
- Involvement of community members / stakeholders in addressing behavioral and structural issues is essential.
- Solid monitoring and evaluation of promising approaches is critical to the expanded understanding and use of best practices in maternal health.

### **Sustainability and scaling up**

- Improved district health management capacity is key to sustainability. Other steps towards sustainability include integration of SCI activities in annual district workplans, and gradual handing over of management/financing of the project activities. FCI worked with national MOHs from onset to pave way for scaling up.
- FCI is drafting skilled care implementation plans detailing the steps in designing, implementing, and evaluating skilled care programs at various levels. These plans will be completed and shared with partners.

### **Resources**

A grant of US\$ 9 million was given by the Bill and Melinda Gates Foundation. In addition, country-level partners, especially, DHMTs, are providing a variety of support and resources, including staff-time and use of vehicles.

### **Contact information**

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## Preventing Postpartum Hemorrhage in Homebirths in Indonesia through Community Education and Distribution of Misoprostol

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### JHPIEGO Maternal and Neonatal Health (MNH) Program

#### Short description

A recent demonstration project conducted by JHPIEGO's MNH Program and its collaborators in Indonesia, with funding from USAID, offers compelling evidence of the feasibility of a community-based intervention to prevent postpartum hemorrhage (PPH). In this project, trained community volunteers provided women with information about prevention of PPH and the drug misoprostol (which controls bleeding after childbirth), distributed the medication to the women, and provided follow-up support. The community-based approach was found to be safe and acceptable to the women studied, contributing to their willingness and ability to use the drug appropriately.

#### Objectives

1. To prevent postpartum hemorrhage in homebirths not attended by skilled providers.

#### Background

Administering a uterotonic drug after birth, which helps the uterus contract and controls bleeding, is a critical intervention in the prevention of PPH. The safety and efficacy of misoprostol as an alternative to oxytocin—when oxytocin or a skilled provider is unavailable—is well documented, and the MNH Program's endorsement of misoprostol is based on extensive research. In a 2001 research review, it was concluded that, when oxytocin is not available, use of misoprostol to prevent PPH is acceptable, and the U.S. Pharmacopoeia Expert Advisory Panel recommended that prevention of PPH be included as an “accepted” indication in the U.S. Drug Information monograph on misoprostol.

In Indonesia, where many women give birth at home without the care of a skilled provider, PPH is estimated to cause 45% of maternal deaths. The province of West Java was selected by USAID and the MOH as the target province for this project because it includes approximately 20% of the Indonesian population and its percentage of births attended by skilled providers (30%) is lower than the national average (43%).

#### Design and implementation

The “Safety, Acceptability, Feasibility and Program Effectiveness (SAFE) Demonstration Project of Community-Based Distribution of Misoprostol for Prevention of Postpartum Hemorrhage in Rural Indonesia” was conducted in West Java in collaboration with Indonesia's MOH, the Indonesia Association of Obstetricians and Gynecologists (POGI), and the WHO collaborating center in Bandung. The non-randomized study included an intervention area comprising seven villages in Bandung, West Java (n = 1322) and a comparison area of 11 villages in Subang, West Java (n = 489). Quantitative survey data were obtained from 1811 women before and after childbirth, and qualitative interview data were obtained from focus group discussions with 90 midwives, women, husbands, and traditional birth attendants.

Based on the study's results, the Indonesian MOH issued a government resolution incorporating prevention of PPH into the national health strategy. The government has also implemented plans to scale up education related to the prevention of PPH and community-based distribution of misoprostol as an effective strategy for reducing the risk of PPH when skilled care is not available. To facilitate a national roll out of the PPH preventive intervention, the MOH increased provision of misoprostol to the community health centers. Community-based intervention was implemented through the existing health system and involved sub-district community health centers (Puskesmas), midwives (bidan), and the network of community volunteers (kader).

### Results and evaluation

This demonstration project was successful in achieving the intended outcome of promoting maternal health:

- Compared to women in the control area, women in the intervention area were 24% less likely to perceive excessive bleeding, 31% less likely to need any emergency referral, and 47% less likely to need an emergency referral for PPH.
- Women reported in focus group discussions and in-depth interviews that they were adequately prepared to cope with any minor discomforts (nausea, shivering) following their use of misoprostol.
- A large proportion of women reported that they would be willing to use misoprostol in their next pregnancies, pay for it themselves, and recommend it to friends.
- Women were able to understand the information provided by the community volunteer, act on it appropriately, and safely take misoprostol at the correct time.
- Based on these results, the SAFE study concluded that trained and supervised community volunteers are able to successfully provide PPH prevention information and then safely distribute misoprostol to women who are unlikely to receive care from a skilled provider during childbirth.
- The proportion of births with skilled provider increased in the intervention area allaying fears that women may choose not to use skilled care if they had a PPH prevention strategy at home.

### Challenges and lessons learned

- Effective means of safety monitoring and drug tracking at the community level should be established as the PPH intervention is scaled up nationally.
- Very active participation of the National Steering Committee was important not only for the success of the study, but also for the rapid acceptance of the study findings.
- It was important to have a responsible person keeping a running count of drugs issued to community volunteers, because safety and potential misuse of misoprostol was a primary concern to the Indonesian MOH and other stakeholders.
- Findings from the PPH Study confirmed that a three-day competency-based training workshop is necessary to adequately prepare health providers and community volunteers to successfully act as peer educators.
- Monthly updates and review of the safe use of misoprostol should be integrated into periodic routine meetings with community volunteers as a way to continuously re-train.

### Sustainability and scaling up

- The National Steering Committee on PPH prevention and Indonesian MOH, as well as the national Obstetrics Professional Society, have approved the findings and plan a step-by-step roll out and program scale up.
- In July 2003, the Minister of Health directed that the prevention of PPH strategy be expanded gradually and incorporated into the national health program.
- The MOH has budgeted for scale up in five provinces by 2004.
- The MOH facilitates the importation/packaging of misoprostol and provides it at low cost to women who need it.
- JHPIEGO developed the Prevention of PPH toolkit and PPH intervention implementation guide for replicability in other countries.

### Resources

This is a USAID-funded program. The financial costs for implementing this PPH preventive intervention were minimal, since it was implemented through the existing health care system network of sub-district level health centers and trained community volunteers.

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## Expanding Access to Post-abortion Care in Ayacucho, Peru

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Ipas

### Short description

This project assessed an intervention to improve the quality and accessibility of PAC services in rural hospitals and other health care facilities in the state of Ayacucho, Peru. The intervention included changes in provider training and supervision, introduction of a preferred technology for uterine evacuation, provision of post-abortion family planning (FP), and development and use of innovative and practical computer-based recordkeeping and monitoring tools. The findings demonstrated that even in low-resource rural settings, an intervention at all levels of the health care system is feasible and low-quality services can be dramatically improved. The addition of PAC as a routine health service is not an enormous, high-cost challenge, and existing infrastructure can be used for PAC services.

### Goal/Objectives

1. To improve PAC access and quality of care in a rural area of Peru.

### Background

The highly restrictive abortion law in Peru leads many women to resort to clandestine abortion, and Peru has one of the highest estimated abortion rates in Latin America, 51.8 abortions per 1000 women of reproductive age. In 2001, over 50,000 women, many from rural areas and of low socioeconomic status, were hospitalized for treatment of abortion-related complications, a figure that does not include treatment for complications related to miscarriage.

The department (state) of Ayacucho, located in the south central mountain range of the Andes, is one of the poorest and most rural in Peru. Maternal mortality and morbidity is estimated to be high, including complications from unsafe abortions, which are a leading cause of maternal death in Peru. Public health services to treat these complications are difficult for women to access and are often of inadequate quality.

### Design and implementation

The project began in July 2001 and ended in June 2002. The design involved a 1-year training and service delivery intervention. Fourteen core sites participated: all 8 public sector hospitals and 6 of 37 health centers in the state. Health care facilities were selected based on population size, infrastructure and accessibility to the state's main referral hospital. Prior to the intervention, a baseline assessment was conducted to evaluate the sites' capacity to provide PAC services. Ongoing monitoring of services was carried out, including application of practical computer-based tools, and a final assessment of services was performed at the project's conclusion.

The implementation included a variety of training and supervision activities: training-of-trainers courses; conference-based training of providers beginning a mandatory social service year in Ayacucho; in-service training at service delivery sites; off-site training in a Lima hospital for project leaders; and facilitative supervision visits. Sites were able to contact a designated PAC clinical expert to answer questions and for support to the newly-trained providers.

All 14 facilities were provided with manual vacuum aspiration (MVA) instruments, and additional instruments and equipment were donated to the main referral hospital to develop a PAC ambulatory unit. Special focus was given to ongoing monitoring and evaluation through implementation of a standard clinical record for PAC patients. Project activities also included training of providers in a broader group of 92 health care sites, with particular focus on university-trained midwives who staff many of the health centers and primary-level facilities. The MOH and local facility administrators provided institutional support.

### Results and evaluation

Three indicators were used to measure improvements: 1) the use of MVA for treatment of incomplete abortion; 2) the status of quality of care for PAC services; and 3) the acceptance of post-abortion contraceptive methods. At the pre-intervention baseline, 12 of 14 (86%) facilities were using sharp curettage (SC) for uterine evacuation; post-intervention, all facilities were offering PAC with MVA, with a comprehensive PAC service site operating in each

province of Ayacucho. By the last quarter of the project, 65% of uterine evacuations of 12 weeks or less of pregnancy were performed with MVA in the 14 sites.

A noteworthy improvement was the reduction in delays experienced by women in receiving PAC treatment after reaching the service site. While initially women waited almost 24 hours prior to receiving treatment with SC, the time decreased to 11.6 hours with SC, and then dropped to 4.1 hours with full implementation of outpatient MVA services. Post-abortion contraceptive services also improved with a baseline figure of 21.1% of PAC patients leaving with a contraceptive method compared to a post-intervention figure of 42.8%. Family planning counseling offered to PAC patients also increased, from 89.5% to 94.2% of women.

PAC-trained providers are now more widely available at all levels of the health care system. All 8 hospitals and 78% of health centers have a trained provider; 1 in 5 primary-level facilities has a provider trained in PAC; and overall, of the 327 public health care facilities in Ayacucho, 28% have at least one PAC-trained provider on staff.

### **Challenges and lessons learned**

- Inadequacies in recordkeeping made pre-intervention data difficult to collect. Supervision of some project sites was particularly challenging. While MVA instruments were provided to all 14 core sites, distribution of instruments to the broader group of PAC-trained providers was hampered by political and logistical obstacles.
- Even in low-resource rural settings, an intervention at all levels of the health care system is feasible and low-quality services can be dramatically improved. The addition of PAC as a routine health service is not an enormous, high-cost challenge. Specifically, the Ayacucho experience shows that a commitment to provider training/supervision, authorization of mid-level practitioners to offer PAC, and the addition of MVA instruments to routine MOH supply lists are investments that would yield enormous benefits.
- In addition, the establishment of linkages between emergency abortion treatment and family planning services is feasible and essential to PAC, as the effectiveness of the provision of contraceptive information and methods prior to hospital discharge has proven invaluable in preventing future unwanted pregnancy and unsafe abortion.

### **Sustainability and scaling up**

- Provision of PAC training and instruments at minimal costs, and establishment of routine information systems, have helped create a sustainable, statewide model for improvements to PAC services. The physical infrastructure and the supplies, equipment and contraceptive commodities already in place for obstetric deliveries/routine FP services can also be used for PAC. The addition of MVA instruments to the MOH routine supply list is a necessary step that still needs to occur in order to ensure an ongoing supply of this technology.
- A policy change to authorize midwives to provide PAC is needed to facilitate the sustainability and expansion of the intervention. These mid-level practitioners staff many health centers and primary-level facilities throughout Peru. Training these practitioners in uterine evacuation for emergency treatment of incomplete abortion and stabilization and referral of more complicated patients would be a life-saving measure.
- The need for PAC services would be greatly reduced with improvements in the FP program, changes in abortion-related policies, and liberalization of the restrictive abortion law.

### **Resources**

A grant to Ipas helped fund provider training, technical assistance, infrastructure upgrades, equipment, supplies and evaluation activities. The Ayacucho MOH made contributions of personnel, time, transportation and other resources.

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## Population and Family Planning Project, Malawi

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**World Bank**

### Short description

To help improve maternal health and improve access to contraceptives in Malawi, the Ministry of Health and Population (MOHP) implemented the Population and Family Planning project. The project was funded by the World Bank under a Learning and Innovation Loan (LIL).<sup>1</sup> The objective of the project was to determine the feasibility of a comprehensive, district-wide community based distribution approach to the provision of family planning services. Community-Based Distribution Agents were trained to provide family planning services and referrals to women and men of reproductive age in Malawi. The project began in April 1999 and closed December 2003.

### Goals/Objectives

The goal was to determine the feasibility of a comprehensive district-wide community based distribution of population and family planning services by the public sector to men and women of reproductive age, including adolescents, in hard-to-reach areas in three districts. The objectives were to:

1. Increase the contraceptive prevalence rates;
2. Increase the demand for services; and
3. Increase access to family planning services for men, women, and adolescents in rural and under-service areas.

### Background

Although fertility had declined between 1984 and 1992 from 7.6 to 6.7, Malawi still had one of the highest TFRs in sub-Saharan Africa. In 1994, the Government developed the National Population Policy to improve the standards of living and quality of life, and to reduce both maternal and child mortality by raising the CPR. A Malawi DHS identified a large unmet need for contraception, which was attributed to limited access to family planning services. The response was the community-based distribution (CBD) of contraceptives initiated by the Family Planning Welfare Council of Malawi, followed by other NGOs. Some of the CBDs showed promise, but were too small or not systematically monitored. Other country programs were showing success in larger CBD programs, which justified testing a district-wide CBD program in Malawi.

### Design and implementation

Family planning services were to be provided as part of a larger reproductive health package and with uninterrupted supply of FP commodities, guaranteed by the government. There were four components: IEC, Community Based Distribution of Contraceptives; Strengthening Clinical Back-up; and Training. Although monitoring and evaluation were built into each of the components, it was treated separately during implementation. Male involvement and youth were also given special attention. As it was a LIL, the design consisted of control districts, representing the same regions as the pilot districts. A Project Management Team facilitated interaction with stakeholders, especially NGOs and CBOs. The project relied on non-volunteer Community Based Distribution Agents (CBDAs) for service delivery, given the shortage of skilled health staff in Malawi. CBDAs received financial and material incentives, including training, uniforms, bicycles, etc. Health Surveillance Assistants (HSAs) were trained in family planning and reproductive health both as supervisors of CBDAs and as providers.

**Results and evaluation**

An end-project survey was conducted by ORC Macro and showed that contraceptive use doubled in all villages covered in the pilot districts. The survey also found that women are using modern contraceptives at younger ages and with lower parity. There was a striking increase in the number of women who receive their family planning supplies from CBDAs and non-users of family planning reported increased contact with family planning suppliers.

The project recruited and trained almost twice as many CBDAs as originally planned, maintaining low attrition rate. An additional 270 HSAs were trained, strengthening the capacity of HSAs to supervise CBDAs and other Community Health Workers. CBDAs were a significant source of information and supplies, helping to raise the CPR in the pilot districts above the national targets for 2012. CBDAs were also effective in referring clients to facilities. The project also completed all the training anticipated, providing both STI drugs and RH equipment, and strengthening the capacity of health facilities to provide a wider range of RH services, including youth-friendly services and post-abortion care.

**Challenges and lessons learned**

- A rapid increase in contraceptive prevalence is possible in rural African villages with the use of CBDAs.
- Effective community mobilization through IEC and supportive supervision, rather than mere financial incentives, can fortify a CBD program.
- Lessons learned from pilots can find immediate value by the MOH resulting in changes in how the health sector works.
- The strained relations between the Project Management Team and the MOH, which was the home of the project, affected the participation of the project activities.
- The project experienced frequent staff changes and delays in hiring replacements.
- The delays in the procurement of drugs, vehicles, printing and equipment, results in project interruptions.
- A shortage of skilled staff constrained referrals and service delivery causing long waiting times.

**Sustainability and scaling up**

The project has contributed to the delivery of essential health services at the community level and informed the government on what it takes to provide district-wide coverage. The project facilitated meetings between the MOHP and MASAF, preparing for collaboration to scale-up the HSA training and CBDAs.

**Resources**

The project was supported by the World Bank and the Government of Malawi.

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## Preventing and Treating Malaria during Pregnancy: Increasing the Survival of Mothers and Newborns in Burkina Faso

### JHPIEGO Maternal and Neonatal Health (MNH) Program

#### Short description

Effective strategies to reduce the impact of malaria in pregnancy (MIP) must address both the need to prevent illness in asymptomatic pregnant women and to manage disease in women with clinical illness. The MNH Program, through competency-based skills training, standards development, and technical assistance for policy revision, promotes intermittent preventive treatment (IPT) during focused antenatal care (ANC) visits, and use of insecticide-treated nets (ITNs), as the best ways to prevent and control MIP.

#### Objectives

1. To develop a cadre with malaria prevention/treatment skills based on competency and scientific evidence.
2. To develop standards with local service providers, university professors, policymakers, and the community.
3. To establish and maintain safe, effective malaria prevention and treatment services and programs.

#### Background

Each year in Africa, about 30 million women become pregnant in malaria-endemic areas, and anemia caused by malaria is estimated to cause up to 10,000 maternal deaths. Malaria affects nearly five times as many people as AIDS, leprosy, measles, and tuberculosis combined. Babies born to mothers with malaria are more likely to have low birth weight—the single greatest risk factor for death during the first month of life. The prevalence of low birth weight in Burkina Faso is currently 11–12%. Studies have shown that HIV/AIDS infection during pregnancy reduces a woman’s resistance to malaria, decreases effectiveness of malaria treatment; increases risk of malaria-related problems during pregnancy, and increases the risk of intrauterine growth restriction leading to low birth weight.

Malaria in pregnancy can be prevented and managed with appropriate, low-cost interventions. The WHO currently recommends that all pregnant women in areas of stable transmission of *Plasmodium falciparum* receive at least two doses of IPT after “quickening” (usually between 16 and 20 weeks gestation), during regularly scheduled ANC visits. The most effective and efficacious drug to date is sulfadoxine-pyrimethamine (SP). SP can be easily administered as IPT, under direct observation during ANC visits.

#### Design and implementation

The MNH Program’s strategy in Burkina Faso includes four main technical components: 1) interagency collaboration; 2) policy and advocacy; 3) updated skills training in ANC; and 4) community social mobilization educational campaigns. These activities began in June 2001.

A rapid initial assessment was done to look at the burden of MIP. Global partnerships were established with WHO/AFRO (Roll Back Malaria partnership) and the USAID-funded Malaria Action Coalition (MAC)—which includes WHO, DC, and the Rational Pharmaceutical Management Plus project—to support the global malaria agenda and provide technical assistance at the policy level. Using the WHO/AFRO strategic framework, the MNH Program developed the *Prevention and Control of Malaria during Pregnancy Reference Manual and Clinical Learning Materials Package*. A regional training on MIP was coordinated in collaboration with UNICEF, and the MNH Program provided technical assistance to UNICEF to follow up on the MIP regional training. The Program has been involved in regional and national workshops to disseminate the benefits of IPT with SP for MIP.

A research project on MIP, with CDC and Centre National de Recherche et de Formation sur le Paludisme (CNRFP), began in July 2001. Supplies and equipment were subsidized by UNICEF for ITN in 26 health centers and communities. In the spring of 2002, MNH/Burkina Faso and CDC, with support from the Africa Bureau, sponsored a regional conference covering recent research on MIP. The conference launched regional policy

dialogue about revising malaria policies. Competency-based skills training was carried out for focused ANC emphasizing the prevention and treatment of malaria using new guidelines. The program trained 89 service providers working in 26 district health facilities. The training included how to distribute and administer IPT/SP as well as the importance of sleeping under ITNs. Approximately 10,000 community members have been involved in the malaria day events, which include theater, radio messages, and community education sessions to promote use of ITNs and IPT/SP. In addition, the Program recently trained 10 community facilitators, 12 nurses, and 2 DMHT staff in developing goals, interventions, indicators, and monitoring tools for social mobilization.

### **Results and evaluation**

Sixteen months after introducing IPT/SP to 23 health centers in the Koupéla district, MNH/Burkina Faso follow-up data show that 92% of women who attended ANC received at least one dose of SP under direct observation, 64% received two doses, and 40% received three doses. The rate of first-time ANC care users rose from 66% in 2000 to 83% in 2003, and for the first quarter of 2004 the rate was 88%. This means further impact with the IP/SP use in prevention and treatment of MIP. The CDC, CNRFP, and the MNH/Burkina Faso program are currently evaluating whether introduction of IPT/SP has affected the adverse outcomes of MIP.

### **Challenges and lessons learned**

- Achieving policy consensus among top leaders and professionals is challenging. Important stakeholders may hold conflicting views on revising/updating or developing policy.
- Service providers are key stakeholders and need to be involved in policy consensus.
- Revising MIP policy can require considerable time/resources, and requires leadership from the MOH.
- It is critical to conduct technical updates with key malaria stakeholders (e.g., malaria researchers, faculty of medical/midwifery schools, active leading providers) prior to holding policy consensus meetings.
- It is crucial to take a systematic approach—with people involved in drug logistics management, monitoring and evaluation, and supervision—to ensure sustainability of the initiative.

### **Sustainability and scaling up**

- Updating national policies, norms, and protocols for MIP was a vital and sustainable approach to strengthening service delivery at all levels of the health care system.
- UNICEF and UNFPA worked with the MOH and MNH/Burkina Faso to expand MIP model approach nationally.
- MAC, MNH/Burkina Faso, and UNICEF's Regional Office for West and Central Africa trained 93 key stakeholders from 17 countries in focused ANC and MIP.
- The newly formed West Africa Malaria in Pregnancy Network, RAOPAG, provides an ideal venue to share MNH/Burkina Faso MIP program expertise throughout the region. This network has prompted at least six countries to address the problem of rising resistance to chloroquine by conducting pilot programs and/or adopting policies to implement IPT using SP, based on the Burkina Faso model project.

### **Resources**

- USAID/WARP and USAID/MNH/MAC were the funding sources, with subsidizing from UNICEF in some areas.
- Important human resources include key stakeholders, such as top researchers in MIP, the MOH and reproductive health team of governmental agencies, the district medical team, and service providers.
- Training and advocacy materials include the MIP reference manual and learning package for training, and the Malaria Resource Package.

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## Reducing Maternal Mortality among Repatriated Populations along the Guatemala – Mexico Border

### Marie Stopes Mexico (MSM)

#### Short description

A mobile team from MSM provided outreach services to returnee communities in the state of Huehuetenango, Guatemala, directly across the border. The outreach team included a driver/health promoter, traditional midwife, nurse, and health technician providing non-surgical family planning (FP), mother and child health (MCH), and information, education and communication (IEC) activities, including the training of health promoters and traditional midwives to improve access to and raise awareness of sexual and reproductive health (SRH) services. From November 2001 to June 2003, the mobile unit provided 2,786 SRH services and trained over 28 health promoters and 45 traditional midwives in 22 rural communities. Evaluation findings revealed that the project had a significant impact on behavior by improving awareness of and access to SRH services – this impact is most likely due to the project alone as no other services are accessible to these communities.

#### Goals/Objectives

1. Improve access to high quality SRH and maternal health services through provision of a mobile outreach unit.
2. Increase awareness of SRH issues amongst the target population and local organizations.

#### Background

Over 43,000 indigenous Guatemalan refugees were repatriated after peace accords were signed in 1998. Repatriation occurred principally in isolated poor and marginalized areas which still lack health services. MSM remains the only SRH provider in the communities in which it works and as such, is an essential presence to protect against escalating maternal mortality rates, which are among the highest in Latin America – estimates vary from 190 to 300 maternal deaths per 100,000 live births, with higher estimates in some rural, indigenous communities.

#### Design and implementation

A baseline survey was undertaken to identify target communities, determine existing reproductive health status and identify perceived needs. The team also carried out an assessment of 28 community promoters and 27 community midwives from five regions in the project area, to detect interest, identify training needs, and develop the training.

The mobile unit provided access to services and information 21 days a month for 22 months – three weeks of the month were spent working in communities and the fourth week holding coordination and planning meetings, and follow-up and training activities. The project focused on building capacity of community stakeholders through interactive and participatory training of local midwives and health promoters in SRH topics. Community meetings and informal gatherings were utilized for participatory educational talks on SRH issues, which were directly translated into local language, *Kanjobal*. IEC components were developed considering local cultural and linguistic frameworks, and locally appropriate materials were developed. The mobile team continuously carried out meetings with community leaders and grassroots organizations to strengthen communication, address gender equity, and encourage community participation in IEC activities and utilization of services. The team established referral agreements with Casa Materna in Huehuetenango and Guatemalan Ministry of Health (MOH) facility in Barillas. However, since these centers are located between two and eight hours from the project communities, many Guatemalan women return across the border into Mexico seeking services. Referral agreements were therefore established with the hospitals in Comitán and Guadalupe Tepeyac and the CAMADDS health center in Poza Rica across the border in Mexico.

During the project, the team successfully provided training and 2,786 SRH services in 22 target communities. Service provision increased dramatically in the last year, suggesting an increased acceptance of MSM and demand for services. In the follow up survey, 93% of those interviewed stated that MSM services were important or very important. FP services represented 22% of services and antenatal care represented 28% of services provided.

### Results and evaluation

An evaluation using pre- and post-knowledge, attitude and practices (KAP) surveys was conducted among representative samples of 12 selected communities. Close to 400 baseline (June 2001) and endline (June 2003) interviews were conducted with men and women aged 14 to 49. Many changes from baseline to endline were statistically significant: 1) antenatal and childbirth care by midwives – 71% to 89%; 2) knowledge of problems during childbirth – 53% to 67%; 3) knowledge of all modern FP methods: oral contraceptive pill – 54% to 85%; injectables – 41% to 89%; tubal ligation almost doubled while knowledge of vasectomy, condoms and IUDs all more than doubled; 4) use of modern FP methods – 9% to 30%; and intention to use FP methods – 36% to 68%.

### Challenges and lessons learned

- A gap still exists between those who accept contraceptives and those who actually use them.
- **Services:** 1) continue to increase the use of broad range of FP methods; 2) improve male participation; and 3) expand active participation of local midwives and health promoters. **IEC:** 1) teach all team members *Kanjobal*; 2) re-train the unit team on current best practices on participatory educational techniques; 3) recruit an additional midwives and young, female health promoters; 4) increase the emphasis on HIV education and 5) increase the emphasis on gender awareness/equity. **Alliances:** 1) initiate collaboration with local schools to include SRH education; 2) create alliances with local churches and pastors; 3) collaboration with MoH to maintain an enabling environment and ideally increase MOH involvement in these communities; and 4) close collaboration with Guatemalan organizations to avoid duplication, maximize coverage and share experiences and best practices.
- A main obstacle was lack of importance reproductive health (RH) is given – target groups did not accept SRH activities if other health needs were not covered. Thus, MSM provided a wide service mix and coordinated these services with other organizations.
- Time is needed to obtain official authorization from relevant authorities and support from other NGOs. Fieldwork for baseline study was very difficult and time-consuming due to the poor conditions of the roads.
- Difficulties in implementation across national borders included a border fee on every crossing and transportation of medical supplies/equipment, despite close relationship with MOH in both countries.

### Sustainability and scaling up

- Social sustainability is achieved through capacity building of health promoters and traditional midwives at community level. MSM operates a cost-recovery mechanism by charging locally determined, affordable fees for services, allowing for development of a degree of self-financing while subsidizing services for poorest clients.
- Following project completion, proposals were presented for the continuation of the project, yet no funding sources have been secured to date. The project finalized operations in December 2003.
- Replication and scaling-up should contemplate the following points in addition to the lessons learned cited above. For improved access to services: 1) select project locations in consultation with local NGOs and communities; 2) provide service delivery and consultation, and referral where necessary; 3) develop new alliances with local NGOs to cooperate in improving training for health promoters and midwives; and 4) improve actual transport of women who are identified as high risk through community organizing and gender awareness. For increased awareness of SRH issues: 1) continue the use of locally appropriate materials and expand the quantity so that all health promoters, midwives, and health centers can have relevant copies; and 2) improve IEC activities through training in participatory education and gender equity awareness.

### Resources

- The Packard Foundation, through Columbia University's Mailman School of Public Health – \$162,500; Moriah Foundation – \$60,000; and UNHCR – second hand vehicle worth \$15,000.

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## Improving Availability of and Access to Emergency Obstetric Care for Conflict-Affected Populations

### Women's Commission for Refugee Women and Children and the RHRC Consortium

#### Short description

The Reproductive Health Response in Conflict (RHRC) Consortium works to increase access to and availability of EmOC services to populations affected by conflict, and has implemented 12 pilot projects in several countries. The projects focused on the health facility level to improve their capacity to provide high quality EmOC services. Activities included facility renovation, maintenance, provision of equipment and supplies, facility setup, placement of staff and training. The Consortium's experiences show that progress can be made, even under extremely difficult circumstances. The use of process indicators has revealed a number of positive trends at many project facilities, including increases in the number of total deliveries, MVA procedures, new family planning acceptors and EmOC signal functions being provided.

#### Goals/Objectives

The goal of the project is to avert maternal death and disability among women in conflict-affected populations by establishing or improving Basic and Comprehensive EmOC services at health centers and hospitals. The specific objectives are to: advocate for improved EmOC services; renovate and construct facilities; ensure adequate equipment, medicines and supplies; disseminate EmOC protocols; promote high quality basic and comprehensive EmOC; provide competency-based training and other technical assistance; and mobilize communities to respond to obstetric emergencies appropriately.

#### Background

Complex emergencies due to political unrest, conflict and natural disasters, frequently result in a breakdown of infrastructure, leading to conditions that have a detrimental effect on women's health and make women more vulnerable to pregnancy-related complications and other reproductive health (RH) problems. Women may suffer from nutritional deficiencies due to lack of adequate food, or may be cut off from services, hence reducing their chances of survival when complications arise.

#### Design and implementation

The 3-delays model provides a framework for maternal mortality reduction programs. The Consortium pilot projects focused on reducing the third delay at the health facility level to improve the facilities and the capacity of health workers to provide high quality EmOC. In addition, community mobilization activities were undertaken. Needs assessments were conducted in Bosnia, Kenya, Liberia, Pakistan, Sierra Leone, Southern Sudan, Tanzania, Thailand and Uganda. The majority of assessments (all but three) were conducted in 2001. Tools for conducting assessments and designing maternal mortality projects, developed by the AMDD Program, were used for the assessments, design, monitoring and evaluation of the programs. Findings from the assessments revealed a chronic lack of attention to EmOC among conflict-affected populations with a lack of coordination among key service providers from the camp/rural level to the national level. Based on these findings, activities concentrated on: facility renovation and maintenance (including rehabilitation of water systems and other major infrastructural renovations); provision of equipment and supplies; facility setup; improved data collection and record keeping; placement of staff and training; establishment of services 24-hours/7 days a week; and improved communication/transportation systems. All activities were undertaken in collaboration with local partners such as the MOH, UNHCR, UNFPA, local NGOs and international NGOs.

#### Results and evaluation

Data used to calculate UN Process Indicators were used to monitor progress. A key lesson learned was the importance of collecting the data needed to calculate the UN Process Indicators from the start of the project. Selected indicators include: total number of births; number of obstetric complications managed; number of caesarean sections performed; number of blood transfusions given; number of maternal deaths; number of referrals; number of MVA procedures; and number of family planning acceptors following PAC.

Following implementation, there has been an increase in the number of deliveries at most of the 24 project facilities (13 health centers and 11 hospitals). For example, at one pilot project site in Pakistan, semiannual service statistics revealed that the number of deliveries for November 2002 – April 2003 was 187, while for May 2003 – October 2003, this increased by 44 percent to 336. At another project site in Pakistan, the number of deliveries at the EmOC facility increased from 49 to 69 in just three months. Similarly, at one project hospital in Uganda, the number of deliveries increased from 307 to 475 over a six-month period. At this same project site over the same period, the number of caesarean sections increased from 52 to 76. The increases seen in the number of deliveries at project facilities was true for many sites. Some project sites have also reported a positive impact on service statistics as a result of PAC training, including increases in the number of MVA procedures and the number of new family planning acceptors. Furthermore, the level of basic and comprehensive EmOC services provided at each facility in the past three months was assessed during project review site visits using the UN Process Indicator signal function criteria to identify whether an EmOC facility is functioning. There was a significant increase in the number of signal functions provided at most facilities visited during the end of project review conducted by the Consortium EmOC Technical Advisor. The number of obstetric complications managed at project facilities has not necessarily changed. However, it is too early to document changes in numbers of obstetric complications managed as this indicator requires significant amounts of training and supervision before noting appreciable changes.

### **Challenges and lessons learned**

- Shortages of qualified staff in conflict-affected countries are a critical challenge to providing EmOC. This is exacerbated in areas of protracted conflict such as Southern Sudan and Liberia. Sustainability of these programs is another serious challenge in countries where health facilities have very few resources to maintain services.
- To provide sufficient hands-on training leading to improved clinical services, health personnel must be trained in a facility where sufficient numbers of deliveries are conducted.
- To improve quality of care, competency-based technical training with close monitoring and supervision is needed. EmOC projects need sustained outside funding for extended periods of time.
- Transportation and communication systems are critical to providing EmOC. Community mobilization to engage communities in assuring timely and efficient transportation for referrals is critical to the success of projects.
- EmOC programming should be integrated into the package of primary health care services provided in humanitarian programs

### **Sustainability and scaling up**

The local community of one project in Liberia raised money through their traditional savings schemes to purchase an ambulance. In Thailand, as a result of the relationship developed with the local hospital, medical doctors from the local Thai hospital periodically go to the Burmese camp to see patients and provide technical support. In Tanzania, the IRC was able to leverage funding to expand its EmOC activities to four health centers in the health district. This will complement the EmOC activities started at the referral hospital.

### **Resources**

The projects were funded and technically supported by the AMDD Program at the Columbia University Mailman School of Public Health. Because projects were integrated into existing health care programs and emphasized using locally made materials whenever possible, costs of pilot projects were kept to a minimum. Grants ranged from \$8,000 to \$173,000 and covered from six months to three years. The majority of projects had budgets ranging from \$50,000 – \$120,000 for one to two years. Projects were able to leverage additional resources such as funding for a new maternity from another donor, and reproductive health kits from UNFPA.

### **Contact information**

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## **Involving Husbands in Safe Motherhood: The Suami SIAGA (Alert Husband) Campaign, Indonesia**

**Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs**

### **Short description**

Suami SIAGA was implemented in Indonesia by the Ministry for Women's Empowerment, UNFPA, and CCP. It was the first ever campaign with the primary goal of involving husbands in safe motherhood. The campaign attempted to change attitudes and behaviors through introducing a revolutionary new idea that captured the imagination and motivated change. The campaign made husbands alert about the three delays that can prevent a pregnant woman from receiving appropriate care during an emergency. The project activities included a national advertising campaign, district and village level public relations activities, a three-part television drama, provider materials, and small grants to communities. While the television and radio spot were aired nationally, three of the eight Mother Friendly Movement provinces had intensive campaign and public relations activities - East Java, South Sulawesi and South Sumatra. The project ran for 2 years, between 1998 and 2000.

### **Goals/Objectives**

The Suami SIAGA Campaign promoted specific actions men could take to prevent maternal deaths. The Campaign also included messages for community members and leaders, and midwives. Specifically, the campaign sought to:

1. Increase men's awareness of the importance of being involved in their wives' pregnancies.
2. Increase men's knowledge of complication signs before, during, and after delivery.
3. Increase the number of couples who intend to use a midwife at delivery.
4. Motivate community leaders and members to develop plans for blood donation and emergency transport.
5. Increase the number of midwives who discuss delivery plans with couples.

### **Background**

Husbands are generally the decision-makers in the household in Indonesia, deciding if a skilled provider attends the delivery, making financial decisions in emergency situations, and determining the type of care wives receive in case of complications. Husbands, however, often lack specific knowledge about why such care is necessary. Compared with other countries in Southeast Asia, Indonesia's MMR with estimates between 307 – 650 deaths per 100,000 live births is considered high. Nearly half of all maternal deaths are caused by hemorrhage. TBAs (Traditional Birth Attendants), rather than midwives attend more deliveries in rural areas, and about 70% of deliveries occur in less-than-sterile conditions in homes. Attitudinal and behavioral issues such as the belief in pregnancy being a normal event with little need for special preparations and women not being in a position to make a decision about their care during delivery, contribute to the high rates of maternal mortality. Some studies have found that people believe if a woman dies during pregnancy, it is God's will and that there is little they can do about it. The Suami SIAGA campaign aimed to be a behavior catalyst so people would move from inertia to action when there was an obstetric emergency.

### **Design and implementation**

“Saya Suami SIAGA” translates to “I’m an alert husband” in Bahasa Indonesia. As an acronym it stands for “SIap Antar JaGa” (SI/A/GA). “SiapAntarJaga” is a positive rendition of the 3 delays: 1) SIap (=ready) – be ready/well prepared to identify danger signs in pregnancy; 2) Antar (=transport) – transportation plan in event of an obstetric emergency; and 3) JaGa (=guard) – be present during delivery, especially if wife is identified as being in a risk group.

Analysis and focus group discussions identified existing programs and policies in maternal mortality. A design document was developed for the TV drama, was distributed and was used to develop the request for proposals for a nationwide, multimedia campaign. An advertising agency was selected through a competitive bidding process and the TV drama was distributed and aired. Accompanying the campaign materials were materials for policymakers for advocacy purposes. The campaign was launched with a big media event; the TV drama aired simultaneously. The TV drama was duplicated on cassette for use by mobile vans and other venues. Cue cards, brochures, stickers, and

posters with information on the Three Delays and on how to discuss birth preparations including possible complications were developed for midwives, who were trained in interpersonal counseling and communication skills to improve quality of their interactions with women. As part of the community mobilization program, 90 villages received mini-grants to develop a transportation system for emergency referral of pregnant women.

Suami SIAGA was a multimedia campaign that included national public relations events, television and radio spots featuring popular singer Iis Dahlia; and a 3-part TV drama directed by two top Indonesian female directors/producers. Three high-priority provinces – East Java, South Sulawesi, and South Sumatra – participated in additional Suami SIAGA activities, including IPC/C training, supervision of midwives, mobile van airing TV drama which stimulate and a mini-grants program to support transport plans. In these provinces, the Campaign was expanded to promote the *bidan* (midwife) SIAGA and the *desa* (community) SIAGA concepts.

### Results and evaluation

Nearly 50% of midwives and 60% of community leaders learned something new from the campaign, e.g., the need for a pregnant woman's family to check blood type or to prepare in advance for transportation and delivery fees. 41% of men who were exposed to the campaign talked to someone else about Suami SIAGA. Men who talked to someone about becoming a Suami SIAGA were 10 times more likely to say they gained new knowledge compared to men who were not exposed via interpersonal communication. Men and women's behaviors also changed. According to women respondents, 87% of husbands accompanied women during deliveries and 75% stayed as long as needed. Two-thirds of midwives observed a significant increase in the number of husbands accompanying their wives to checkups/deliveries. Some 30% of male respondents indicated they had taken action toward becoming a Suami SIAGA in the form of (i) helping a woman who was experiencing a pregnancy complication, (ii) participating in community activities related to Suami SIAGA, or (iii) encouraging others to participate in community-level campaign activities. Eight of every 10 communities involved in the *desa* SIAGA component established emergency transportation. Six of every 10 communities created a blood donation system.

### Challenges and lessons learned

- Project delay/reduced focus on MH due to economic crisis and political shifts causing civil and social unrest.
- A lack of human resources and field staff caused challenges at the district level.
- Iis Dahlia proved to be an important factor in the program's success. She was a popular performer with the intended audience and had credibility as a spokesperson having just gone through a difficult pregnancy.
- The economic crisis reduced the number of competing media messages, and enabled some free air time
- Mini grants program was not successful in most areas – likely due to changes in government personnel managing accounts.

### Sustainability and scaling up

The campaign provided a blueprint for donors, NGO's and government agencies to reduce maternal deaths and a foundation from which other women's health issues can be addressed. The success of the Suami SIAGA campaign led the USAID-funded Maternal and Neonatal Health program to adopt the SIAGA concept for the behavior change communication component of the program. The MNH program also used Iis Dahlia as the spokesperson. **Resources** Total cost of the project was \$834,435. UNFPA was the main funding source, with the Ministry for Women's Empowerment contributing in-kind resources through material distribution channels and assistance at provincial level.

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## SUMATA Campaign, Nepal

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### Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs

#### Short description

SUMATA (Care, Share, Prepare) is a national safe motherhood (SM) communication initiative intended to increase awareness of danger signs associated with pregnancy complications and childbirth and to improve birth preparedness to help safe women's lives. The JHUCCP initiative, SUMATA, uses a synergistic blend of mass media, community-based media, community mobilization and interpersonal communication to disseminate and reinforce safe motherhood messages at the national and community levels through multiple channels. Phase I highlighted the importance of pregnancy and childbirth as a special condition; phase II expands the themes of care, share and prepare at the national level, including messages about complications and seeking emergency treatment in districts where EmoC is available. The project was initiated in July 2000 and closed September 2003.

#### Goals/Objectives

1. To raise awareness among husbands and family members about the importance of caring, sharing and preparing for childbirth.
2. To promote preparedness for birth and readiness in the event of complications, primarily amongst husbands and mother-in-laws in increase their support for women during pregnancy, childbirth, and postpartum period.

#### Background

The maternal mortality, at 539 per 100,000 live births, is amongst the highest in South Asia. The underlying reason for the high ratio is the low status of women, and immediate causes include women's economic and geographic barriers to healthcare, a weak health service, which lacks sufficiently trained staff to provide quality health services, and the socio-cultural context surrounding pregnancy and childbirth. Cultural beliefs, low status of women and the low female literacy rates reinforce traditional birth practices, which includes home-delivery without the help of a skilled birth attendant.

#### Design and implementation

Key SM stakeholders in Nepal were brought together to identify the factors influencing practices and decisions related to pregnancy, childbirth and postpartum in Nepal. A list of priority behaviors and associated audiences were identified, as well as a national, unified approach to increasing access to SM healthcare services using an integrated, IEC/BCC strategy. The multi-media strategy was to address social context issues and institutional barriers to care. Interpersonal communication was considered the best option for educating the community about the danger signs of obstetric complications. Messages were identified to motivate the audiences to adopt desired behaviors. The *Care, Share, Prepare* model was the unifying theme identified to be appropriate for all audiences.

From the framework identified, radio and television shows were produced and broadcast nationally. At the community level, radio programs were broadcast in local languages through FM channels and street theater was performed. Print materials, "danger sign" posters, and interpersonal communication and counseling was conducted reinforcing the messages that were relayed in the radio, television and street theater, further stimulating behavior change in SM. Inter-sectoral collaboration in designing the framework and implementing the multi-media activities was of great significance in that it brought stakeholders together to unify the SM messages, coordinate BCC activities, identifying clear strategic communication objectives to improve maternal health.

**Results and evaluation**

A series of 6 radio dramas incorporating EmOC messages were broadcast through FM targeting districts where EmOC services are available. A nationally broadcast tele-film was produced highlighting the caring role of men and mother-in-laws during pregnancy, childbirth and postpartum. Street performances were held based on the radio dramas and with an interactive question/answer session. In two districts, more than 50,000 people participated in the street performances. Interpersonal communication and counseling was identified as the key approach to educate people about the danger signs of potential obstetric complications.

Among those exposed to SUMATA activities, nearly 95% comprehended the messages; more than 75% of the respondents reported having used the information contained in the SUMATA messages; and nearly 90% acknowledged their intention to do so in the future. Survey results also showed higher levels of awareness of the danger signs during pregnancy, childbirth, and postpartum.

**Challenges and lessons learned**

- Behavior change is a gradual process and initiatives require continuous support to maximize impact.
- Stakeholder participation helps unify messages given and enhances the effect of the intervention.
- SUMATA materials and activities were well received and supported by all stakeholders, improving their institutionalization, sustainability, and effect.
- Partner collaboration, while pertinent to the success, was challenging given the varying program agendas, busy schedules, and multiple commitments.
- Ensuring cultural appropriateness of messages, while continuing to challenge culture norms and behaviors, was difficult.

**Sustainability and scaling up**

The success and approach of SUMATA has propelled many organizations and initiatives to continue support for key SUMATA activities. For example, both Government of Nepal and private channels continue to support the broadcast of the television drama. The Nepal Family Health Program supports the radio broadcasts and print materials. Partners continue to expand use of many of the printed materials developed under SUMATA. The Nepal Safer Motherhood Project (Options/DFID) has continued support for radio dramas in Nepali, Abadhi, and Tharu languages and used SUMATA theme and materials in social mobilization programs.

There have been numerous requests to for SUMATA materials spreading their usage all over the country by both INGOs and NGOs. In particular, SMN (Safe Motherhood Network) used the SUMATA theme in celebration of Safe Motherhood Day in Nepal and uses print materials to support district level activities, which have been popular in local tea shops and health posts. The Yala Urban Health Project (United Mission to Nepal) is also using the materials in areas of Nepal.

**Resources**

The project was financed by USAID for \$500,000.

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## **Building Technical Capacity of Providers for EmOC Service Delivery in Tajikistan**

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CARE – USA

### **Short description**

CARE's FEMME (Foundations to Enhance Management of Maternal Emergencies) project is part of a global program in several countries, including Tajikistan to improve availability of EmOC services to address high rates of maternal mortality and disability. The goal of the program is to increase utilization of quality EmOC services. A main component of the program is competency-based training to strengthen the technical capacity of local health providers to provide good quality EmOC. In Tajikistan, trained providers displayed and reported increased skills and practices for the delivery and management of obstetric cases. The project was carried out between April 2000 and April 2004.

### **Goals/Objectives**

Some main objectives of the FEMME program are:

1. To increase by three the number of facilities that can provide Basic or Comprehensive EmOC.
2. To increase access to good quality EmOC as indicated by Met Need for EmOC.
3. To increase the percentage of women who deliver with a skilled provider.

### **Background**

Following the break-up of the Soviet Union, Tajikistan's health care system has declined and health indicators have worsened. As utilization of antenatal, intrapartum, and postpartum services declined, maternal mortality has dramatically increased – between 1990 and 1996, the Maternal Mortality Ratio more than doubled from 42 to 88 maternal deaths per 100,000 live births (UNDP-Tajikistan Human Development Report 1998). Many health standards used in pre-service education during the Soviet era are now outdated. Thus, many service providers have limited knowledge and skills to effectively manage obstetric complications. CARE working under its FEMME program supported competency-based training to enhance medical and paramedical staffs' ability to provide quality EmOC services.

### **Design and implementation**

The project was carried out at the health facility level, where activities were designed to improve overall institutional capacity for the delivery of good quality EmOC. The Central District Hospitals (CDH) in Leninski, Bokhtar and Varzob were the focus of project interventions and two main Maternity hospitals in the capital Dushanbe were used as training and clinical preceptor sites. In collaboration with the MOH, a Core Training Team (CTT) was created consisting of 5 OBGYN physicians and 3 midwives from the Tajik Institute of Scientific Research for OBGYN and Pediatrics, and from the main maternity hospitals in Dushanbe. The main purposes of the CTT were to update training materials, train staff from pilot CDHs to improve their skill and knowledge for the management of key emergency obstetric complications. CARE worked closely with the CTT to translate American College Nurse Midwives (ACNM) LSS materials into Russian, which they later adapted to the Tajik cultural context.

CTT members received TOT training from ACNM consultants (adult learning techniques, clinical updates, evidence based practices, coaching skills, etc). The CTT then served as trainers for facility staff within the project sites. Following this, trainers provided Advanced and Basic LSS training for providers in the three hospitals, using a team approach to training. A total of 29 providers from the CDHs received Advanced LSS training. Regular monitoring and supportive supervision was emphasized to assure appropriate performance of new knowledge and skills.

### **Results and evaluation**

An evaluation conducted in September 2003 revealed that: 1) trained staff have increased proficiency in key skills such as AMTSL, digital evacuation of clots and bimanual compression of the uterus for management of PPH, and regular use of the partograph for management of labor; 2) staff at Leninski and Bokhtar now respond better to emergencies and handling complications; 3) midwives at both of those hospitals are now capable of and authorized to manage obstetric emergencies if a physician is not available; 4) midwives report increased confidence in their ability to respond appropriately; and 5) staff who received the Advanced LSS training consistently scored higher in knowledge of EmOC than staff who were not trained.

### **Challenges and lessons learned**

- Establishment of the CTT contributed significantly to the project's success by enhancing credibility, and garnering support and buy in of the process by the MOH, for changes in medical practice.
- The competency based training program was essential in imparting skills and knowledge, but also in building staff capacity and increasing confidence and self-efficacy, which is very important in addressing the emergent situations, that would often result in maternal morbidity/mortality.
- Use of local technical expertise helped strengthen partnerships, and improve acceptability and credibility.
- The team approach to training that included doctors and nurses created a team of change agents within the facilities that worked together to effectively address obstetric emergencies.
- Adaptation of scientific-based evidence from the WHO's publications and manuals helped standardize and legitimize the process.
- Competency based trainings require small numbers that will support skill proficiency. However, with frequent turnovers and rotations, trained providers often left the facility or department, which reduced the availability of a core mass of staff to sustain change, and created an ongoing need for trainings of new staff.
- The MOH required specifically designed training courses for different health cadres (for example, anesthesiology, surgery, laboratory or pharmacy staff), which can increase implementation costs.

### **Sustainability and scaling up**

- The MOH has approved the training materials as standards of EmOC, and modules have been widely distributed to key stakeholders including medical educational facilities, and several international NGO's in the country (Save the Children, Aga Khan Foundation).
- The CTT has expanded its reach and impact for programs outside of CARE, and now serves as a resource for training activities sponsored by the MOH and organizations working in other areas of the country. The CTT recently conducted Basic LSS training for 70 midwives from Karategan Valley under the auspices of MSF.
- The translated LSS Modules were promoted at the Annual UNICEF Forum in Turkmenistan in support of UNICEF's Safe Motherhood Efforts in Central Asia. UNICEF Tajikistan requested a formal presentation of the LSS Modules and IEC Materials.
- The Minister of Health has requested the promotion and utilization of the LSS modules and IEC materials at the national level. The strong collaboration that CARE developed with the OBGYN society and the MOH, in the implementation of this project has contributed to the sustainability of Safe Motherhood efforts in Tajikistan.

### **Resources**

The project was supported by Columbia University's Averting Maternal Death and Disability (AMDD) Program.

### **Contact information**

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## Expanding the Role of Nurses to Increase Access to Good Quality Emergency Obstetric Care, Nepal

### Options Consultancy Services – Nepal Safer Motherhood Project

#### Short description

The Nepal Safer Motherhood Project (NSMP) is a part of His Majesty's Government of Nepal's (HMGN) Safe Motherhood Program and aims to bring about a sustained increase in utilization of and access to good quality emergency obstetric lifesaving care in order to reduce maternal mortality. However, in light of ongoing health system-related weaknesses, NSMP continued to face significant challenges in its effort to improve the quality of midwifery and obstetric care. One of the major challenges was to ensure the availability of 24-hour Basic EmOC services at district hospitals and at primary health centers (PHC). In order to address this problem, NSMP created an innovative approach by expanding the role of nurses to provide Basic EmOC, and post-abortion care (PAC) and safe anesthetic care at Comprehensive EmOC health facilities. Evaluation findings revealed strong evidence that nurses are competent and able to provide a full range of Basic EmOC services, including PAC and anesthetic care.

#### Goals/Objectives

1. To update nurses' competency to the level of Basic EmOC and create an enabling environment.
2. To ensure the availability of 24-hour good quality Basic EmOC services at district hospitals and PHCs.

#### Background

Two main reasons prompted this innovative approach: 1) doctors were generally unavailable in health facilities in remote districts (whether a hospital or PHC), and available nursing staff had inadequate clinical skill to handle obstetric cases; and 2) the high turnover rate of staff.

#### Design and implementation

The NSMP covers 9 districts. Between 2000 and 2003, this innovative approach was implemented in 17 project-supported health facilities, and at least 4 nurses were trained at each site. In light of nurses' expanded role, the first step was to revise their job description to include the full range of Basic EmOC services to the standard of the national level clinical RH protocol. An enabling environment at the health facility was critical to the provision of quality care, including adequate facilities – equipment, regular supplies of drugs and logistics related to Basic EmOC services; peer support; performance appraisal; on-site technical support and feedback; promotion of nurses' expanded role within communities; recognition of her job; and most importantly, support from doctor/s with whom she is working. This formed the framework for the design of this approach. Implementation activities included provision of midwifery refresher courses, PAC training packages, and anesthetic assistant courses; developing capacity of training sites/trainers and implementing training courses; and monitoring change using evidence-based findings as a tool to influence future policy and strategy.

#### Results and evaluation

By 2003, NSMP could demonstrate a full range of nurse-led Basic EmOC services at 17 project-supported health facilities. An evaluation found that all trained nurses managed incomplete abortion complications safely with MVA, while doctors continued use of D & C, even after training. This result was enough to scale up nurses' expanded role at the national level. The findings also caused NSMP to broadcast this evidence-based research not only to policymakers, but also to professional organizations: NMA (Nepal Medical Association), NESOG (Nepal Obstetrics and Gynecology Society), NEPAS (Nepal Pediatric Society), and continue to advocate for nurses' expanded role.

The approach is currently being monitored and evaluated through the regular government monitoring system (the development of which was also supported by NSMP) and through project-based monitoring systems such as PAC reporting forms (focused mainly on availability and quality of PAC services) and EmOC monthly forms which show Basic EmOC services, including PAC. Each facility also monitors its quality of care by introducing criterion-based audit systems. In addition, post-training evaluations and performance evaluations by type of providers are

also in place. Regular monitoring of the findings showed that, by the end of 2003, all project health facilities were providing 24-hour midwifery and obstetric services.

In 2004, four years of data (1999 – 2004) from 3 core Comprehensive EmOC hospitals was analyzed to understand the impact of this intervention. Findings demonstrated that more than 70% of obstetric complications (of the total institutional deliveries – PPH, retained placenta, prolonged labor, and incomplete abortion) were being managed only by nurses – safely, competently, and with confidence. This finding is very close to the vision created by MOH, who themselves advocate for further expansion to Basic EmOC services, which will be able to address 95% of the direct causes of maternal death (except Caesarean section requiring skilled physicians). This finding was shared at the NESOG conference in 2004, providing strong evidence with which to demonstrate the success of this approach.

In addition, a further performance evaluation was conducted by JHPIEGO in 2002 which found that nurses trained in PAC are competent, confident and ensure the availability of quality PAC services. Recommendations were given to integrate PAC into Basic EmOC services in order to ensure its availability 24 hours a day. However, project evaluation findings still show that nurses are not getting enough support from doctors who, for their own reasons, prefer to manage incomplete abortions in the operating theater, using the D & C method.

### **Challenges and lessons learned**

- Not all policymakers supported the project – there was a hidden resistance amongst physicians to empowering nurses, reflected in a lack of respect for this new expanded role.
- Policymakers and other stakeholders are easier to convince with evidence-based practices – this is a strong tool with which to lobby for scaling up inputs. However, physicians took longer to empower their nurses than envisaged, although project staff felt physicians can change their view once they see clear cut benefits for themselves – e.g., with more technical, competent, and confident nurses, physicians started getting less calls at night, and during the day they have time for the provision of higher levels of care and for some rest.
- Similarly, NSMP experienced some reluctance on the part of local level health management committees but they started to change their behavior when they saw that their health facility was functioning 24 hours, collecting more funds from user fees, and the facility gained more respect from the community – this motivated these committees to provide further resources in order to support these promising changes.
- Ongoing advocacy on any new approach is critical to success.
- Some ongoing external support for new initiatives is also vital to ensure real institutionalization, and together with a phased handover to the facility, these are the keys to sustainability.

### **Sustainability and scaling up**

- In order to ensure sustainability, NSMP developed the capacity of local health management teams to create a mechanism for sustaining and scaling up nurses' expanded roles. Government resources for new approaches are almost negligible, but the majority of local health management committees have demonstrated that they can successfully supplement the project's supportive role. However, NSMP is currently undertaking further research to learn more about a sustainable approach in order to feed this into the development of a national level strategy.

### **Resources**

Cost per Basic EmOC unit is Nepali rupees 6.02 million – this covers construction/renovation, equipment/logistics supply, human resource development, monitoring, and implementing a quality of care approach.

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## Mid-level Providers Perform Lifesaving Functions in Nyanza District Hospital, Rwanda

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UNICEF – ESARO

### Short description

Delegation of lifesaving skills from doctors to mid-level providers for obstetric complications is necessary in resource-poor countries. Few countries in Africa legally allow mid-level providers to perform lifesaving functions during obstetric complications, even though the availability of medical doctors is quite limited. Vacuum delivery is the most often missing signal function to be performed at Basic and Comprehensive EmOC facilities in Africa. Nyanza district hospital of Rwanda provides Comprehensive EmOC, where midwives and nurses in the labor ward routinely conduct vacuum assisted vaginal deliveries independently. The Nyanza experience shows that under adequate supervision and with immediate caesarean section back-up, vacuum deliveries conducted by competent mid-level providers are safe. This makes lifesaving services more accessible and affordable for low-income households and for those living in rural areas. Nyanza district hospital can serve as a model for other district hospitals in developing countries with limited human resources, when upgrading the district hospitals and health centers to provide EmOC.

### Goals/Objectives

1. To study the proportion of births by vacuum delivery in Nyanza district hospital between 2000 and 2003.
2. To study the immediate outcome of vacuum delivery for mothers and newborns in Nyanza district hospital.
3. To compare cost and cost-benefit of vacuum deliveries and caesarean sections in Nyanza district hospital.
4. To examine factors necessary for the routine application of vacuum deliveries in the hospital.

### Background

For the period between 1995-2000, the MMR was estimated at 1,071 maternal deaths per 100,000 births, 75% higher than the period from 1985 – 1990, attributable to destruction of health infrastructure post-genocide. This translates to 3,759 maternal deaths/year, and more than 10 maternal deaths/day.

In March 2004, an EmOC baseline assessment carried out in 4 districts (Gakoma, Kabaya, Muhororo and Nyanza) revealed that in Nyanza, coverage of Comprehensive and Basic EmOC was 2.59/500,000 and 0/500,000 population, respectively. In 2003, 11% of the total annual births took place in EmOC facilities, 25% of the total expected direct obstetric complications were treated, and 1.3% of all births were by caesarean sections. Although all 4 district hospitals were qualified as Comprehensive EmOC facilities, only Nyanza district hospital conducted vacuum assisted vaginal deliveries routinely by mid-level providers. According to the Ministry of Health, all the district hospitals were given Ventuse (vacuum delivery set) before the genocide some 10 years ago. However, the majority of the district hospitals had stopped routinely conducting vacuum deliveries.

### Design and implementation

At Nyanza district hospital, delivery registers were reviewed for a four-year period (2000 – 2003). In the delivery register, mode of delivery, outcome of delivery of mothers and babies, and APGAR scores were entered routinely. Data were analyzed in EPIInfo. There are two sets of vacuum extractors: one in the operating theatre and the other in the labor ward. In the labor ward, midwives and nurses conduct almost all deliveries including vacuum deliveries. This study reviews the immediate outcome of vacuum assisted vaginal deliveries conducted in the labor ward.

The labor ward of Nyanza hospital has two delivery beds with partitions in between. The operating theatre is just down the corridor. The nurses and midwives usually have 2-3 years of pre-service training, and are experienced in handling normal and some complicated deliveries. The operating theatre operates 24 hours a day and there is always a doctor on call to assist complicated deliveries. However, cases of failed vacuum delivery were not recorded in the delivery register. According to the midwives and nurses of the labor ward, the failure rate of vacuum is very low. The common indications for using vacuum deliveries in Nyanza district hospital included delayed second stage due to poor maternal effort, soft tissue blockage and fetal distress, with good fetal head decent.

### Results and evaluation

During the four-year period (2000 – 2003), a total of 3,160 deliveries were recorded. Among them, 335 (10.6%) were vacuum deliveries – nurses and midwives working in the labor ward performed almost all vacuum deliveries. The mean and median birth weight was 3,021 grams and 3,000 grams respectively. Among the 208 singleton deliveries with both APGAR scores recorded at one and five minutes, the mean and median APGAR 1' was 6.60 and 7.00 respectively; and the mean and median APGAR 5' was 8.25 and 10.0 respectively. One minute after birth, 29.8% newborns had APGAR scores between 0 and 5. But 5 minutes after births only 15% of newborns had APGAR between 0 and 5. The neonatal resuscitation capacity was quite limited in the labor ward, and therefore, the improvement of APGAR score was achieved naturally without much intervention. It is envisaged that with improved neonatal care, more newborns with low APGAR score could be saved in the future.

Adequate supervision and immediate 24-hour Caesarean section back up are crucial for routine application of the procedure. Without the option of vacuum delivery, the majority of these cases would have to undergo C-section. The cost of vacuum delivery is 3,000 Rwandise Francs (1 USD = 585 R.F.) while a caesarean costs up to 20,000 R.F. including medication and hospitalization. It makes the lifesaving service more affordable to low-income households. The estimated annual number of births is 351,000 in Rwanda. If all the district hospitals were to conduct vacuum deliveries routinely, assuming 10% of annual births could be assisted by vacuum deliveries instead of Caesarean sections, an estimated 600,000,000 Rwandise Francs (1.02 million USD) could be saved per year.

### Challenges and lessons learned

- Routine application of vacuum delivery requires competent providers and adequate supervision.
- A reliable referral mechanism or a 24- hour functioning operation theater has to be in place in case of failure.
- Lack of infection control procedures must be addressed.
- Given the higher risk of mother-to-child-transmission of HIV during instrumental deliveries, it is important to make rapid testing of HIV and anti-retrovirals available in the labor ward.
- Lack of neonatal resuscitation capacity limits effectiveness of gains achieved by successful vacuum deliveries and compromises possibility of neonatal survival.
- Under adequate supervision and immediate caesarean section back-up, vacuum deliveries conducted by competent mid-level providers are safe.
- Provision of vacuum deliveries avoided unnecessary caesarean sections, thereby decreasing excessive obstetric morbidity/mortality associated with surgical procedures, which is cost effective, when applied properly.
- If more lifesaving functions are delegated to competent midlevel providers, it will increase availability of EmOC, especially in rural areas. Governments and medical professional organizations should work to reduce barriers.

### Sustainability and scaling up

- Baseline assessment identified lack of Basic EmOC as a major problem. The MOH in collaboration with UNICEF has undertaken the task of training mid-level providers to provide EmOC services and upgrading health centers. It is hoped in the future more district hospitals will be able to carry out vacuum deliveries on routine basis.
- While scaling up, need to ensure quality by setting up clinical standards, supervision, adequate referral backup.

### Resources

N/A

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## Preventing Postpartum Hemorrhage: Active Management of the Third Stage of Labor Saves Lives in Zambia

### JHPIEGO Maternal and Neonatal Health (MNH) Program

#### Short description

The reduction of postpartum hemorrhage (PPH) depends on skilled providers with appropriate training in childbirth care—including active management of the third stage of labor (AMTSL), a proven, simple measure for reducing PPH. In Zambia, JHPIEGO’s MNH Program worked with the General Nursing Council for several years to help standardize AMTSL into national health protocols and standards of practice in pre-service curricula and in-service training. To implement its PPH initiative activities, the program used team meetings to gain consensus on the clinical protocols and guidelines for program activities. To identify barriers to the practice of AMTSL, the program collected baseline data in four districts regarding current incidence and management of PPH. A costing study showed that AMTSL resulted in cost savings. As a result of the baseline analysis, all four districts now implement action plans that address barriers to practicing AMTSL. AMTSL is now a standardized protocol for every woman giving birth in the country of Zambia.

#### Goals/Objectives

1. To bring about sustainable change by developing a competent cadre with evidence-based skills for AMTSL for the prevention of PPH.
2. To develop evidence-based standards and norms for AMTSL with local service providers, university professors, and policymakers.

#### Background

The maternal mortality rate in Zambia is estimated to be 750/100,000, and the majority of maternal deaths are due to PPH. Two-thirds of the women with PPH have no identifiable risk factors, and 90% of cases of PPH are due to uterine atony, the failure of the uterus to contract.

#### Design and implementation

The MNH Program participated in USAID’s Special Initiative to Reduce PPH. USAID funded the PPH Initiative in four countries, including Zambia. In Zambia, JHPIEGO’s MNH Program worked with the General Nursing Council for several years to help standardize AMTSL into national health protocols and standards of practice in pre-service curricula and in-service training.

In collaboration with the Zambia Central Board of Health, the MNH Program designed a research project to address PPH, coordinating with both providers and policymakers. To implement its PPH initiative activities, the project used team meetings to gain consensus on the clinical protocols and guidelines for program activities. In order to identify barriers to the practice of AMTSL, the program collected baseline regarding current incidence and management of PPH. Three district schools of nursing and midwifery had already received MNH Program training that included AMTSL; one district had not, and served as the control for the study. The baseline assessment analysis found many areas in need of improvement, despite knowledge and skill retention among those providers who had received previous trainings. Most of the needs centered on systems issues that were barriers to practicing AMTSL (e.g., inadequate drug management systems, poor record-keeping, inadequate stocking patterns). As a result of the analysis, actions plans were developed to address barriers to practice, and all four districts now implement action plans that address these barriers. AMTSL is now a standardized protocol for every woman giving birth in the country of Zambia.

**Results and evaluation**

The following monitoring and evaluation indicators were established to assess process and outcomes of the approach: proportion of women who had a vaginal birth and received AMTSL; number of new PPH cases over time; proportion of facilities with formulary that includes national formulary drugs required for standard practice of AMTSL; proportion of facilities with up-to-date provider job aid for AMTSL; proportion of trained skilled attendants performing AMTSL to standard; average proportion of time out-of-stock of a complete set of unexpired drugs (oxytocin) and supplies required for standard practice of AMTSL; proportion of facilities that have sufficient stock on hand of a complete set of unexpired drugs and supplies required for standard practice of AMTSL; proportion of skilled attendants trained in AMTSL; proportion of supervisors trained in supervision of AMTSL performance; and proportion of facilities correctly using all drugs and supplies required for standard practice of AMTSL.

Critical success factors include continuous supplies of essential medications, competency-based staff training, supportive supervision, and systematic record-keeping. A dramatic reduction in PPH in initial districts is catalyzing other districts into adopting this strategy..

**Challenges and lessons learned**

- Typical challenges include high staff turnover rate, thereby requiring frequent trainings, and a continuous supply of essential drugs with maintenance of the cold chain.
- The approach must be consistent with MOH goals and priorities, and with the current infrastructure (e.g., pharmaceutical management).
- In-service training alone, without strengthening support systems will not achieve desired result and missed opportunities for new pre-service training curricula, and faulty national policies.

**Sustainability and scaling up**

- Including AMTSL in pre-service curriculum guarantees sustained training of new skilled providers. The Central Board of Health has made a commitment to expand AMTSL to other districts.

**Resources**

- Funding source includes international donors and USAID, but program is now largely run on Zambian Government funds
- At the clinical practice level (post-training), costs are minimal (cost of 10 units oxytocin for each woman giving birth). Cost savings are achieved by reducing PPH, thereby reducing the costs of blood transfusion, IV and equipment, and hospitalization.
- Training was funded by USAID, and related practice costs (e.g., oxytocin) were supported by facilities through the MOH.

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## Creating an Enabling Environment for EmOC Interventions in order to Achieve the 5<sup>th</sup> Millennium Development Goal in Africa

### Regional Prevention of Maternal Mortality (RPMM) Network

#### Short description

The RPMM Network is a multidisciplinary network of NGOs and country teams currently operating in 20 countries in Sub-Saharan Africa. The Network is totally committed and dedicated to implementing strategies that improve quality of and access to EmOC, in order to achieve the 5<sup>th</sup> MDG to improve maternal health. In Year 2004 essential newborn care was added to it's focus, in order to address the significantly high neonatal mortality, in the region, as obstetric complications that kill women seriously affect neonates. Interventions are based on the 3-delays model and stress the importance of putting functioning health services in place before introducing community interventions. RPMM focuses on improving quality of and access to EmOC, and ENC, in district health systems by building the capacity of District Health Management Teams (DHMTs) and local health staff in the design, implementation and evaluation of interventions using UN process indicators. RPMM emphasizes national ownership and leadership, and local resource mobilization to promote sustainability. Approaches also stress the need to collaborate with central /local government, communities, civil society, and development partners to promote multisectoral inputs to reduce maternal mortality. At country level, the RPMM national team starts in 1 or 2 districts, and interventions are progressively scaled up nationally on a sustainable basis, as local experience is built and as resources permit. The teams, which act as national catalysts, use intervention results to influence governments to focus on allocation of resources and formulation of policies that address the reduction of maternal and neonatal mortality.

#### Goals/Objectives

The overall goal is to make maternal and neonatal mortality in Sub-Saharan Africa an insignificant public health problem. The specific objectives are the following:

1. To build and strengthen capacity of national and district teams to act as catalysts to reduce maternal and neonatal deaths.
2. To expand RPMM approaches and interventions in Sub-Sahara Africa.
3. To provide technical support and consultancy services.
4. To maintain national, regional and international collaboration and partnerships.
5. To disseminate the Network research results.

#### Background

RPMM Network's activities are being implemented in an environment of declining economic growth, inadequate resources, unstable political environment and unacceptable levels of maternal and neonatal mortality (200 – 2000 maternal deaths per 100,000 live births, neonatal deaths as high as 40% of infant mortality) in Sub-Saharan Africa. Reducing maternal and neonatal mortality through creating an enabling environment for emergency obstetric care will improve the health of women and their newborns, and promote socio-economic development.

#### Design and implementation

The design of RPMM's interventions focus on the following: 1) setting up multidisciplinary national teams; 2) training teams in design and evaluation of programs to reduce maternal and neonatal deaths (methodology workshops and study tours); 3) needs assessment; 4) needs assessment dissemination and intervention planning seminars; 5) resource mobilization to promote sustainability; 6) implementation of interventions; and 7) M & E using UN process indicators, including Case Fatality Rates (CFR) and Mean Admission to Treatment Intervals (MATI). The specific essential components required for implementation of RPMM interventions include: improving quality of obstetric and neonatal care; improving access to obstetric care; community mobilization to improve related services (e.g. blood donation, loan schemes, transport etc.); community health education on danger signs in pregnancy and prompt referrals; and institutional arrangements for implementation, which involves working closely with district health systems (government, NGOs, community and private sector), and working positively to influence local policy and practices.

RPMM's strategies operate at a number of different levels. At government or policy level, strategies focus on: advocacy for policy formulation and revision to incorporate emergency obstetric care training in pre-service training and continuing education for doctors, midwives, nurses and other paramedics; advocacy for additional resource allocation for maternal and newborn health; advocacy for reproductive rights of women. At health programs and services level, strategies emphasize: upgrading of facilities; skills training for staff in EmOC and ENC; improve records keeping; monitoring and evaluation (with focus on use of routine data); and improve client-staff interaction. At health financing level, RPMM's focus includes: innovative approaches on community loan schemes; and savings schemes by pregnant women and partners, at facility level, for emergencies. At community, household, or individual levels, RPMM emphasizes: community education on supervised delivery; community education on danger signs in pregnancy and need for prompt referral; first aid care to sustain life at the community level; mobilization of transport for referrals; and male involvement in health care of pregnant women. Finally, with the media, RPMM advocates on maternal and newborn health issues, and on reproductive rights of women.

### **Results and evaluation**

Monitoring and evaluation is based on the UN process indicators and reports from country teams every 6 months. Other areas of focus are on case fatality rates (global and by case type) and the mean admission to treatment interval. A number of RPMM's successes were shared at a 2<sup>nd</sup> generation results conference organized in Accra, Ghana in September 2003.<sup>5</sup>

### **Challenges and lessons learned**

- Challenges include accelerating scale up of positive experiences and good practices, especially making health facilities functional to provide EmOC services, skills training and creating an enabling environment for EmOC. Other challenges include prevention of neonatal mortality through integrating ENC into EMOC, and addressing safe abortion care.
- Core of committed and dedicated individuals and experts needed.
- Promoting sustainability is essential to obtaining long-term results.
- Continuous monitoring required to sustain interventions.
- Maintain focus – concentrate on provision of prompt quality care/treatment of complications (e.g. emergency obstetric care, essential newborn care)!
- National ownership essential for success.
- Start Small, and grow is a Sensible First Step! Policymakers in countries often want to see if proposed strategies/interventions will succeed in their own environment, before scaling up.

### **Sustainability and scaling up**

- Country teams mobilize and utilize 75% of local resources, which promotes sustainability.
- Scaling up has been slow but is building up.

### **Resources**

Country teams mobilize 75% of their resources locally for interventions; rest comes from external funding sources.

### **Contact information**

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<sup>5</sup> See the RPMM 2<sup>nd</sup> Generation Results Conference Abstracts (September 2003) for more details on the results of individual RPMM projects.

## **Integrated Training to Improve the Quality of Maternal Care Services including Post-abortion Care: Lessons from Kenya**

### **EngenderHealth (with Ipas and the Kenyan MOH)**

#### **Short description**

EngenderHealth, in collaboration with the Kenyan MOH and Ipas, implemented a 6-month project to improve the quality of essential obstetric care (EsOC) including post-abortion care (PAC) services in 4 district hospitals and 1 health center in Kenya. EsOC services were either previously not offered in these districts or were of poor quality. The SIDA-funded EsOC/PAC intervention was conducted from June – October 2001.

#### **Goals/Objectives**

1. To support the Kenyan MOH in improving quality of pregnancy monitoring, delivery, PAC, FP counseling, and other selected RH services.
2. To strengthen safe management of pregnancy, active management of labor and incomplete abortion in each health facility by supporting training.
3. To provide hospitals with essential start-up EsOC and PAC equipment and supplies for providing these services.
4. To establish RH, post-delivery and post-abortion FP services, including emergency contraception (EC) counseling and service provision at all project sites, and to link incomplete abortion clients to this service.
5. To improve quality of services offered at selected facilities.
6. To increase ownership and sustainability of services offered.

#### **Background**

There has been little improvement in Kenya's maternal mortality figures, even 15 years after the launch of the international Safe Motherhood Initiative. Current maternal mortality figures are about 1,000 deaths per 100,000 live births, and lifetime risk of maternal death is 1 in 20. Unsafe abortion accounts for between 13-52% of gynecological admissions in rural hospitals in Kenya, and for 60% at the Kenyatta National Hospital (Kenya's national referral hospital). Kenya's doctor/population ratio is 1:10,000, while the nurse/population ratio is 1:993. Nurses cover facilities where traditionally there are no doctors and extend down to primary health facilities at the community level.

#### **Design and implementation**

The intervention was conducted at 4 district hospitals and 1 health center in two provinces in Kenya. In the intervention districts, quality EsOC and PAC services were not being offered. Two Provincial Health Management Teams (PHMTs) were oriented on the rationale and benefits of integrated quality EsOC and PAC, to gain their commitment and buy-in and to garner support from interested district hospitals in their provinces. District Health Management Teams (DHMTs) were oriented on the concept of integrated quality EsOC and PAC to get their buy-in and commitment for implementation in the district hospital as a referral center, and to solicit funds for extending the same services to secondary (health centers) and primary (dispensary) health facilities. The DHMTs identified their EsOC/PAC needs and developed action plans. Project implementers used the action plans to determine assistance needed in implementing interventions.

OBGYNs and nurse officer teams were trained as trainers in EsOC/PAC and quality improvement (QI). The regional trainers trained additional service providers. Training activities included: orientation of PHMTs, DHMTs, and hospital management teams; training of regional RH coordinators as PAC trainers; training of district hospital service providers in PAC; training of district hospital health service providers in EsOC, Maternity COPE, Child COPE, general COPE, Infection Prevention and Cost Analysis Tool (CAT); and training of district health service providers in RH, FP (including EC) and PAC counseling. The training was strengthened by Whole Site Training, during which an external trainer in EsOC and QI tools worked with each hospital for 5 days. Facilitative supervision and proficiency certification of service providers was carried out at the regional level and national level. The project assisted each site in making minor renovations to create PAC rooms, and each site was provided with start-up EsOC (including PAC) equipment and expendable supplies.

### Results and evaluation

All DHMT members reported the EsOC/PAC intervention helping their facilities, with the most frequent benefit being a reduction in waiting time for clients. All 5 intervention sites found that post-intervention: 1) referrals of maternity and post-abortion clients were handled without delays; 2) labor complications were detected early and acted upon; 3) service providers used the skills they learned to provide quality care; 4) there was proper/effective use of the health facility, available human resources and reduced client costs; 5) infection prevention measures and maternity management improved and prompt provision of services to PAC clients were in place; 6) reduced time-span for handling of obstetric and post-abortion emergencies; 7) reduced maternal mortality; 8) on-the-job training was occurring in all facilities; 9) most health workers in the facilities knew what comprehensive PAC was and who to call in an emergency; 10) all the facilities use CAT to determine the cost of services; 11) 75% of the funds collected go back to the unit to determine how it should be used; 12) emergency supplies were readily available; 13) the facilities had a strategy in place for sustaining these services and staff want to take PAC to scale by training health center staff using additional funds; 14) all the facilities now have maintenance units where the EsOC/PAC equipment can be repaired; 15) system of timely replenishing of supplies was instituted; and 16) the facilities make arrangement for staff to work on call to ensure 24-hour services, making sure equipment is ready.

### Challenges and lessons learned

- Poor trainee selection offered challenges in ensuring the use of proper skills.
- Irregular availability of expendable supplies, lack of adequate equipment and space, lack of information about PAC among the community members and lack of support from supervisors and staff, including negative attitude of other service providers to PAC clients all proved challenging during the implementation.
- Mid-level providers can safely and effectively offer quality EsOC and comprehensive PAC services.
- Empowering mid-level providers to offer integrated EsOC and PAC services increases access to these services.
- Participation, buy-in, commitment of HFMT/HMT is essential for success of sustainable quality assurance.
- Commitment by the HFMT/HMT to plough back part of the Facility Improvement Fund (Cost Sharing Fund) to the QA, EsOC and PAC services helped sustain service provider skills, motivation and services.
- On-the-job training with an accreditation system can ensure sustainability of manpower, availability of services at health facility level, and expansion of services to lower levels.
- Whole Site Training and providing facilities with the means to implement the staff's newly acquired skills is a powerful personnel motivator and increases participation and ownership of EsOC/PAC services.
- Ownership by health facility management ensures sustainability and integration of new technologies.
- Incorporation of QI into EsOC and PAC is readily accepted.
- Integration of EsOC/PAC and family planning is viewed as practical and receives more support.
- Proper trainee selection influences the motivation and use by service providers of the acquired EsOC/PAC skills.
- Regular and frequent structured facilitative/supportive supervision maintains motivation and quality.
- Regular case audit and quality assurance meetings help sustain quality EsOC/PAC services.

### Sustainability and scaling up

- Transfer of clinical and counseling skills acquired during the initial intervention enables the sustainability of the skills and services. Some staff plan to take PAC to scale by training additional health center staff.
- The QI approaches used help staff identify opportunities for action and are responsive to local needs, thus building commitment to the ongoing process of improving the quality of services offered at the facility.

### Resources

This intervention was supported with funding from a SIDA grant.

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## Quality Improvement for Emergency Obstetric Care Processes and Tools

EngenderHealth, AMDD

### Short description

EngenderHealth and AMDD jointly developed quality improvement (QI) tools for Emergency Obstetric Care (EmOC), which outline a QI process for providers to follow and offer a set of tools for gathering and analyzing information about the quality of EmOC. The primary focus of this QI process is on tackling problems that were solvable. The materials were field tested in India and Ghana over a 9-month period, and subsequently revised based on feedback from these field tests.

### Goals/Objectives

Goals:

1. For staff to move from actual or existing practices to best (or desired) practice.
2. For the facilitating role to change from being the responsibility of a supervisor, “team leader,” or external facilitator to one that is shared among colleagues with support from the team leader.

Objective:

1. To improve the quality of EmOC services provided at the facility by helping staff achieve a state of readiness that will enable them to respond appropriately to obstetric emergencies in a way that fulfills the rights of clients.

### Background

Studies show that most women who develop complications do not have known risk factors; even when a woman is in good health and receives antenatal care, there is no way to know whether she will develop a complication and require emergency services. Therefore, high quality EmOC services need to be available to every pregnant woman to avert death and disability related to childbearing. EngenderHealth and AMDD developed these QI for EmOC tools to provide teams and supervisors with approaches to improve the quality of supervision, clinical quality assurance, and training systems of EmOC services. They were piloted in districts in India and Ghana.

### Design and implementation

In both countries, each intervention began with a medical monitoring visit to observe the facility resources and assess current clinical practices. The entire EmOC staff at each site engaged in a series of self-assessment exercises to improve the quality of services. During the pilot interventions in India and Ghana, EngenderHealth program staff facilitated the QI processes at each site, pairing with internal site staff to mentor them in facilitation skills and in QI problem-solving processes. The team leader implemented the EmOC Assessment and other QI for EmOC tools, preparing staff in advance and keeping facility management well informed of the process. Supervisors and representatives of all cadres of staff met periodically to assess and analyze services provided, identify gaps and problems and develop an action plan to address those gaps.

The QI for EmOC Leadership Manual and Toolbook are meant to assist the team leader to:

- Introduce, demonstrate and maintain a QI process with the team of staff that provides EmOC services;
- Use facilitative leadership and communication skills to structure the work environment to encourage teamwork;
- Problem-solve with the EmOC team;
- Encourage individual excellence of EmOC staff at all levels through mentoring, coaching and other capacity-building skills; and
- Coordinate input from external supervisors and technical specialists.

### Results and evaluation

The project found that in both countries, about 75% of identified problems were solved by facility staff themselves (the remaining 25% were issues requiring outside resources to resolve). Providers spoke of improved attitudes toward their colleagues, better communication among different hierarchy levels, and a new sense of “permission” to take initiative, whereas, pre-intervention, there may have been interest in making improvements but staff lacked the

empowerment to do so. Positive changes to service provision as a result of this intervention include: improved record keeping; improved infection prevention practices; development of protocols and guidelines; greater degree of privacy in the labor room; improved cleanliness of hospital premises; and improved emergency preparedness and response in some areas.

### **Challenges and lessons learned**

- While the focus was on tackling ‘solvable’ problems, staff frequently begin with those “big picture” issues which are not in their control at the site level—and which are not directly solvable through this process—such as lack of funding, staff shortages and general issues of poverty among their clients, which frustrated the staff.
- Client Flow Analysis proved difficult to implement in emergency settings. Though still included in the QI for EmOC Toolbook, instructions have been simplified with an emphasis on doing a less complex flow analysis.
- Realistic action planning involves the accumulation of problem-solving skills and is an intrinsic part of the learning process.
- In both India and Ghana, the QI process increased the provider’s sense of individual responsibility and ownership over the quality of their work, which increased motivation and teamwork.
- Providers do not have difficulty empathizing with clients if they are given the opportunity. Thinking about service delivery through a client lens has real consequences for more humane service delivery.
- Facilitation skills transfer and ongoing facilitation support are key to the success of this intervention. While the EmOC manual was written with the intention of being introduced either by an external facilitator or a facility-based supervisor, the feedback received through the field-testing indicates that, where possible, an experienced facilitator be used. If the facilitator is external, the goal is for the facilitator to model supportive facilitation and to transfer those skills gradually, depending upon the needs and skills of the facility providers.
- Some problems are not directly solvable through this process. However, the intervention is useful if staff try to improve in areas where they can make an impact.
- Given the insurmountable difficulties in providing EmOC in low-resource settings, the context in which those services are provided must be taken into account when seeking both to improve care and to measure those improvements. If the yardstick is international standards unmediated by the local context, the goals will not always be possible to achieve and staff morale may suffer. Ideally, a balance should be struck between what is realistic in the present and what a facility should strive for in the future.

### **Sustainability and scaling up**

This initiative can be replicated with little funding. The tools are designed and intended to be modified and adapted as needed by any type of health facility. Particularly for those facilities and/or individuals new to the QI process, the facility may require initial technical assistance from an external facilitator with QI and facilitation skills. In the India pilot sites, an explicit request was made for ongoing facilitation to be included in the resources provided. However, the facilitation skills that the process describes are intended to be passed on to the local “team leaders,” who then lead and supervise the ongoing QI process within the facility. The QI process outlined in the Leadership Manual and Toolbook is designed for an EmOC team to use on a regular basis so they can assess and adjust systems and practices in a constructive way.

### **Resources**

The development of the QI for EmOC Leadership Manual and Toolbook, as well as the field-testing of the tools in Ghana and India, was funded by AMDD, through a grant from the Bill and Melinda Gates Foundation.

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## Performance and Quality Improvement: Facility and Performer Accreditation in Guatemala

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### JHPIEGO Maternal and Neonatal Health (MNH) Program

#### Short description

Through implementation of the performance and quality improvement (PQI) process in Guatemala, the MNH Program helped the MOH, providers, and community members to work together to improve performance and the quality of maternal and newborn services. Moving beyond a focus on only clinical quality, the MNH Program systematically applied the PQI process to all services that are part of essential maternal and newborn care—including support functions, infection prevention practices, and client preferences. One of the key elements of the MNH Program in Guatemala is an accreditation program for maternal and neonatal health services networks. If the facility achieves a satisfactory percentage of the criteria for quality, it receives official MOH accreditation as a quality site for essential maternal and neonatal care, and recognition through a community event or ceremony.

#### Goals/Objectives

1. To bring about sustainable change by instituting a process defined by the providers, policy makers, and community members to improve the quality of maternal and newborn essential care services.
2. To measure and evaluate changes in the performance of providers and support services, and determine whether interventions are closing the performance gap.
3. Use information in the PQI tool to guide further analysis of gaps and causes for those gaps to track progress on achieving desired quality standards.
4. To implement, measure, and evaluate improvement at health care facilities that deliver quality essential maternal and newborn health services.

#### Background

The majority of maternal and newborn deaths are in areas with poor quality of service, where consumers do not have access to life-saving interventions because of poor quality of care. Skilled providers sometimes cannot provide necessary care if the facility and support services are poor or faulty. Providers, policymakers, and community members want to work together to analyze the causes for performance gaps and have ownership of their services and quality of care. Once the gaps are identified, the cause analysis motivates people to identify weaknesses and find solutions to improve quality. Quality is determined not only by technical capacity, but also by cultural appropriateness and the dynamic interaction between clients and providers. The PQI process considers the sociocultural context and actively involves clients and providers in identifying problems *and* solutions for delivering quality health services.

#### Design and implementation

The MNH Program began talks with policymakers in the Guatemala MOH, and had technical update courses for providers and policymakers. The Program built consensus with key stakeholders from the MOH, health care facilities, and other agencies to oversee the PQI process, and developed a baseline for standard quality with providers at the facility. These teams defined clear standards, used tools to identify gaps in quality, analyzed the causes for each gap in performance, determined specific interventions or inputs to address these gaps, and measured subsequent changes in performance. The PQI process is a living tool, and can be replicated and updated.

The entire training, technical update, and collaboration with officials took about one year. Baseline measurements were done once PQI tools were finalized, and as soon as these measurements were complete, interventions plans were put into motion. Follow-up supervision ensued, and replication of the external quality assessment was done one year after baseline at each facility. In the interim, self-assessments were performed within facilities on a quarterly basis to assure advances were being made toward meeting quality standards.

### Results and evaluation

Monitoring and evaluation indicators used to measure the process of PQI include: 1) percentage of health facilities in target geographic regions that have started the PQI process, by facility type (hospital, health center, community maternity, health post), and 2) percentage of health facilities that have been accredited. Specific detailed indicators that were tracked for health facilities include: 1) percentage of all facilities with essential maternal and newborn care norms and protocols available onsite; 2) percentage of hospitals that perform adequate decontamination of instruments; 3) percentage of hospitals that have had an increase in infection prevention scores; 4) percentage of hospitals with a functioning blood bank 24 hours a day; 5) percentage of hospitals that have adequate supplies and equipment for essential maternal and newborn care in labor and delivery rooms; and 6) percentage of hospitals with a linkage to a community health committee.

Critical success factors for the approach include commitment at several levels: community involvement in the process from identification of quality standards to the accreditation of quality facilities; political level champions of the process to assure it is funded and initiated in a large number of facilities; and local champions that carry out the measurements, identify quality gaps, and design and mobilize resources to carry out intervention plans.

### Challenges and lessons learned

- Mobilization of resources for intervention plans has been a challenge in some regions and a success in others.
- Facilities being assessed were at times focused on the accreditation and wanted to receive “credit” for making improvements or be accredited even if they did not achieve all standards of quality.
- Health Areas did accredit three facilities that had not achieved all of the stipulated criteria (100% of clinical criteria and 85% of overall criteria); two of these were in Sololá and one in Retalhueu.
- Another challenge was the change in data collection instruments, and the focus on quantitative score improvements for tracking progress over time. Because the instruments were modified after the baseline measurement, the scores overall were not comparable between measurements. Over time, if the instruments continue to evolve, the scores should be used less and less as indicators for tracking trends, and the focus should be on key substantive indicators based on the quality criteria themselves.
- Political involvement with collaboration among key stakeholders as well as providers is crucial for implementation.
- With the change in government and change in MOH leadership, detailed reporting and meetings should be carried out to assure continuity.

### Sustainability and scaling up

In Guatemala, the MNH Program initiated the PQI process in 153 of the 428 health facilities in the target health areas. By 2004, the MOH and other donors and cooperating agencies scaled up the PQI process to an additional 222 facilities, covering nearly one-third of all public sector healthcare facilities in the country. This is only the beginning, as the majority of these facilities has had a baseline measurement and should be in the process of carrying out intervention plans for improvement. However, there is not a tracking progress institutionalized yet at the MOH to ensure that this is occurring at all intervention facilities.

### Resources

This was a USAID-funded program. The financial costs for implementing the PQI process were shared with international and local NGOs and municipal governments. Most of the resources were provided by the MOH from their regular budgets, and the interventions were implemented through the existing health care system network of district level health centers, posts, community maternities, and trained community volunteers.

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## Making Pregnancy and Delivery a Better Experience in Zhezkazgan, Kazakhstan

Abt Associates Inc./John Snow Inc.

### Short description

Zhezkazgan, a city of 103,000 in the middle of the Kazakh steppe, is a typical mining town. For a number of years, prenatal care was provided by just two overworked obstetrician-gynecologists (ob-gyns) in the outpatient department of the maternity hospital. With the help of the USAID-funded ZdravPlus project<sup>6</sup>, which provides technical assistance and training to improve health services provided to Central Asian populations, and the WHO, an innovative Safe Motherhood pilot project paved the way to improved prenatal care and delivery services – and has since been adopted by the Government of Kazakhstan for national implementation.

### Goals/Objectives

1. To modernize and improve the quality of pre- and postnatal care for women, newborns, and their families.
2. Expand care provided in Family Group Practices (FGPs) (primary health care clinics) to include prenatal care.

### Background

Results from formative research done prior to the Safe Motherhood project in Zhezkazgan showed that, consistent with the policies inherited from the former Soviet Union, prenatal and delivery services were over-medicalized and following out-of-date protocols. The results of such a system were too many prenatal visits; many referrals to specialists; unnecessary laboratory tests, ultrasounds, and medications; unwarranted prenatal hospitalizations; and many unnecessary, invasive procedures during labor and delivery. The majority of pregnant women expressed fear about labor and delivery – fear for their own health, of complications, and for the baby. Both men and women indicated that to overcome such fear, they would like more information about pregnancy, birth, and breastfeeding; a kind and warm attitude from midwives; and the presence of partners during labor. The Safe Motherhood project was implemented to address these concerns.

### Design and implementation

The Safe Motherhood project approached maternity services from a systems perspective. It worked both in FGPs and hospitals to create improved care and continuity of care across levels of the health system; reached out to women and their partners with information about the new services; and it sought to document the impact of the new approaches on utilization of hospital services, anticipating that full implementation of the new, less medicalized approaches would require reform of hospital payment systems. Key activities included: 1) a needs assessment conducted by a WHO consultant; 2) qualitative and quantitative baseline research on the knowledge and attitudes of pregnant women, new mothers and family members toward current and proposed new approaches to services, as well as utilization of services; 3) policy dialogue to allow introduction of the new approaches without punishment of front-line service providers; 4) training courses in modern, evidence-based approaches to prenatal care, delivery, and newborn care for obstetricians, neonatologists, nurses, and midwives working in hospitals; 5) training courses in modern approaches to prenatal care for doctors and midwives working in FGPs; 6) the provision of small items of essential life-saving equipment to the hospitals; 7) the production of educational materials for the public about the new approaches; and 8) endline population survey and analysis of patterns of hospital utilization.

### Results and evaluation

The major sources of data on the impact of the pilot project are from hospital discharge data and client surveys. Data were compared for the year prior to implementation of the pilot project and the first year of implementation. Key findings from the hospital data were:

- Prenatal hospitalizations for 11 monitored conditions, for which hospitalization is not normally required, declined by 19% and the average length of hospital stay for these conditions fell from 8 days to less than 7;

<sup>6</sup> The ZdravPlus Project is implemented by Abt Associates Inc. as the prime contractor. John Snow Inc. (JSI) is the lead subcontractor for activities to improve the quality of clinical care, including reproductive health services.

- The average length of stay for deliveries declined from 4.1 to 3.7 days;
- The number of caesarian deliveries fell by 12%;
- While there are still some issues in the transition from the old to new state procurement system, pre- and post analysis showed that hospitalization and average length of stay for the monitored conditions decreased while the overall budget and hospital based rate increased. In effect, this means the hospital has the opportunity to reinvest the cost savings realized from the SM program. The opportunity of sustained cost savings should encourage the sustainability and further refinement of the SM intervention.
- Number of deliveries remained relatively stable between the two time periods, increasing by just 1%.

Highlights from client surveys findings were:

- While previously all women delivered on their backs, 98% of new mothers said that they themselves chose their delivery position.
- The level of satisfaction concerning the care new mothers received increased. In 2002, 40% of women across both sites said they were “completely satisfied” with their care and 40% were “satisfied.” In 2003, this rose to 98% “completely satisfied,” with another 2% “satisfied.”

By the end of the pilot project, all FGPs in Zhezkazgan had integrated prenatal care into their services, making care accessible to women close to where they live and work. They were only referring women to the hospital outpatient department when they were considered to be high risk. Within a year of starting the Safe Motherhood pilot project, the Government of Kazakhstan adopted a perinatal care program based on the approaches piloted in Zhezkazgan.

### **Challenges and lessons learned**

- The major challenge was to convince opinion leaders that the majority of pregnant women are healthy and do not need extensive medical care, when they considered 80-90% of pregnant women to be sick and in need of treatment. An additional challenge was to persuade the Sanitary and Epidemiological Services to waive their stringent infection control requirements which barred family members from the hospital, punished providers who failed to ensure that women only gave birth in a sterile delivery room, called for all clothing and bedding to be sterilized, and many other antiquated provisions.
- The main lesson learned is that once opinion leaders allow the new approaches to be introduced, providers will make changes. However, Quality Improvement techniques will be needed for the new approaches to truly permeate the system.

### **Sustainability and scaling up**

The new model has already been expanded from Zhezkazgan to the capital city of the Oblast, Karaganda, with ZdravPlus support. In addition, with the adoption of the new approaches as national policy, the Government is beginning to support expansion to other sites, starting with the country’s two premier hospitals for delivery in the commercial capital of Almaty.

### **Resources**

Funding for the pilot project was provided largely by USAID, through the ZdravPlus project, with additional support from WHO. The costs involved in the pilot project included two training courses for hospital staff conducted by international consultants; two courses for FGP staff, also conducted by international consultants; about \$3,000 per hospital for essential equipment; development and production of educational materials for the public; and the costs of a pre-project assessment by an international consultant, focus group research prior to implementation, and client surveys before and after implementation of the pilot project.

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## Promoting Birth Preparedness to Improve Maternal Health in Bangladesh

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CARE – USA

### Short description

Promoting birth preparedness was a component of CARE's Dinajpur Safe Motherhood Initiative (DSI) program in Bangladesh. Birth planning is a process where women and their family members were targeted with key information and the following key messages about pregnancy and childbirth to ensure a healthy outcome for both mother and baby: a) know what to expect; b) know danger signs; c) identify trained birth attendant; d) prepare for clean delivery; e) know which facility provides EmOC services; and f) plan for complications. The results of the project were the following: an increase in knowledge of pregnancy danger signs among women in the project area; and a dramatic increase in the utilization of EmOC services from 16% to 40%. Use of a national birth-planning card has been adopted by the Government's Ministry of Health and is being distributed throughout the MOH program.

### Goals/Objectives

1. To improve use of birth planning as a strategy to address delays that women experience in seeking care.
2. To increase utilization of EmOC services in the Upazilla Health Complex (UHC) (sub-district hospital).

### Background

CARE conducted a situational analysis to understand the knowledge, attitudes and practices related to maternal health. This information guided the identification of appropriate messages and strategies to reach the pregnant women and their family members. Key findings were: most births and maternal deaths occurred at home with untrained birth attendants; families lacked access to transportation and to "ready cash" to pay for services; most women needed approval from their husband or other family members to seek and/or use health services; many men had limited access to accurate information about danger signs and where to obtain services to make these decisions; and many women/families preferred to go to a traditional healer or village doctor first if a complication should arise.

### Design and implementation

Based on the situational analysis, CARE, UNICEF and the Government of Bangladesh (GoB) launched a joint effort known as the Dinajpur Safe Mother Initiative. DSI aimed to address maternal mortality/morbidity by identifying and removing barriers that inhibit women from accessing and using quality EmOC services. In the Control area (Debiganj in Panchagar district), EmOC services had not been upgraded and there were no CARE activities. In the Comparison area (Bochaganj), UNICEF and the GoB had upgraded the Basic EmOC services at the UHC, but there were no CARE interventions. The Intervention area (Birampur) UNICEF and the GoB had upgraded Basic EmOC services in the Birampur UHC (e.g., trained staff, equipment, drugs). The DSI interventions included: promoting birth planning (BP); creating community support systems (CmSS); addressing violence against women (VAW); and improving the "social aspect" of QoC in Birampur UHC.

The strategy of birth planning approach was to provide women and their family members key messages about pregnancy and childbirth to ensure a healthy outcome for both the mother and the baby. Key birth planning (BP) messages were: know what to expect; know danger signs; identify a trained birth attendant; prepare for clean delivery; know which facility provide EmOC services; and plan for complications. Seven key principles were used to effectively facilitate the BP process, including: 1) conducting an assessment of attitudes and practices (qualitative survey); 2) assessing where people currently go for services and the status of those services; 3) seriously considering the value/role of community mobilization efforts if quality services are not available in the area; 4) undertaking an analysis of the existing community change agents and how they can be involved in promoting birth planning; 5) involving key decision-makers throughout the process; 6) developing culturally sensitive messages that build on cultural beliefs/practices; and 7) involving family members as well as the pregnant women.

Steps to implementation of the birth planning intervention: 1) conducted a situational analysis; 2) shared findings with counterparts (advocacy); 3) explained the importance of birth planning (orientation); 4) facilitated the process of developing birth planning; 5) advocated the use of BP with the Ministry of Health and Family Welfare (MOHFW)/NGO managers; 6) organized training for the MOHFW and NGO field staff; 7) supported

MOHFW/NGO field workers with on-the-job training; 8) followed-up on birth planning activities; 9) evaluated progress; and 10) disseminated findings.

### **Results and evaluation**

Results from the program were: 44% of women in the intervention area knew 3 or more of the 5 pregnancy danger signs; a national birth-planning card was adopted by the GoB Ministry of Health and is being distributed throughout the MOH program; and utilization rate of EmOC services in the intervention area significantly increased from 16% to 39.8% in the intervention area, compared to an increase of 11.1% to 12.1% in the control area. The key DSI interventions acted synergistically to promote a significant increase in use of EmOC services. Comparison of EmOC rates in the study areas suggests that a combination of efforts directed at upgrading the facilities, improving the quality of services and targeted community mobilization, produce better results in increasing use of EmOC services.

### **Challenges and lessons learned**

- Key challenges in promoting birth planning were: developing strategies to truly involve men; reaching all pregnant women/their families when many do not access services; and motivating government staff and TBAs.
- While families initially thought that maternal deaths were "normal" providing them with information and concrete actions (i.e., savings, identify transport) that they could undertake helped to change their attitudes and practices.
- The greater involvement of husbands and other male decision-makers, the better the results.
- Younger generation was more interested in learning new ideas, while older generation was harder to convince.
- Birth planning is most effective when it is promoted through a variety of communication channels (e.g., health facilities, flashcards, men, community support systems).

### **Sustainability and scaling up**

- BP card focused on danger signs and preparedness, which had been missing in many of the ANC messages. This process has provided a means for the women and others to bargain/convince other decision-makers about the importance of recognizing danger signs, and referring the women in a timely manner and it has heightened people's awareness that pregnancy can be a potential risk.
- CARE's intervention in this area has influenced national policy on maternal health. CARE shared its birth planning experience during the National Behavior Change Communication Strategy meeting in 1999. As a result, many components of the CARE Birth Planning card have been incorporated into the Government of Bangladesh national Birth Planning card, which is now used throughout the country.

### **Resources**

Personnel – this project worked with community health workers and facility health workers; Supplies – birth planning cards, brochures, posters, and other stationery; Short-term training – initial and refresher trainings, meetings; Transport – fuel, maintenance, vehicles; Equipment – office furniture. Besides the personnel, all the other costs were covered by CARE, as project costs.

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## Community Support Systems Contribution to Use of EmOC Services in Bangladesh

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**CARE – USA**

### Short description

In Bangladesh, CARE partnered with the Government of Bangladesh (GoB) and UNICEF, to implement the Dinajpur Safe motherhood Initiative, which focused on promoting birth planning, community mobilization, and enhancing social aspects of the quality of EmOC. As part of this initiative, CARE worked with communities to develop community support systems (CmSS), which served as a mechanism to mobilize collective community action to provide support for pregnant women in accessing EmOC services during an obstetric emergency. Following project implementation, findings revealed a direct relationship between CmSS participation, and knowledge of danger signs and preparation for clean births. There was also a positive association between number of CmSSs and an increase in use of EmOC.

### Goals/Objectives

1. To improve the use of EmOC services through increased community participation and involvement.

### Background

CARE conducted a situational analysis to help identify appropriate strategies to address community issues, particularly in terms of accessing Basic EmOC. Key findings: rickshaw pullers refused to take laboring women to health facilities or asked exorbitant prices; average distance to a Basic EmOC facility was between 5.5 and 10.4 km, requiring about 25 mins travel time; only about a third of husbands reported some savings for possible problems but most were not in cash; low knowledge of danger signs among community leaders and men; high transport costs if a woman had to be referred to a Comprehensive EmOC site; and additional costs (e.g., burial, etc.) if the woman died.

### Design and implementation

Based on the situational analysis, CARE, UNICEF and the GoB launched the Dinajpur Safe Mother Initiative (DSI), a joint effort to identify and remove barriers that inhibit women from using good quality EmOC. A key intervention was formation of the CmSS, to foster timely referral of women with obstetric complications to appropriate EmOC facilities; promote an enabling community environment for improved maternal health; and create community awareness about danger signs and services available at different facilities. CARE employed the following principles to establishing a CmSS: 1) the CmSS had to be initiated by the community; 2) the CmSS had to be led by the community (community makes the decisions); 3) village meetings had to be facilitated by a community member; and 4) the CmSS was implemented and monitored by the community. The community decided which support services were most important for them, for example – developing a community fund, ensuring available and affordable transportation, and/or ensuring that someone is identified to accompany the women to the facility. The project undertook the following steps to establish the CmSS: selected villages; conducted community diagnosis; shared findings with community; discussed potential solutions with key stakeholders; identified community facilitators; prepared facilitators; held a village meeting led by community facilitators; held discussions about forming a CmSS; implemented CmSS; disseminated information about CmSS; follow-up/monitored/evaluated and developed a plan to sustain the CmSS. In addition, each month, at least 5 case reviews of women who experienced obstetric complications, regardless if they died or survived, were conducted at both the community and facility levels. At the community level, the case studies were used to encourage community members to act together to reduce barriers EmOC services. The project implementation period was from 1998 to 2000.

### Results and evaluation

- Out of 189 villages, 133 villages formed a CmSS by the project's end. All groups had established executive committees, which ranged in size from 3 to 21 people; most of who were men (64%). All villages adopted a system to accompany women to the Basic EmOC facility and funds to pay for transportation and/or services. On average, 39% of households participated in the CmSS. However, this varied greatly by union and village.
- Although somewhat subjective, CARE field staff used the following criteria to evaluate performance quality of the CmSS: regular savings; good leadership (understand the problem, respected and trusted by community, presentation of skills, regular follow up); operational guideline written by executive committee; broad scope of

work/innovative initiative; and less follow up from CARE (quarterly instead of monthly). Out of 133 CmSS, ratings were: 22% as very good (the first three criteria were present); 22% as good (first two criteria); 31% as moderate (first two criteria); 30% as weak; 17% as failed/non-functional. (Note: The difference between good and moderate ratings was the quality of leadership in the executive committee.)

- There appeared to be a direct relationship between participation in the CmSS, knowledge of danger signs and preparation for clean births. The two unions with lowest participation rates had lowest knowledge rates. Conversely, unions with the highest participation rates also had the highest levels of knowledge.
- The average amount of CmSS savings was Tk.475 (US \$11). Fifteen of the groups had purchased a rickshaw-van to provide transportation during an emergency and 13 had opened a bank account to maintain their funds. 41% (62/150) of women who had complications used a CmSS. Out of these 62 women: 52 used money from the emergency fund; 23 women were accompanied to the health facility; and 23 women used transportation system.
- Data was not sufficient to demonstrate that the CmSS directly resulted in greater use of EmOC services. However, there was a positive correlation between development of the CmSS and greater use of EmOC.
- As the number of CmSS's grew, there was also a rise in use of EmOC. Moreover, the utilization rate of EmOC significantly increased from 16% to 40% in the intervention area, from 13% to 26% in the comparison area, and from 11% to 12% in the control area.

### Challenges and lessons learned

- Challenges included: creating demand for the CmSS; gaining trust within the community; ensuring transparency within the community about how the funds will be managed; raising adequate funds – the funds that were raised were enough to get the women to the UHC but not to the district hospital; balancing decision-making between male/female committee members; and ensuring the sustainability of community groups.
- It was important to make sure that the community leads the process and makes the decisions about its use.
- Key variables in establishing CmSS: time of year (e.g. harvest) and when meetings were held (e.g. time of day).
- CmSS needed to appoint someone to regularly collect money from community and they may have to be paid.
- The fewer the village politics, the more sustainable the CmSS.
- The broader the scope of services (*not just for pregnant women*) provided by the CmSS, the greater the community participation, and the broader the access to the CmSS (*not just pregnant women*) the greater the benefit for the community.
- The CmSS worked better with more male participation.

### Sustainability and scaling up

Sustainability of CmSS is a major issue. Since project was only implemented for 2 years, many of these groups were just beginning to really function efficiently at the project's end. CARE encouraged the CmSS to think about expanding the types of services offered in order increase community participation in the CmSS, leading towards sustainability.

### Resources

Personnel – this project worked with community health workers and facility health workers; Supplies – birth planning cards, brochures, posters, and other stationery; Short-term training – initial and refresher trainings, meetings; Transport – fuel, maintenance, vehicles; Equipment – office furniture. Besides the personnel, CARE covered all the other costs, as project costs.

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## Communities and Households Working Together to Save Lives in Guatemala

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### Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs

#### Short description

*Communities and households working together to save lives* is a social and behavioral change program aimed to increase maternal health outcomes. This initiative was a critical strategy within the Guatemala's Maternal and Neonatal Health (MNH) program. By using participatory approaches, households and communities have been able to form emergency response action plans and other community-based initiatives, proving to be effective at reducing the barriers men and women faced in accessing maternal and reproductive health care. The project was implemented by the Johns Hopkins School of Public Health, Center for Communication Programs and ran from 2000 to 2004.

#### Goals/Objectives

1. Develop community-based emergency plans that raise funding, provide access to transport, and offer support.
2. Create citizens groups prepared to respond to obstetric emergencies.
3. Create direct linkages between communities and local health centers.
4. Increase knowledge about obstetric emergencies.
5. Improve attitudes related to maternal health and saving women's lives.
6. Increase antenatal care rates.
7. Increase utilization of services including during obstetric emergencies.
8. Raise service provider's accountability.

#### Background

The maternal mortality rate in Guatemala fell from an estimated 219 maternal deaths per 100,000 births in 1989 to 153 in 2000, however remains one of the highest in Latin America. The majority of maternal deaths in the country are preventable. Poor quality health care, lack of childcare, mountainous terrain, inadequate transportation, and minimal household income, are major barriers women face in seeking essential obstetric care. Close to 85% of women choose home delivery with a traditional birth attendant of family member over hospital birth or other skilled attendant.

#### Design and implementation

Key barriers preventing women from accessing pre- and post-natal care were identified during interviews with community leaders and families. To ensure appropriateness of the behavior change initiatives (BCI), community members engaged directly in the planning of specific BCI components and service quality criteria. Interventions were designed guided by the formative research. The BCI design included mass media and community mobilization activities, aiming to promote improved health care services and encourage service utilization. The research was also used to develop the IEC materials, radio spots, and community led programs.

Using community dialogue, participatory leadership and collective self efficacy as central to the BCI, the team used the Community Action Cycle<sup>7</sup> and the Communication for Social Change<sup>8</sup> approaches to achieve its objectives. Distance and lack of money were identified from the research as the two major factors preventing access to health services; the community participation program therefore focused on developing community and household emergency plans to overcome the barriers. Each plan consisted of necessary actions for the evacuation of women including funds, transport, and community support.

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<sup>7</sup> Howard-Grabman Lisa, Snetro Gail. How to Mobilize Communities for Health and Social Change. Health Communication Partnership Baltimore, 2002.

<sup>8</sup> Figueroa Maria Elena, Kincaid D. Lawrence, Rani Manju, Lewis Gary. Communication for Social Change: An integrated Model for Measuring the Process and its Outcomes. The Rockefeller Foundation and the Johns Hopkins University, Center for Communication Programs. New York, 2002.

### **Results and evaluation**

The BCI approach was successful in achieving the original objectives. 99 communities have been involved in the process, over 90% of which have committees formed. Half of the communities have secured transport, 40% have community emergency funds, and 33% have emergency plans in place. 11% of the communities have put their plans to action during emergencies. Further, the evaluation showed a positive change in the knowledge, attitudes and practices in the participating communities. Knowledge of complications, such as bleeding, increased by 33% in the exposed group compared to no change in the unexposed group. The exposed group was also more likely to report antenatal care as essential for a healthy pregnancy, and was likely to express greater importance on a skilled attendant at delivery. Overall, women in the exposed group were more likely to deliver their baby in a health facility compared to the unexposed group.

### **Challenges and lessons learned**

#### Challenges:

- Coordinating with the MOH at all levels was difficult, even though the MOH support and coordination were found to be essential for program success. Making sure that community groups and local health centers established a good rapport with one another proved to facilitate this coordination.
- Community members were resistant at times to overcome inter-cultural barriers in their communities. The BCI approach overcame this by helping groups come to a consensus on issues and to work closely with the health center in supporting each cultural and linguistic group

#### Lessons Learned:

- One of the key factors to success of this approach was coordination with the MOH and other in-country civil society social and NGO partners, which served to reinforce program objectives through multiple channels and to increase sustainability
- Integrating both supply and demand issues into the program concurrently was also essential to form a solid platform for communities to organize together in saving women's lives, and to changing attitudes, perceptions and behaviors of men and women with respect to Safe Motherhood
- Participation is needed at all phases in the program to ensure effectiveness and cost-effectiveness, to consistently monitor and evaluate the program, as well as increase knowledge, change attitudes and change behaviors most effectively

### **Sustainability and scaling up**

Because of the methodology and community ownership of the BCI under MNH, it will continue beyond its program funding cycle. The maternal health community groups were built on the existing Health Committees, which will remain. Because of the close collaboration with the MOH and local health centers, health staff will continue to work with the committees in preparing women for labor and delivery. All BCI tools developed and disseminated will remain in these health centers and with the select community groups. Community groups and households developed the Emergency Plans and will continue to operate, since they were based on existing resources. Further, NGOs across the country had already begun adapting and implementing the BCI process in other communities. Since the MOH was so closely involved, there are plans to continue scaling this model up through the rest of the country.

### **Resources**

The majority of the funds were from USAID, with other support from community volunteers, local funds, local transport, and other local resources.

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## Home Based Life Saving Skills

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American College of Nurse-Midwives

### Short description

Home Based Life Saving Skills (HBLSS) is a family focused, community-based program designed to reduce neonatal and maternal mortality. It aims to decrease delays in reaching the referral facilities and increases access to basic life saving care within the home and community. It does this by supporting birth preparedness, recognition of complications, providing stabilization skills and encouraging the involvement of decision makers in timely decisions. The HBLSS materials, processes and activities were field tested, 1998 - 2001 in Kanpur, Uttar Pradesh, India and 2001 – 2004 in Liben District, Guji Zone, Southern Ethiopia. The 1<sup>st</sup> Edition of the Manual was published in 2004.<sup>9</sup>

### Goals/Objectives

The goal of HBLSS is to bring obstetric and neonatal first aid skills to the home and community. The objective is to develop consensus on practices (obstetric and neonatal first aid) that are not only safe, but also feasible and acceptable to users in a home setting until they reach a referral facility where obstetrical and neonatal complications, such as postpartum hemorrhage and newborn asphyxia, can be managed.

### Background

Over 500,000 women die every year from pregnancy-related causes. Others survive but live in poor health for what should be their most productive years and what are their years of greatest family responsibility. With the majority of deliveries occurring at home, improving access to emergency obstetric care can greatly reduce the loss of life and vitality. It is not enough to upgrade referral facilities and strengthen the technical and communication skills of trained health care providers. It is also vital to educate, motivate and mobilize the pregnant women, husbands, mother-in-laws, and communities to improve maternal and neonatal health outcomes.

### Design and implementation

HBLSS was conceived in 1997 as part of the family and community component of the Community Partnership for Safe Motherhood Model,<sup>10</sup> which describes the continuum of life-saving care needed at various steps of the survival pathway. Critical to the continuum is the development and strengthening of links between home, community and referral facilities through community mobilization. HBLSS development began with a feasibility study in India.

HBLSS<sup>11</sup> targets a home birth team that consists of all of those who are expected to be present at a birth, namely the pregnant woman, her family caregivers and birth attendant. HBLSS has a flexible modular design covering preventative and life-saving topics, allowing the HBLSS Trainer, HBLSS Guide, and home-birth teams to select the topics most appropriate to their needs and interests. The curriculum focuses on the prevention, recognition, and initial home management of life-threatening maternal and newborn problems, and referral, where possible. The prevention of maternal-to-child transmission of HIV/AIDS is included in all modules.

Implementing HBLSS uses a cascade training strategy<sup>12</sup> that relies on HBLSS Trainers to train HBLSS Guides, who in turn facilitate meetings with groups of pregnant women, family caregivers, and birth attendants. HBLSS Guides are selected community members consisting of TBAs, community health workers and others. HBLSS uses a variety of methods to maximize communication and learning amongst participants with varied levels of reading capabilities.

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<sup>9</sup> Buffington, Sibley, Beck, Armbruster. Home Based Life Saving Skills, 1<sup>st</sup> Edition. 2004 by ACNM. [www.shopacnm.com](http://www.shopacnm.com)

<sup>10</sup> Sibley and Armbruster. Obstetric first aid in the community-partners in safe motherhood. A strategy for reducing maternal mortality. J Nurse-Midwifery 1997; 42:117-121 by ACNM.

<sup>11</sup> Sibley, Buffington, Beck, Armbruster. HBLSS: Promoting safe motherhood through innovative community-based interventions. J Midwifery Women's Health 2001; 46: 258-266 by ACNM.

<sup>12</sup> Sibley and Buffington. Building community partnerships for safer motherhood: HBLSS. At-a-glance 2003; 1:1-16 by NGO Networks for Health.

### Results and evaluation

An internal review was conducted showing improved performance in management of postpartum hemorrhage. Evidence from the Ethiopian field test<sup>13</sup> showed successful skills transfer and retention, as well as appropriate case management of PPH following the introduction of the HBLSS program. Exposure to HBLSS training in the community was estimated at 38%, and there was strong community support for the guide and activities. There was a large, positive, difference in average pre- and post-training performance scores for some of the topics presented in the HBLSS training activities, representing a 129% increase in knowledge and skills over the pre-training value for the topic “Too Much Bleeding After Birth” and 182% increase for the topic “Baby Is Sick”.

### Challenges and lessons learned

- Regular monitoring and follow-up in the communities is essential to provide support and assistance to those implementing HBLSS. This means funds are allocated for the supervisors.
- Places where HBLSS is appropriate many times are rural areas with limited resources including reliable transportation and communication both of which are essential for appropriate referral.
- Only data that will be used (and is necessary) should be collected to save time of those gathering this data.
- Appropriate home-based management of signs of postpartum hemorrhage by unskilled attendants, including HBLSS Guides, is promising since this condition is the leading cause of maternal death worldwide.
- Adults learn best when they are interested in the topic. In the focus group discussions the topic “Too Much Bleeding” (antepartum and postpartum) was a clear favorite of both HBLSS Trainers and HBLSS Guides. As one HBLSS Guide commented, “What I liked most is about the woman who is bleeding too much. Helping her, taking her to a health facility and saving her life. This is the most important topic.”
- All stakeholders must be involved in HBLSS. As learned during the internal review, “The level of interest, acceptance, and support of the HBLSS by all stakeholders, including the Ethiopian Ministry of Health, Save the Children, HBLSS Trainers and Guides, Health Action Committees, and Bridge-to-Heath Teams are impressive and suggest additional strategies for increasing coverage.” As several Health Action Committee chairmen commented, “Since HBLSS, we men are now involved in childbirth and help when problems happen. Before... we would run away, we were ashamed, did not know how to help.”

### Sustainability and scaling up

HBLSS in Ethiopia was built on the community system and MOH staff, as part of their job description, are trained as HBLSS trainers and supervisors. The community and MOH are planning to continue using the HBLSS approach. Save the Children, MOH and ACNM, through the Saving Newborn Lives Project expanded the HBLSS program within Liben District. Save the Children and MOH with ACNM technical assistance are using the Liben project model including HBLSS for 3 zones in the Somali Region as part of a Southern Tier Initiative.

### Resources

The Ethiopia field test demonstrates that integrating HBLSS into existing child survival programs is a feasible and affordable option. The approximate cost to implement the program was \$260,000, less than 20% of the overall Child Survival-17 Project budget.<sup>14</sup>

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<sup>13</sup> Sibley, Buffington, Haileyesus. A review of the Ethiopia field test. *J Midwifery Women’s Health* 2004; 49:320-328 by ACNM.

<sup>14</sup> Ibid.

## Monitoring of Maternal Health Programs Using UN Process Indicators: CARE's Experiences in Tanzania and Peru

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CARE – USA

### Short description

CARE, under its FEMME projects in Peru and Tanzania, used UN Process Indicators at the facility levels to monitor progress of project implementation and assess changes key process linked to maternal health outcomes. In order to enhance mechanisms for data collection and analysis, the project assisted facility staff in development or review of existing obstetric registers to ensure these tools capture key information. The project also supported staff in improving the accuracy of the data provided in the registers in order to compute the process indicators.

### Goals/Objectives

1. To strengthen and support systems at the health facility level to improve the monitoring of maternal health programs using UN Process Indicators.

### Background

The six UN Process Indicators measure the availability, utilization and quality of EmOC services. The information required for the calculation of indicators is derived from good data collection and record keeping systems. Obstetric registers, if well maintained, are an important source for this information, and programs need to utilize this readily available resource to track key data for the indicators.

### Design and implementation

The FEMME project, collaboration between CARE, and Columbia University's Averting Maternal Death and Disabilities (AMDD) program began in April 2000 and is ongoing. To strengthen management systems for data analysis and utilization, a baseline health facility assessment was conducted to collect information on maternal health data and indicators. The project worked with hospital staff to maintain the validity and completeness of obstetric registers to support data collection and compilation. This process was to ensure the registers capture key information (e.g. obstetric admissions, numbers and type of deliveries, obstetric complications, maternal deaths, etc). Some of the essential activities involved were:

- Standardize definitions of obstetric complications – The project emphasized common agreement on the definition of obstetric complications, based on established standards and guidelines.
- Proper maintenance of case records – Hospital staff were supported to record appropriately their clinical findings and to file case notes in manner that would ease retrieval. The project also supported the development and use of one complete register that compiled information on the key maternal health variables.
- Data tabulation and presentation – Data presentation through monthly tables, histograms was a useful means of understanding the data and encouraging its use by the hospital staff.
- Increasing data consistency – Project staff worked with facility personnel to improve consistency and validity of data by conducting regular checks of the registers, often followed by a discussion with health personnel.

### Results and evaluation

In Peru, before project interventions, the main referral hospital in Ayacucho and its outlying rural health centers used about 20 different registers for data collection. With project training and supervision, all health care facilities in the district now use only 3 registers for collecting information. Project evaluation indicated that Met Need for EmOC increased from 30% at baseline in 2000 to peak of 51% in 2002. Maternal deaths due to direct causes in the area of jurisdiction of the FEMME project decreased dramatically between 2001 and 2003, and we believe this is due to interventions at the project sites, especially the improvement of EmOC provided at the Departmental Hospital of Ayacucho. Other programs such as the Health Reform in Peru, the USAID Project 2000, and the establishment of a Maternal Insurance Program by the government in 2000 could also be contributing factors to the improvement in overall health indicators, including maternal mortality.

CARE's program in Tanzania works in collaboration with the MOH, and District Health Councils, in the northwestern Mwanza Region. The baseline survey indicated that registers and client records were poorly maintained (e.g., procedures were not recorded or organized and there was a poor storage mechanism for client files) and very few complications were recorded in the Operations Room (OR) register. Many staff found the data collection was tedious and useless. With project support, the staff improved their data collection approaches and developed one logbook to collect information on maternal complications, C-Sections, and newborn conditions. The project targets a population of about 23,045 pregnant women. A midterm evaluation revealed that Met Need for EmOC increased from 9% in 2000 to 21% in 2003. There were similar increases in the C-section rates and declines in the maternal deaths.

#### **Challenges and lessons learned**

- Standardization of patient registers, obtaining consensus on obstetric definitions, proper maintenance of records, are important first steps in improving data management systems to support use of process indicators.
- Simple tabulations, or other graphic presentations facilitate understanding of data, and regular reviews encourage participation and commitment by staff.
- Active involvement of facility staff in the data collection process, calculation of indicators, and discussion of their significance is essential to promoting use of data for decision-making.
- Advocacy and training opportunities on UN Process Indicators should be made available for policy makers and program managers at the district and regional health bureaus. Their involvement in the review and use of data is critical for sustaining wider changes within the health system
- In circumstances where the data is not collated and interpreted in conjunction with the overall district/regional data, program managers and health officials may not have an accurate representation of the utilization of obstetric care and thus the maternal health status of the target population.
- The process for analyzing, interpreting, and using the data for decision-making, requires support and involvement from the health officials, and supervisors from the ministries and departments of health. In places where this support was minimal, facility staff had a hard time internalizing and appreciating the need for focused attention on data, without regular project (CARE) supervision.

#### **Sustainability and scaling up**

- The FEMME project interventions are still ongoing in these two countries. One of the main areas identified to support sustainability of the use of UN Process Indicators, is increased work with the policy makers and other health officials, at the regional/national level, to promote their understanding of process indicators, and the use of this data to support their own decision-making on maternal health.
- In the Mwanza region of Tanzania, for example, the Missungwi district health council identified maternal health as one of the key health priorities, and will be providing increased resources to support maternal health interventions. The project will be working closely with the district team to promote the regular use of UN Process Indicators for monitoring progress towards achieving this goal. In Peru, the regional health bureau has requested CARE's support in training, and facilitating sessions on process indicators.
- Other project sites in Ethiopia and Rwanda are also facilitating the understanding and use of process indicators at the national level.

#### **Resources**

The project is supported by Columbia University's Averting Maternal Death and Disability (AMDD) Program.

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## Emergency Obstetric Care Needs Assessment – Generating Evidence to Facilitate Policy Changes

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UNICEF – ESARO

### Short description

Emergency Obstetric Care (EmOC) baseline needs assessments were carried out in Kenya, Rwanda, Southern Sudan, and Uganda during 2003 – 2004, using UN Process Indicators. The EmOC baseline assessment is an effective tool to identify gaps in coverage and use of life-saving services for obstetric complications. Evidence generated by the assessments has been most useful for governments and their development partners in guiding and revising national policies, and redefining the focus of effective program interventions to accelerate the reduction of maternal and neonatal mortality in these countries. The assessments are also a reliable way to monitor progress towards achieving the maternal health MDG and reducing maternal mortality by ¾ by 2015.

### Goals/Objectives

1. To assess the coverage, utilization and to some extent quality of EmOC services in a defined population.
2. To explore factors affect the utilization of available EmOC services.
3. To identify obstacles in providing 24-hour good quality EmOC services.
4. To identify gaps and priority interventions to improve coverage and quality of EmOC services.

### Background

Most countries in Africa do not have baseline assessments on EmOC, using UN Process Indicators. Current HIS are inadequate and inefficient in producing UN indicators routinely. Many countries are undergoing a paradigm shift in maternal mortality (MM) reduction programs, from conventional to evidence-based interventions. Therefore, results generated by EmOC assessments are powerful and can facilitate policy dialogue and changes.

### Design and implementation

The EmOC needs assessments, based on UN Process Indicators, were carried out in 2003 – 2004. Sampling frames varied in different countries from sub-district, province, to national levels. Either random or universal sampling was used to select facilities. MOHs organized assessments with financial and field support from UNICEF country offices. Local health workers did the data collection. Data analysis and report writing were carried out with assistance and technical support from AMDD and ESARO. In some countries, local staff were trained for data processing and analysis. Typically, one day was planned for each facility assessment. Activities included a review of clinical records, interviews with patients/staff, observation of outpatient clinics/maternity wards, and focus group discussions.

*Kenya:* In the North Eastern Province (NEP), the provincial, district and sub-district hospitals, and health centers that provide maternal health care were all selected for the assessment. The sample covered 17 health facilities and population of 935,138. *Rwanda:* The sample covered a population of 693,875 population in 4 health districts Nyanza, Muhororo, Kabaya and Gakoma, that were selected purposively. All the district hospitals and health centers that provide maternal health service, 28 in total, were sampled. *Southern Sudan:* Two counties, Yambio and Rumbek, were selected that had ongoing UNICEF-supported field programs. The sampling covered 15 health facilities, including county hospitals and primary health care centers with a maternity ward serving 760,237 people. *Uganda:* The EmOC needs assessment was conducted in 19 of 56 districts. It covered a population of 9,392,537, which is 38.2 % of the total population. In each district, 1 district hospital and 50% of all Health Center IVs (with surgical care facility) and Health Center IIIs (without surgical care facility) were sampled randomly.

### Results and evaluation

In all 4 countries, needs assessments determined that coverage of Basic EmOC was well below UN recommended levels. Key findings were shared with policy makers such as the Ministers of Health; national, provincial, and district reproductive health program planners and managers; medical professional organizations; and the media.

- In NEP Kenya, results guided EmOC program implementation against the US\$450,000 contributions from UNICEF UK National Committee in 2004. It also helped other development partners (e.g., DANIDA) to support radio calls for emergency referrals. LSS training courses were organized to improve competency of mid-level providers working at district hospitals/health centers. Selected health centers and district hospitals have been upgraded to provide Basic and Comprehensive EmOC. UN Indicators have been added to the Kenya Service Provision Assessment 2004 as a way to institutionalize them into the regular information system.

- In Rwanda, national team has been sent to participate in TOT competency-based training on EmOC. National training site is being upgraded. Health staff from districts will be trained in 2005 to perform Basic EmOC.
- In Southern Sudan, evidence from the EmOC assessment in 4 counties has been made available to health authorities and international development communities. EmOC will be one of the key elements in rehabilitation of the health system. Three training courses for mid-level providers on lifesaving skills are planned for the first quarter of 2005. Midwifery kits, delivery beds and other necessary supplies have been ordered to upgrade selected health facilities. Standard antenatal care and maternity registers are being piloted. IRC is recruiting midwives to work in health centers and offer EmOC to local communities.
- In Uganda, lack of Basic EmOC, as identified in the assessment, has been one of the most powerful pieces of evidence for government and donor communities when planning effective program interventions for MM reduction through SWAPs. EmOC has been included in regular government budget through SWAPs. National roll-out plan of EmOC prioritizes fixing the ‘missing functions’ in health facilities in a phased manner.

### **Challenges and lessons learned**

- Main challenges include: lack of national commitment and financial support; growing poverty; lack of access/availability/use of quality skilled care; continued focus on less effective interventions; poorly functioning health/ referral systems; weak human resource development/management; negative impact of HIV; poor logistics for management of drugs/equipment; unclear policies on practice regulations; and harmful sociocultural practices.
- The buy-in or paradigm shift process does not take place over night. Policy makers and program managers need time to see the effectiveness and evidence of EmOC while being weaned away from conventional interventions. All donor agencies have not yet been fully convinced of EmOC-focused interventions. The tendency and risk of pulling the same government counterparts in different directions are still quite real.
- It is essential to bring policy makers/program managers into process of planning/implementing the assessment.
- The assessment itself can be a ‘wake-up’ call but does not necessarily generate immediate actions/commitment – it is the first step. Easy entry points should be identified based on results for different countries and settings.
- Reputable national OBGYNs should be involved in assessment to make results credible and acceptable.
- If local staff is involved in data collection/processing/analysis, results become easier to understand and interpret.
- It is necessary to look beyond the numbers to understand factors affect the utilization of available services. The tools can be further simplified without losing the key information.
- Integrating EmOC with other interventions (e.g., focused antenatal care, community activities, prevention and treatment of MIP, PMTCT of HIV) could help avoid the single intervention/component approach.

### **Sustainability and scaling up**

- At national/district levels, including EmOC interventions in the regular government budget is key for sustainability
- Scaling up has to be realized in a phased manner. Rapid expansion is not realistic given resource constraints.
- Competency-based training on maternal and newborn care, including EmOC, should be integrated into the pre-service curricula of medical, midwifery and nursing schools.
- The institutionalization of UN Process Indicators in the routine health information system is important for the government to be able to monitor the progress nation-wide.

### **Resources**

- UNICEF country offices in four countries and ESARO.
- Columbia University’s Averting Maternal Death and Disability Program.

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## Skilled Attendance for Everyone (SAFE)

University of Aberdeen (Coordinating Center)

### Short description

SAFE was launched with the aim of providing new knowledge on strategies to increase skilled attendance at delivery in developing countries in order to reduce maternal mortality and serious morbidity. The SAFE study (September 2000–February 2003) involved collaboration between five countries – Bangladesh, Ghana, Jamaica, Malawi, Mexico – and the coordinating center at the University of Aberdeen in Scotland.

### Goals/Objectives

The objectives of the study were the following: 1) devise a tool for the systematic development of a national strategy to increase the proportion of deliveries with skilled attendance in developing countries; 2) conduct in-depth primary research on the preferences for, barriers to, and utilization of skilled attendance by the poorest groups of women in two countries; 3) prepare guidelines for policy makers, program managers and international agencies to interpret national trends and differentials in the proportion of deliveries with skilled attendance; 4) develop and test a “skilled attendance monitoring system”; 5) apply the Strategy Development Tool (SDT) in four countries along the continuum of skilled attendance; and 6) devise detailed protocols for demonstration projects to increase skilled attendance in countries participating in the strategy development.

### Background

Skilled attendance can be defined as the process through which women are provided with adequate care during labor, delivery and the postpartum period. The ultimate aim of this research was to reduce maternal mortality and serious morbidity by providing new knowledge on strategies to increase the proportion of deliveries with skilled attendance. The 5 collaborating countries, Bangladesh, Ghana, Jamaica, Malawi and Mexico, encompass a range of different settings: from 14% of deliveries currently attended by health professionals in Bangladesh to 92% in Jamaica, from doctor-led to midwife-led services, and from low-income to transitional economies.

### Design and implementation

The SDT is the key output from SAFE, and has been developed as a resource document that will enable program managers to systematically gather and interpret information and to plan for strategies to increase the proportion of skilled attendance. The SDT comprises 5 modules: 1) Problem Identification: a preliminary diagnostic exercise using qualitative methods to establish local priorities; 2) Situation Analysis: identification, analysis, and interpretation of existing data through a document and literature review, and population-based surveys; 3) Needs Assessment of the Poor: needs of the poorest groups in society determined through qualitative methods; 4) Quality of Clinical Care: assessment of quality of care provided in health facilities, using delivery records; and 5) Synthesis for Development of Strategic Options: interpretation of information collected by other modules to formulate strategic options. The SDT was developed through field tests of the modules individually and was followed by their reapplication together as a composite tool in all 5 SAFE partner countries. A method for costing the development of strategy options was developed alongside the SDT. Final products of SAFE include: freely accessible manuals available for use – the SDT and Costing Manual; development of methods to assess and measure skilled attendance at delivery; generation of new knowledge on skilled attendance; action plans to improve skilled attendance in 5 SAFE collaborating countries; new knowledge shared with development and research audiences via peer reviewed publications, national, international scientific presentations, newsletters, websites and reports; and an international SAFE workshop in February 2003.

### Results and evaluation

The super-goal, goal, purpose, and outputs of SAFE are described in a logical framework (logframe). Monitoring of SAFE took place using the logframe, which describes achievements (output to purpose level) in terms of objectively verifiable indicators. These indicators were reported by the management team to the funders annually. Additionally, a Project Advisory Board was responsible for providing guidance on strategic and policy-level decisions pertaining to the project, monitoring the progress and performance, promoting international recognition and awareness of the project and reviewing and giving feedback on all documents and specific outputs from the project.

The stated purpose of SAFE was that “health policy makers and program managers use new tools” to firstly, assess the proportion of deliveries with skilled attendance, secondly, monitor and evaluate trends and thirdly, develop strategies and proposals to increase the proportion of deliveries with skilled attendance. Evidence of achievement was demonstrated as follows, using the agreed logical framework indicators: new knowledge on skilled attendance used to develop demonstration protocols in the five SAFE collaborating countries; endorsement of demonstration protocols by Ministries of Health in each country; application of interpretive guidelines to investigate trends in delivery attendance; employment of a rapid assessment instrument to measure the provision of skilled attendance in four SAFE countries; safe motherhood program managers in at least ten developing countries other than those participating in SAFE, oriented on the SAFE SDT.

A SAFE workshop was held in February 2003 to share experiences and research methods generated by the study to a range of developing countries and to the global safe motherhood community. This workshop was followed by a review of the SAFE study by an external reviewer, representatives from SAFE funding agencies, collaborating countries, the Advisory Board and the Project Management Team. There was general agreement that the study had been conducted in an inclusive and participatory manner, was well managed and that the requirements of the study as defined by the logical framework had been satisfied, and indeed exceeded requirements in several areas.

### **Challenges and lessons learned**

- Formulation of demonstration protocols and demonstration of evidence in the strategies developed. Collaborating countries felt that evidence had been used and shown to have led to the development of the strategies in their demonstration protocols.
- Whether the range of skills and experience required to use the SDT successfully would be available when applying the SDT in a non-research environment
- Complexity of collaboration agreements
- Some limitations in conducting SAFE included difficulties in demonstrating how the demonstration protocols used research findings, the need to facilitate implementation of demonstration protocols, and the wide range of skills needed to use the SDT successfully.
- Much attention was paid to the terms “skilled attendants” and “skilled attendance”. There was full agreement with the generally accepted definition of “skilled attendant” as “a professional with midwifery skills.” “Skilled attendance at delivery” requires skilled personnel, who have the competencies to provide care for normal delivery, as well as to provide basic and comprehensive essential obstetric care and the capacity to refer women. In addition it requires an enabling environment – necessary drugs, supplies, equipment and transport.

### **Sustainability and scaling up**

Sustainability of the research referred to the need to implement the strategies developed within SAFE. This implementation was not part of SAFE's remit, but the SAFE partners and international community have the shared responsibility of creating a conducive environment for ensuring implementation.

### **Resources**

The cost of applying the SDT in three SAFE countries was estimated to range between \$12,938 and \$15,627 (US\$), for applications at district or sub-district level. To apply the SDT takes 3–5 months, with 1-2 full-time research fellows at doctorate or masters level and 2-3 part-time research assistants. Basic skills in management, research methods, computer skills and knowledge of safe motherhood are required. Additional inputs from policy makers, clinicians, statisticians and social scientists will enrich outputs. SAFE was funded by Department for International Development and European Commission. DFID awarded £50,000, in addition to the European Commission award of 1million EURO.

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## White Ribbon Alliance for Safe Motherhood

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### White Ribbon Alliance

#### Short description

The White Ribbon Alliance for Safe Motherhood (WRA) is an international coalition of individuals and organizations formed to increase public awareness of the need to make pregnancy and childbirth safe for women worldwide. WRA aims to build alliances within countries and across regions, involving all stakeholders.

#### Goals/Objectives

1. To raise awareness among citizens, INGOs, NGOs and governments concerning the need for action to make pregnancy and childbirth safe for all women and their families.
2. To build alliances to save the lives of women through intersectoral and non-traditional partnerships, recognizing that the strength of a large and united effort can effect change.
3. To act as a catalyst for action to address the tragedy of maternal deaths and sustain the current safe motherhood efforts under way.

#### Background

One woman out of every 16 in Africa and one in every 21 in Asia die of pregnancy-related causes. Most of these deaths are caused by socio-cultural factors, poor health, and lack of access to healthcare, most of which can be prevented. While maternal mortality affects women worldwide, it disproportionately affects women in developing countries: there are 27 maternal deaths for every 100,000 live births in developed countries and 480 maternal deaths for every 100,000 live births in developing countries.

The Safe Motherhood Initiative convened in 1997 at a technical conference to review lessons learned in its first 10 years and to set the priorities for the work in safe motherhood. Ten action messages were developed, including one calling for alliances between governments, policymakers, nongovernmental organizations, and citizens: "Safe motherhood must be a priority for governments, policy makers, health providers, and for civil society at large. Alliances need to be formed, not only among advocates for human and women's rights, but also with men's groups and religious groups, with non-governmental organizations, donors, and other sectors of government as well."

#### Design and implementation

The global WRA's current organizational structure is comprised of a Global Secretariat located in Washington, DC and 12 National Secretariats. An interim governing body, the Decision-Making Committee, has 8 members and is charged with developing the global WRA's future organizational and governance structures. The Global Secretariat has three full-time staff member and relies upon interns and volunteers from its membership to carry out its work. The Global Secretariat facilitates the development of a shared vision that binds the Alliance, supports maintains and expands the WRA membership, facilitates the provision of technical assistance to National Secretariats to promote organizational development, sustainability and effectiveness in achieving the mission of the WRA, diversifies and leverages resources to support and secure the Alliance for the future, and serves as a communications hub for the Alliance. Individuals and organizations may join the global WRA or their National Secretariat.

The sharing of and exchange of programmatic and technical information, lessons learned and assistance of information between National Secretariats and members is strongly encouraged and promoted as an important value of the WRA.

The National Secretariats are established through a variety of methods; however, the involvement of the Global Secretariat and/or an international NGO frequently occurs to facilitate the process. Key stakeholders meet during a workshop or large meeting, usually facilitated by the Global Secretariat, to share the concept of the WRA, identify what it can bring to the stakeholders and the country, and identify what each stakeholder can bring to the WRA. If the establishment of the WRA is accepted, a concept paper is developed by a core group of stakeholders outlining the rationale, proposed structure and work plan.

**Results and evaluation**

A monitoring tool was developed to gather information about WRA member activities at the National Secretariat level. In 2004, the monitoring tool is being shared with 7 of the 12 National Secretariats and training is being performed on its usage.

**Challenges and lessons learned**Challenges have been:

- Assuring that there is an open dialogue and safe environment between the skilled practitioners, governments and communities.
- Providing consistent culturally appropriate evidence based messages for government officials to lobby for change and for families to mobilize for change within their own communities.
- Building an understanding and ownership of maternal and neonatal health issues at the community level, which requires funding and commitment from both donors and government, creating multi-sectoral linkages between unlikely partners.

Lessons learned:

- Successful mobilization requires dynamic, dedicated leadership.
- Invite key stakeholders to the table from the beginning of the planning process.
- Broad-based multi-sectoral alliances are a potentially powerful force for change.
- Create alliances that are owned by the membership and not by any one agency or group. The power of the Alliance is its members.
- Build on what works and create a climate of trust and collaboration.
- Starting with major (or visible) events can be a beneficial mobilizing activity.
- Secretariats help to support collaboration and sharing of lessons among Alliance members.
- Ensure that local, district, and national government entities are full partners and supporters of the WRA.
- Organize and build capacity for local leadership and action.
- Pool resources and share responsibility for raising funds and supporting events and activities.

**Sustainability and scaling up**

WRA was launched in 1999 with 35 participants. In 2004 it has grown to over 400 individual and organizational members in 71 countries spanning throughout Africa, Asia, Europe, Latin America and North America. National Secretariats are currently established in 12 countries – Burkina Faso, Ethiopia, Ghana, India, Indonesia, Malawi, Nepal, Nigeria, South Africa, Tanzania, Vietnam, Zambia.

To ensure sustainability, each National Secretariat must work on securing additional funding outside of any start-up funds provided. In Zambia, for example, they have been able to scale up the Zambian White Ribbon Alliance for Safe Motherhood by making an agreement with UNFPA to participate in their new country program, carrying out social mobilization for safe motherhood activities in parts of Zambia.

**Resources**

A variety of different donors help to support WRA.

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HEALTH, NUTRITION,  
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HUMAN DEVELOPMENT NETWORK

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