



TARGETING

POVERTY AND GENDER INEQUALITY

TO IMPROVE  
MATERNAL  
HEALTH

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# POVERTY AND GENDER INEQUALITY

## TO IMPROVE MATERNAL HEALTH

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## List of Acronyms

<b>BPL:</b> Below the Poverty Line	<b>NGO:</b> Non-Governmental Organization
<b>CCT:</b> Conditional Cash Transfer	<b>PBC:</b> Performance-Based Contracting
<b>GBV:</b> Gender-Based Violence	<b>P4P:</b> Pay for Performance
<b>HEF:</b> Health Equity Fund	<b>SCI:</b> Skilled-Care Initiative
<b>JSY:</b> Janani Suraksha Yojana	<b>STI:</b> Sexually Transmitted Infection
<b>MDG:</b> Millennium Development Goal	<b>WHO:</b> World Health Organization
<b>MMR:</b> Maternal Mortality Ratio	

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## Introduction

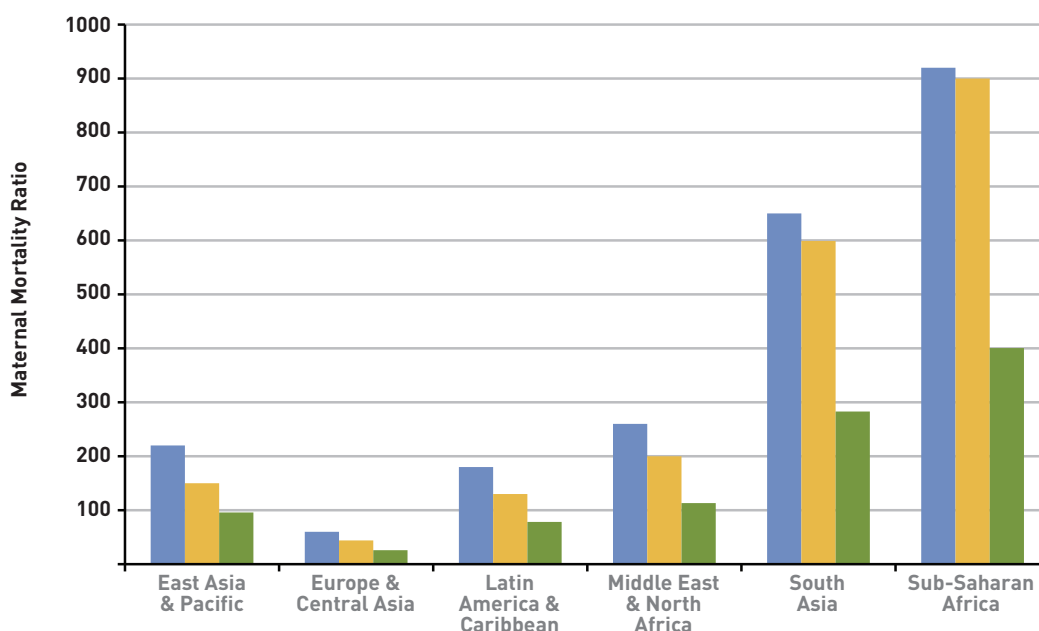
More than 500,000 women die every year in childbirth or from pregnancy-related causes.<sup>1</sup> Virtually all (99 percent) of these maternal deaths occur in low-income countries.<sup>2,3</sup> The maternal mortality ratio (MMR) is 44 per 100,000 live births in Europe and Central Asia as compared with 900 in Sub-Saharan Africa.<sup>1</sup> The lifetime risk of maternal death is one in 30,000 in Northern Europe as compared to a high of one in six in the poorest countries.<sup>4</sup> For every woman who loses her life due to pregnancy, between 15 and 30 women suffer from lifelong illness and disability.<sup>2</sup>

In 2000, the United Nations General Council adopted eight Millennium Development Goals, a process which is intended to generate government and civil society momentum to meet the needs of the world's poorest citizens. Goal 5, to Improve Maternal Health, has two targets: Target A, to reduce the maternal mortality ratio (MMR) by three-quarters between 1990 and 2015; and Target B, to achieve universal access to reproductive health by 2015. A decade into the MDG timeline, progress toward achieving the maternal health goal has been limited at best.<sup>ii</sup> The modest decline in the MMR of 2.5 percent globally from 1990 to 2005,<sup>6</sup> while laudable, is still too far from the goals set (see figure 1).

Figure 1

### Maternal Mortality Ratio

by Region, Modeled Estimate, Deaths per 100,000 Live Births<sup>i</sup>



NOTE: Data from latest available year per country

■ 1990 ■ 2005 (actual) ■ 2005 (target)

<sup>i</sup> The MMR is the number of women who die from pregnancy-related complications during pregnancy or delivery, per 100,000 live births. Data reported here are based on modeling techniques developed by the WHO, UNICEF and UNPF.

<sup>ii</sup> Using a new methodology, Hogan et al.<sup>5</sup> estimate global maternal mortality in 2008 at 342,900, a drop from the estimated 526,000 in 1980. While this shows global progress in meeting the MDG5 goal, only 23 of the 181 countries in the study are on track to achieve the target of 75 percent decline by 2015. Childbearing-related complications continue to be among the most important preventable causes of death globally.

This paper argues that in order to sustainably reduce MMR and improve the overall life chances of poor mothers, policy and programs need, as a matter of urgency, to address two interrelated, root causes of maternal death: poverty, which creates the conditions for inadequate, inaccessible and costly maternal health services in poor and underserved areas, and gender norms that tend to privilege the well-being of men and boys at the expense of women and girls, leading to women's lack of economic options and lack of autonomy. The paper reviews evidence that suggests such actions can reduce MMR by increasing acceptability and use of maternal healthcare services, thereby increasing the number of mothers who receive antenatal and postnatal care and reducing the number of unattended births.

### **Background on Maternal Mortality**

The vast majority of maternal deaths (80 percent) are due to complications during pregnancy, at delivery or within six weeks post-delivery.<sup>8</sup> The presence of HIV further complicates the picture as the virus increases the likelihood of obstetric complications such as anemia and postpartum hemorrhage.<sup>4,9</sup> Indeed a number of African countries with serious HIV epidemics saw significant increases in the MMR between 1990 and 2008.<sup>5</sup>

According to World Bank estimates, the MMR can be brought down by 74 percent just through interventions that provide access to skilled delivery and emergency obstetric care.<sup>10</sup> However, putting services in place will not in itself achieve results. In order to be effective in reducing maternal mortality, these services need to be both acceptable and accessible to the women who need them. Specifically, this paper argues that, in order to adequately reduce maternal mortality, it is essential to address poverty and gender inequality, which together affect the demand for and the utilization and supply of maternal healthcare services. It is only by taking such a holistic approach that recent increases in political will for and investments in maternal health care can be maximized (see Box 1).

#### **Box 1**

##### **Political Action to Improve Health Care**

In order to intensify efforts to meet the health-related MDGs and strengthen health systems in 49 of the poorest countries in the world, global leaders set up a taskforce on Innovative International Financing for Health Systems in September 2008. Based on the recommendations made by the Taskforce, in September 2009, world leaders at the U.N. General Assembly committed \$5.3 billion in additional funding to improve health care around the world focusing especially on women and children, and building on the Global Consensus for Maternal, Newborn and Child Health. Countries such as Nepal, Malawi, Ghana, Liberia and Sierra Leone pledged free access to health care. Overall, 10 million women and children are expected to benefit.<sup>7</sup>

This paper provides the analysis and evidence base by which to substantiate this call. The first section examines the ways in which poverty and gender inequality impact maternal mortality by creating barriers to maternal healthcare access and utilization. The second section analyzes the effects of strategies designed to increase utilization of maternal healthcare services, exploring outcomes achieved and whether benefits reached the poorest and most disempowered women (see Box 2 for a definition of “empowerment” as it is used in this paper). While the full continuum of maternal health care includes general reproductive health care, family planning, antenatal, delivery, postnatal and abortion care, most maternal deaths occur between the third trimester of pregnancy and the first week after birth. Thus, while it touches upon all components of maternal health care, the analysis focuses mainly on antenatal, delivery and postnatal services.<sup>4</sup> Furthermore, most of the research and programming in maternal health care to date focuses on antenatal and delivery care, while postnatal and earlier services receive somewhat less attention. This imbalance is likewise reflected in our analysis.

## Box 2

### What We Mean by “Empowerment” and “Disempowerment”

According to Malhotra and Schuler,<sup>11</sup> Kabeer<sup>12</sup> defines empowerment as “the expansion in people’s ability to make strategic life choices in a context where this ability was previously denied to them.” Empowerment here has two critical dimensions: *process*, which refers to a shift “toward greater equality, or greater freedom of choice and action” and *agency*, because “women themselves must be significant actors in the process of change that is being described or measured” (both quotes from Malhotra and Schuler).<sup>11</sup>

As used in this paper, therefore, the phrase “disempowered women” refers to those who, due to social and structural processes beyond their control, do not have the ability to act on their desires.

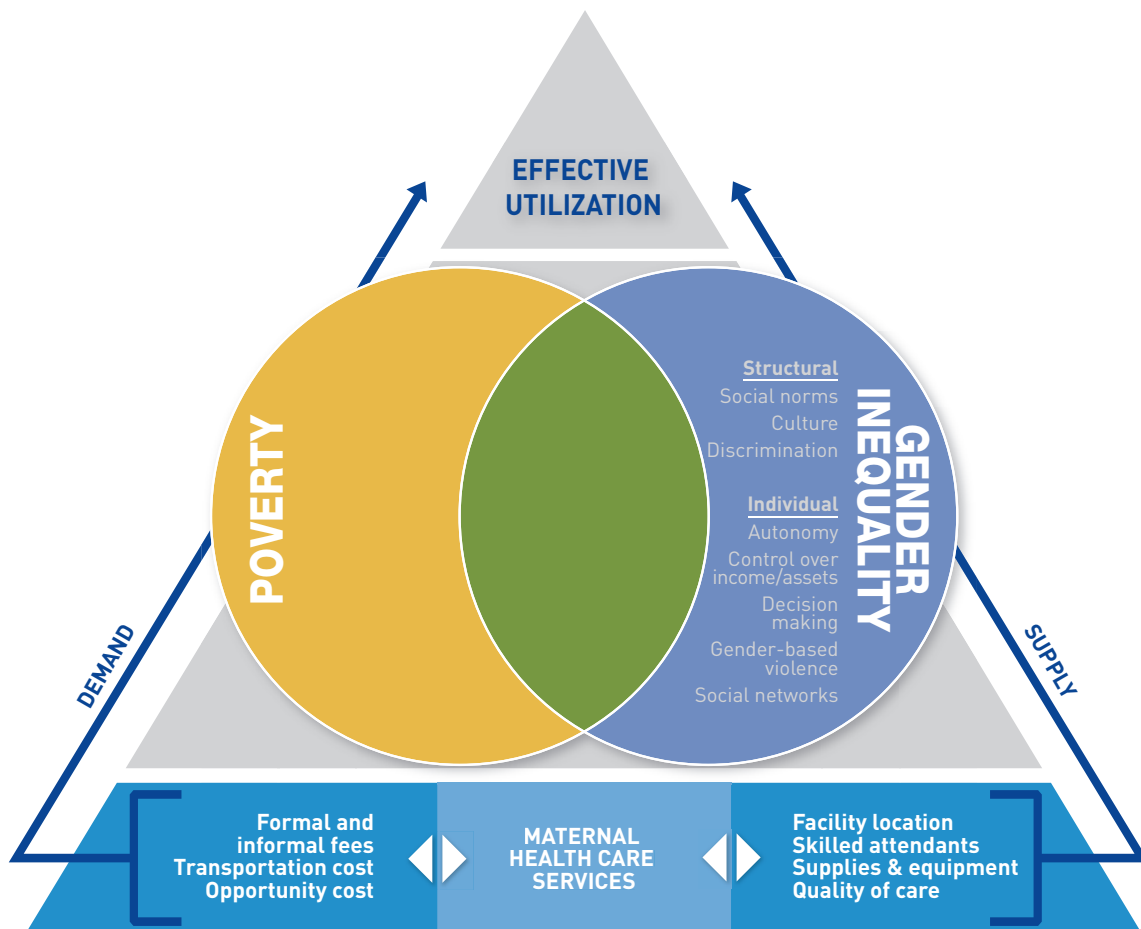
## Poverty and Gender Inequality Restrict Progress in Reducing Maternal Deaths

Figure 2 shows the demand- and supply-side factors affecting utilization of maternal health care. Key among the demand factors is the cost of care, including formal and informal fees, transport and opportunity costs. However, the decision and/or ability to use maternal healthcare services is also highly dependent on a number of supply-side factors, most important among which are the location of facilities and the quality of care. Inadequate physical resources, including basic supplies, medical equipment and technology as well as low capacity, absenteeism and adverse attitudes of staff, create disincentives to seek facility-based care.<sup>13</sup> These demand- and supply-side determinants underlie the three critical delays of maternal mortality:<sup>2</sup>

- 1) The failure to seek appropriate medical care in time;
- 2) The delay in reaching an adequate healthcare facility; and
- 3) The delay in receiving adequate health care at the facility.

Figure 2

### Women at the Center of Maternal Health Care: Determinants of and Barriers to Utilization





For the individual woman, poverty and gender inequality are key factors affecting demand for healthcare services. In Figure 2, they are shown in the center of the triangle that leads up to effective utilization, both because of their importance and because they act as barriers or filters that mediate an individual woman's ability to translate demand into effective utilization. The circles overlap because poverty is closely interlinked with gender inequality. However, gender inequality can affect women's demand for services at all socioeconomic levels. Two sets of factors contribute to gender inequality: (1) institutional or structural factors such as culture, social norms and discrimination that, in turn, affect (2) women's individual ability to act on their own behalf (agency). The second set of factors includes those that affect individual autonomy, ability to make decisions (e.g., to seek health care, engage in social interactions, move freely outside the home, etc.), control over vital resources (e.g., income and assets, time, etc.), and gender-based violence. Many of the factors affecting women's individual agency play out at the household and community levels and are, in turn, socially reinforced. Together, they influence a woman's empowerment or disempowerment and hence her ability to effectively use maternal health care.

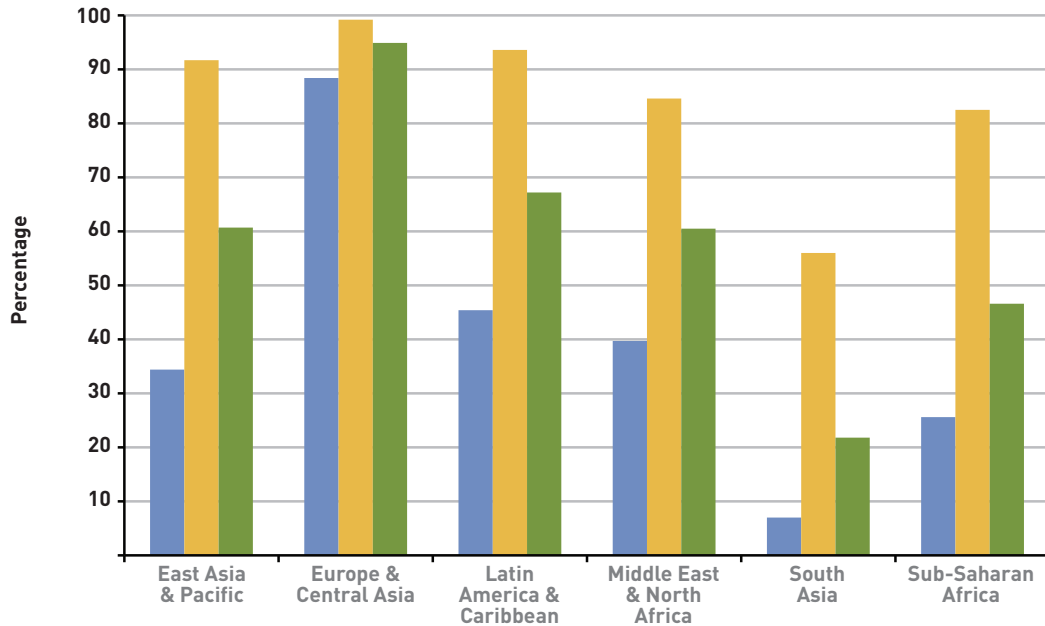
### **Poverty is a Key Determinant of Women's Use of Formal Maternal Healthcare Services and Maternal Mortality.**

There is emerging evidence of the link between poverty and maternal deaths in low- and middle-income countries. In Peru, for example, there is a sixfold difference between the MMR among the richest and poorest income quintiles (130/100,000 vs. 800/100,000).<sup>4</sup> In Indonesia, the risk of maternal death is around three to four times greater in the poorest than the richest groups.<sup>14</sup> An analysis across 10 developing countries<sup>iii</sup> reveals that the proportion of women dying of maternal causes increases consistently with increasing poverty.<sup>14</sup>

There are also significant disparities in the use of maternal healthcare services across socioeconomic groups. A 55-country analysis of the Demographic and Health Survey in the mid-1990s found that women in the richest quintile were 5.2 times more likely to give birth with a doctor, nurse or midwife in attendance than the poorest quintile.<sup>13</sup> As shown in Figure 3, data from the World Bank reveal similar disparities. In all regions except Europe and Central Asia, less than 50 percent of women in the lowest wealth quintile deliver with support from a medically trained person. Meanwhile, with the exception of South Asia, 80 percent or more of women in the highest wealth quintiles have their deliveries attended by trained personnel. On average, just about 22 percent of women in South Asia and less than half in Sub-Saharan Africa deliver with medically trained staff and in the lowest income quintiles just 7 percent in South Asia and a quarter in Sub-Saharan Africa do.

<sup>iii</sup> The countries included in this study are Burkina Faso, Chad, Ethiopia, Indonesia, Kenya, Mali, Nepal, Peru, Philippines and Tanzania.

Figure 3

**DELIVERY ATTENDED BY A MEDICALLY TRAINED PERSON**by Income and Region<sup>15</sup>

NOTE: Data from latest available year per country

■ Lowest Income Quintile    ■ Highest Income Quintile    ■ Population Average

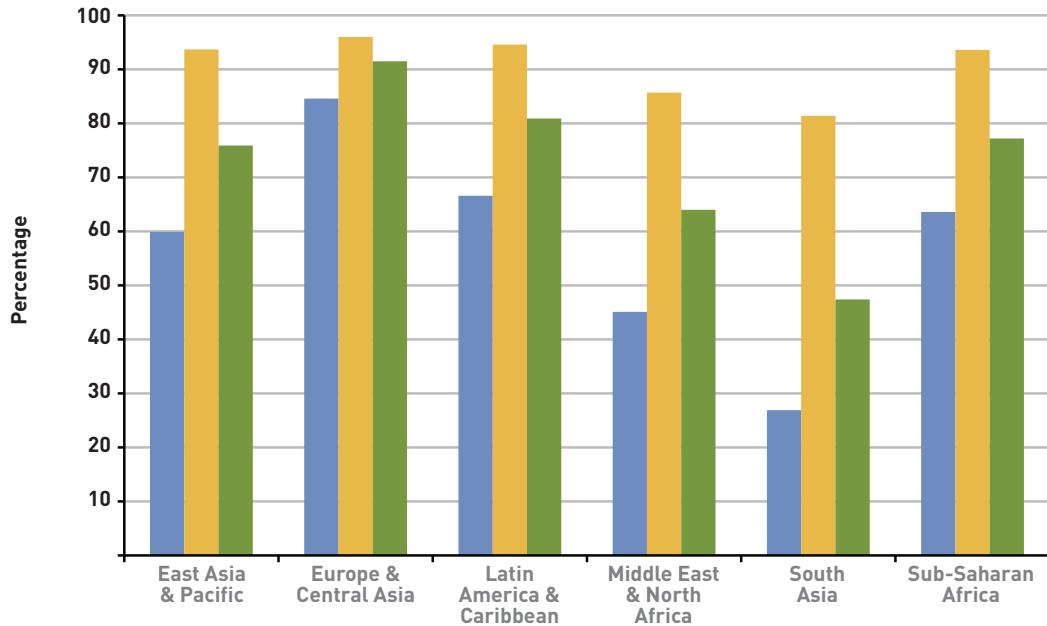
Although coverage for antenatal visits is generally at higher levels than attended deliveries in all regions, disparities exist between the richest and poorest quintiles. As shown in Figure 4, antenatal visits decline with each income quintile in all regions. The difference between the richest and the poorest is greatest in South Asia, where just 27 percent of women in the lowest wealth quintile make an antenatal care visit as opposed to 82 percent of those in the highest wealth quintile. South Asia also ranks last in terms of absolute levels of utilization of antenatal care.

Overall, the poorest women in the poorest regions of the world have the lowest maternal healthcare service access and use.<sup>16</sup>

### **Maternal Healthcare Costs are High, Unpredictable, a Barrier to Utilization and Potentially Catastrophic for the Poor.**

Cost is a key factor accounting for the low rates of utilization of maternal healthcare services among poor women. For women seeking maternal health care, costs include those for facilities and services, and involve both formal and informal fees, the cost of drugs and equipment, transport to a hospital or clinic, and the opportunity costs of getting to a health facility and receiving care.<sup>17-19</sup>

Figure 4

**At Least One Antenatal Visit**by Income Quintile and Region<sup>15</sup>

NOTE: Data from latest available year per country

■ Lowest Income Quintile    ■ Highest Income Quintile    ■ Population Average

Formal fees often take the form of user charges that accrue at the time of service and are typically financed out of pocket. Such fees can be relatively high, even in public health facilities, especially for the poor. A recent study in Indonesia, for example, showed that facility-based costs alone could be more than US\$200 for a delivery. For 68 percent of the study households in the poorest quintile, these costs amounted to more than 40 percent of the households' disposable annual income, an amount deemed "catastrophic" by the authors.<sup>20</sup> The costs of emergency care in the event of obstetric complications can be even higher. Thus, for many poor women, costs can be prohibitively high and prevent them from getting the maternal health care they need.<sup>18</sup>

Informal fees are unofficial payments that may have to be made even where services are nominally free. They may be paid for supplies or given as incentives to staff to induce better care. Studies show that such costs can be high, often higher than formal charges. They may exist even when there are no official charges. One study in Bangladesh showed actual charges for maternal care in government hospitals in Dhaka—where services were ostensibly free—amounted to US\$32 for a normal delivery and US\$118 for a Caesarean section.<sup>iv,21</sup> In one region of rural India, the poor pay almost as much for a visit to a "free" health clinic as for one to a private doctor.<sup>13</sup>

<sup>iv</sup> The average monthly income of study participants, which is likely above the national average since the sample was drawn from an urban population, was US\$123, according to these same authors.

The cost of travel can also be substantial and pose a significant barrier in many places. Studies in Tanzania and Nepal estimate transport costs at 50 percent or more of the total costs of care.<sup>18</sup> Studies from a variety of settings, including Philippines, Uganda and Thailand, show that distance had an adverse affect on women’s demand for facility-based deliveries.<sup>17</sup> Transport costs are high mainly because distances are great in the rural areas of low-income countries where the poor are concentrated, and road and transport infrastructure are in such a poor state. By contrast, halving distance to public health facilities in Ghana almost doubled utilization.<sup>13</sup>

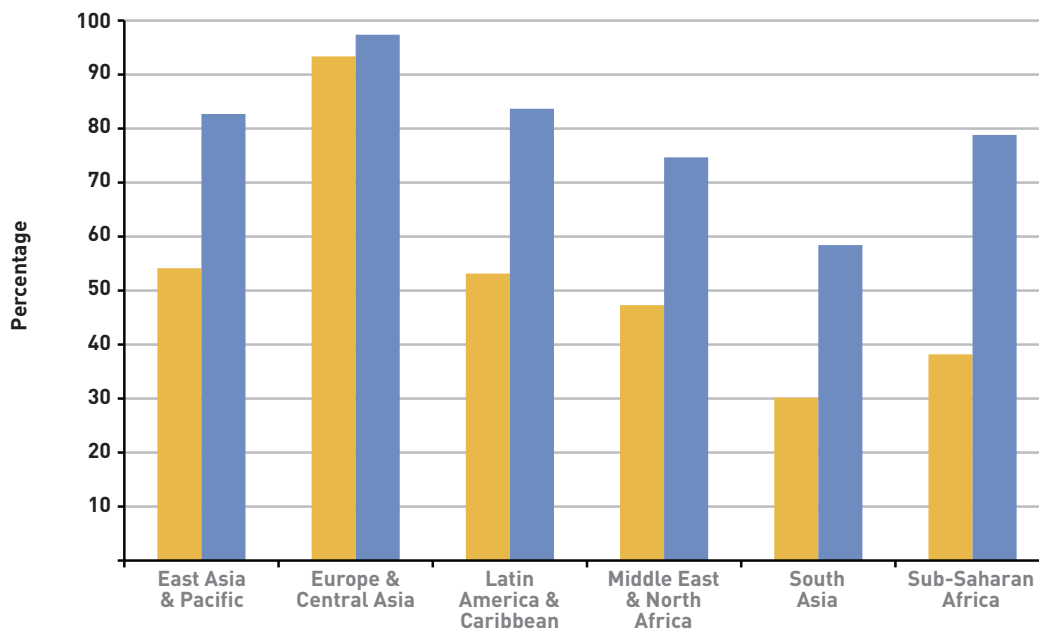
Figure 5 illustrates disparities in the percentage of deliveries by skilled health personnel in rural and urban areas. Utilization is significantly higher in urban than rural areas in all global regions. Furthermore, in the sample of 86 countries, 45 had an urban/rural difference of 30 percentage points or more in deliveries attended by skilled birth attendants.

The opportunity costs of seeking care can also be a significant barrier for poor women, who cannot afford to take time off from their productive work and lack the means to pay someone to carry out these tasks while seeking maternal healthcare services.<sup>19</sup>

**Figure 5**

### BIRTH ATTENDED BY SKILLED HEALTH PERSONNEL

by Region, Rural vs. Urban<sup>3</sup>



**NOTE:** Data from latest available year per country

■ Rural ■ Urban

**Gender Inequality is a Critical and Neglected Factor in Utilization of Maternal Healthcare Services.**

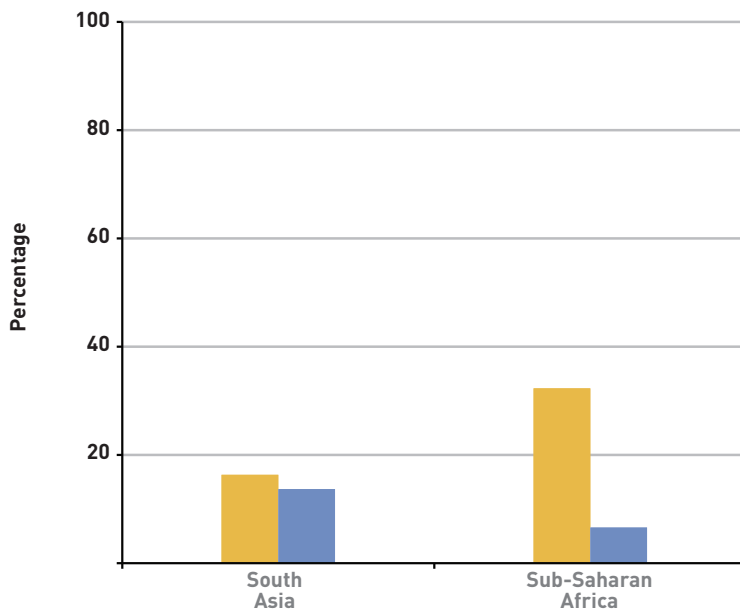
Deeply entrenched gender inequalities exist in many low-income countries where maternal deaths are high and health service utilization is low. Poverty is an important component of gender inequality, but the effects of unequal gender norms, like those of race, religion and ethnicity in some contexts, go beyond class differences.<sup>22</sup> This is because gender inequality is defined and perpetuated by social norms and culture, and reflects differences in power between men and women both within the household and in the wider society.<sup>22,23</sup> The effects include relatively higher rates of poverty and lower levels of education among women than men, women’s lack of autonomy and mobility, intimate partner violence and, overall, lower social status and disempowerment of women relative to men.<sup>24,25</sup> Figures 6 and 7 present regional and country data on some of the key indicators of gender inequality—lack of access to employment opportunities beyond unpaid agricultural labor on family farms and limited roles in decision making about women’s own health care.

Gender inequality and women’s low social status and disempowerment relative to men significantly impact women’s health, the health of mothers and overall demand for maternal healthcare services.<sup>28</sup> A study in Bangladesh, for example, showed that the probability of seeking

Figure 6

**WOMEN’S NON-AGRICULTURAL WORK AS PERCENTAGE OF THEIR TOTAL EMPLOYMENT**

in South Asia and Sub-Saharan Africa<sup>26</sup>

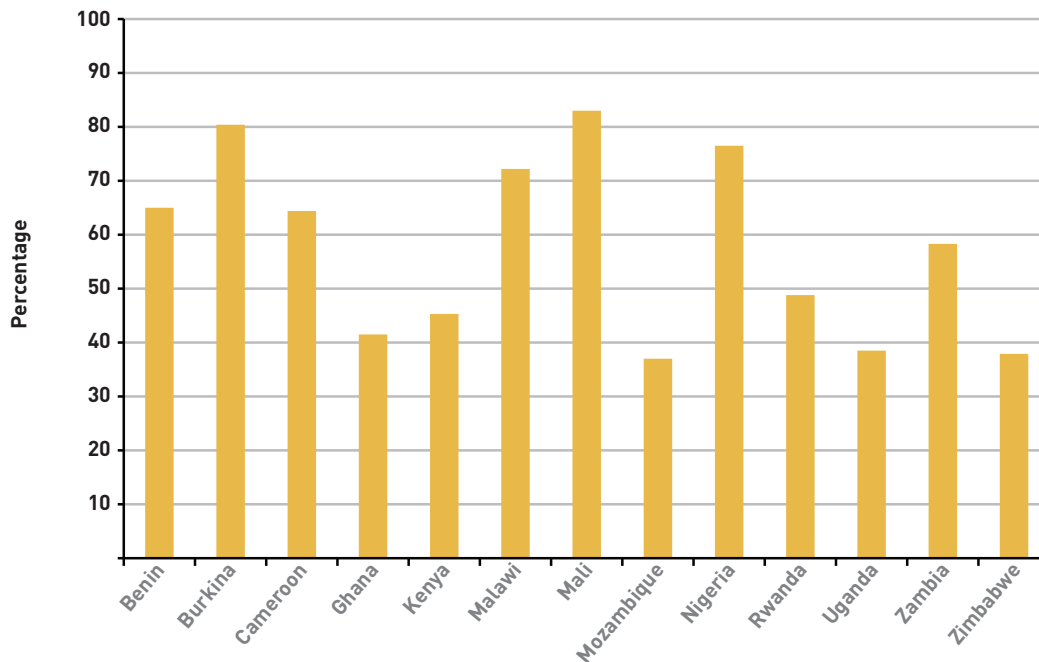


NOTE: Data from latest available year per country

Figure 7

### PERCENTAGE OF CURRENTLY MARRIED WOMEN WITH NO PARTICIPATION IN DECISIONS ABOUT OWN HEALTH CARE

Selected Countries in Sub-Saharan Africa<sup>27</sup>



**NOTE:** Data from Demographic and Health Surveys conducted from 1999–2004

Services Industry

any type of health care was 1.73 times greater among men than women.<sup>29</sup> In many conservative communities, cultural and social norms restrict women's mobility and prevent them from seeking health care.<sup>8,17,30</sup> In other cases, women's and girls' limited access to education deprives them of the knowledge and tools to make informed decisions.<sup>22,24</sup>

Women may get less support when they are ill than other family members; they may choose or be forced to seek treatment less often or delay seeking treatment—all with adverse health consequences, including preventable death. A large sample study in rural south India found only one-third of households that could afford health care (without getting into debt or selling assets) rationed treatment by gender, and the rationing was more intense in poorer household.<sup>31</sup> Family members may consider childbirth to be the concern of women and not of the household at large.<sup>32</sup> As a consequence, women may not get the kind of support they need to seek maternal healthcare services.

Women may also be more likely than men to seek treatment from informal providers, or to self-treat.<sup>33</sup> In Bangladesh, where utilization of preventive and curative care by women is low, women are economically dependent on their husbands, who may be unwilling to pay for care.<sup>33</sup> In Indonesia, researchers found that the wife's share of household assets (an indicator of power relations between the spouses) affected use of antenatal care.<sup>34</sup> While women who had no stake in household assets were found to be at a disadvantage in terms of healthcare decision making, small increases in ownership had a substantial impact on uptake of maternal healthcare services. Owning assets made women more likely to use antenatal care and deliver in a hospital or private doctor's office.

Gender also interacts with age to make young women particularly vulnerable to the ill effects of gender-inequitable norms on maternal healthcare access and utilization. These norms may dictate early marriage for girls. Globally, around 17 million young women are married before the age of 20, and a majority of these marriages take place in low-income countries.<sup>41</sup> Early marriage often leads to early childbearing and high total fertility, both of which are linked to higher risk of maternal mortality and morbidity.<sup>28,41,42</sup> In fact, it is estimated that between 25 percent and 50 percent of all young women in low-income countries give birth before they turn 18.<sup>41</sup>

Both poverty and gender bias feature into healthcare provider negative attitudes toward women and can create disincentives among them to seek maternal health care. O'Donnell<sup>13</sup> found that deficient capacity—manifested in lack of physical and human resources (absenteeism among staff, misdiagnosis, lack of basic supplies, etc.) as well as hostile attitudes of staff toward pregnant and parturient women discouraged them from seeking facility-based care.

### Box 3

#### The Impact of Gender-Based Violence on Maternal Health

Gender-based violence (GBV) refers to physical, sexual, psychological and economic abuses stemming from women's subordinate status in society, and can include controlling behaviors that restrict women's access to resources,<sup>35</sup> including health care. Most often these abuses are perpetrated by intimate partners and may begin or become aggravated by pregnancy,<sup>36</sup> thus compromising maternal health. The prevalence of physical abuse during pregnancy in developing countries ranges from 4 percent to 32 percent.<sup>37</sup> Indeed, studies have found that maternal mortality is higher among abused mothers.<sup>37,38</sup> Fatal outcomes include maternal death caused by direct trauma and stress.<sup>36,37</sup> Nonfatal outcomes include unintended pregnancy, vaginal and cervical infections, kidney infections, miscarriages/abortions, premature labor, preterm labor and preeclampsia.<sup>37,39,40</sup> Experts recommend that all women seeking prenatal care should be screened for abuse.<sup>35,37</sup>

Thus, the available evidence shows that while it is critical to improve and expand services and to reduce the burden of cost for low-income women, these actions alone may not be sufficient to guarantee that women will use maternal health care. Gender inequality may still prevent women from obtaining access to healthcare services. Therefore, efforts to improve maternal healthcare utilization and outcomes must also find ways to empower women and overcome the effects of gender inequality, and even directly challenge the underlying structures of gender inequality.<sup>22,28</sup> While not all such efforts may be within the purview of healthcare programs, it is important to discover those that are and to act on them, as well as to advocate for investments that improve women's status overall. Moreover, there is a need for more systematic research to elucidate the factors contributing to women's disempowerment and links between those factors and the utilization of maternal health care. Finally, it is important to include gender indicators in assessments of health and development policies and programs focused on improving maternal healthcare utilization.

The next section reviews selected programs and interventions designed to overcome income- and gender-related barriers to maternal healthcare utilization, assesses their relative effectiveness and identifies best practices.



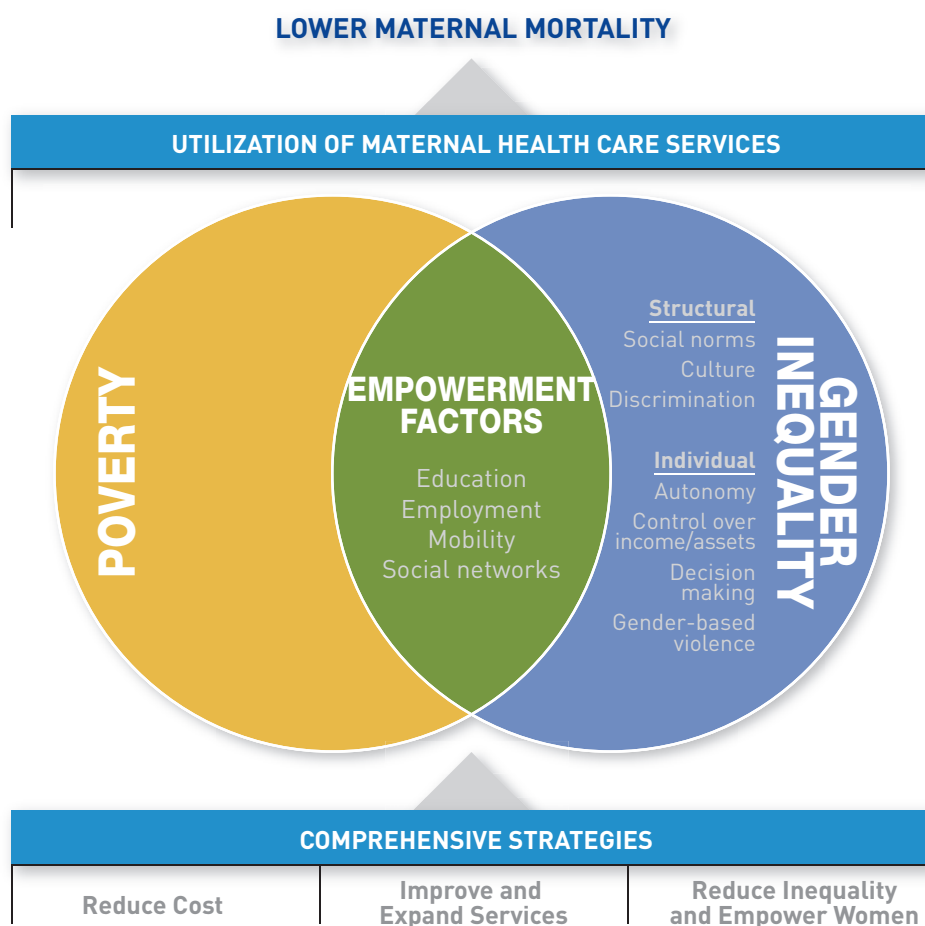
## Strategies to Increase Utilization of Maternal Healthcare Services: How Well Do They Address Poverty and Gender Inequality?

As described above, a mix of economic and gender-related factors shapes women's health-seeking behavior, their demand for various maternal healthcare services, and their ability to access and utilize services. On the supply side, delivery of services is shaped by financial, physical and human resources to provide sustained, high-quality, accessible and affordable care.<sup>13,17</sup>

Figure 8 shows at its base the kinds of broad strategies needed to increase utilization by enabling women to overcome barriers posed by poverty and gender inequality. Because of the importance of poverty in deterring use, a wide variety of strategies have been designed and implemented to reduce the burden of cost. On the demand side, these strategies range from the removal of user fees to the provision of conditional or unconditional cash transfers. On the supply side of maternal healthcare provision, strategies designed to increase utilization include performance-based

Figure 8

### Women at the Center of Maternal Health Care: Removing Barriers to Utilization



incentives for providers and contracting private organizations to provide maternal health services. Strategies that empower women to become active healthcare consumers are also needed but are much less common. They include education, employment, social networks and increased mobility. They are shown at the intersection of poverty and gender inequality because they simultaneously help women to overcome both the poverty and gender inequality barriers to healthcare utilization. Empirical research has also demonstrated these effects—to a much greater extent in the case of education, and less so in employment, social networking and mobility, as will be shown below. This paper argues for integrating all these mechanisms into comprehensive strategies for addressing poverty and gender inequality, thereby enabling poor and disempowered women to benefit from the provision of high-quality maternal health care.

In order to better understand good practices that can inform the design of poverty and gender-responsive policies and programs, this section analyses key results from selected program evaluations.<sup>v</sup> The review is not exhaustive but rather highlights a variety of recent impact evaluations conducted in low- and middle-income countries as the basis for assessing the field and for informing future program and policy directions. Although the focus is on rigorously evaluated programs, a few less rigorous studies are also included because they provide the only evidence available on some of the issues of interest for this paper. The analysis below presents relevant findings, including—wherever possible—the extent to which the programs addressed poverty and gender inequality and whether they benefited the most poor and disempowered women.<sup>vi</sup>

<sup>v</sup> Selection criteria included: i) low- or middle-income country setting; ii) published in the last 10 years; iii) evaluation methodology was considered the most rigorous; iv) evaluation showed program impact on indicators of interest such as antenatal care, delivery, postnatal care utilization. Where strategies employed a mix of components, we classified them by the main intervention based on emphasis given in the study.

<sup>vi</sup> We present the impact on the maternal healthcare services only and do not include discussion of child health services, although they are often paired with maternal health care in these programs.

## Reducing the Burden of Cost

When introduced 20 years ago, user fees were expected to improve effectiveness, efficiency and equity in health systems.<sup>43</sup> Yet a substantial body of literature shows that they did not deliver as expected; user fees have been shown to disadvantage the poorest, and magnify poor/rich gaps in maternal healthcare use and outcomes.<sup>18,43</sup> The introduction of fees in a district in Nigeria, for example, resulted in a 50 percent drop in hospital deliveries, while doubling the number of maternal deaths.<sup>18</sup> Waivers and exemption schemes for the poor also failed because, in addition to other problems, they were difficult to administer, with inferior targeting mechanisms and inconsistency in application.<sup>13,18</sup>

User fees also failed to generate the financial resources needed to replenish healthcare systems and increase efficiency. This was largely because the revenues generated by the user fee systems were not substantially greater than the cost of administering them. A review of the implementation of user fees in 19 African countries revealed that, on average, the revenues they generated accounted for 6.9 percent of the public health budget.<sup>43</sup> Furthermore, revenues were not retained at the local level, where they could have been used to improve accessibility and the quality of services.<sup>18</sup>

There is currently strong and growing support for abolishing user fees and providing free health care for women and children in many countries. Recent reforms have, therefore, focused on removing user fees for all.<sup>23</sup> As Box 1 showed, provision of free maternal health care is one of the five key action items in the Global Consensus for Maternal, Newborn and Child Health.

### **Removing User Fees Can Increase Demand Among Low-Income Women, but Will Require Sustainable Financing and Careful Planning.**

As noted above, many low- and middle-income countries have recently removed user fees to increase uptake of healthcare services. Results show that this strategy has effectively increased utilization of maternal healthcare services overall, including among the poorest in many settings (see Box 4). Removal of fees in Niger in 2006, for example, doubled antenatal visits; in Burundi, births in hospitals rose 61 percent, and the number of Caesarean sections increased 80 percent; in rural Zambia, utilization rates in government facilities increased by 50 percent and proportionally more among the poor with no reported decline in the quality of care.<sup>44</sup> When South Africa abolished user fees for pregnant women and children under age six, there was a significant positive impact on total utilization.<sup>18</sup> And in Uganda, removal of health user fees in public facilities increased use of hospital services by 84 percent, with a 12 percent to 14 percent increase in the bottom income quintile versus 6 percent among those in the highest quintile.<sup>45</sup>

But removal of user fees can have unintended negative consequences, including increases in demand that overburden existing healthcare systems and jeopardize the quality of care provided.<sup>47,48</sup> Furthermore, this strategy may result in a surge in unofficial payments to provide incentives to staff, obtain better service and pay for basic supplies that are otherwise lacking.<sup>18</sup>

**Box 4****Removing User Fees: Findings from Ghana**

In 2004, Ghana instituted a national policy to exempt women from paying for deliveries in public and private health facilities. An evaluation of the program found that the exemptions were cost effective and that equity issues were appropriately addressed—there was a significant increase in facility-based deliveries among the third and fourth poorest quintiles. Out-of-pocket spending relative to income was lowered, although more so among richer households. The proportion of households falling into poverty due to catastrophic out-of-pocket delivery payments dropped from 2.3 percent to 1.3 percent.<sup>46</sup>

**Box 5****Alternative Healthcare-Financing Mechanisms**

Indirect financing mechanisms, which are mainly based on pooling or prepayment principles, often produce more equitable outcomes, particularly when they are designed and implemented effectively.<sup>13,18</sup> These include tax-based financing, social insurance and private insurance, including community-based insurance schemes.

Among alternative healthcare-financing mechanisms, tax-based financing is viewed by many as the ideal, particularly if the tax system itself is progressive or proportional and the funds are spent equitably across the population.<sup>50</sup> In many low-income countries, however, the lack of a large tax base and effective tax-collection systems limit the usefulness of this mechanism.<sup>13,51,52</sup> Social insurance generally distributes the burden of health financing between employees and enterprises, and allows public funds to subsidize premiums for the poor.<sup>51,53</sup> Among its limitations in low-income countries is its ineffectiveness in reaching the unemployed, self-employed and those in the rural and informal sectors.<sup>18,51,53</sup> The relatively new model of community-based health insurance can be effective in reaching these populations,<sup>48,52</sup> but to date remains limited in scale. Where they have been successful, community-based insurance schemes are not small-scale programs but are an integral part of national health systems.<sup>48</sup>

These experiences suggest that while removal of user fees can improve access to health care among the poorest in some cases, the process requires careful planning to mitigate unintended negative consequences. Health systems choosing to remove fees should be prepared for the higher demand for services and ensure adequate levels of staffing, drugs and supplies. As a rule, therefore, removal of user fees can be effective if accompanied by requisite financial investment. Exploration of alternate mechanisms for sustainable and equitable financing of health systems in the absence of user fees is also merited.<sup>43,47,49</sup> A number of existing models are discussed in Box 5 above.

### **Providing Subsidies to Targeted Populations Has the Potential to Increase Access and Utilization of Maternal Healthcare Services by Poor Women.**

Voucher programs are designed to provide purchasing power to their recipients, while increasing access and utilization, and usually consist of a subsidy that can be used by beneficiaries to cover (fully or partially) the cost of a service offered by a predefined set of providers. Offering beneficiaries a choice of providers should increase competition, reduce costs and ultimately improve the quality of services.

A health center-based voucher scheme offering vouchers to pregnant women to offset costs for antenatal care and delivery (such as user fees and transportation costs) was evaluated in three districts in Cambodia.<sup>54</sup> The scheme was introduced in 2007 in 30 health centers selected by quality criteria. The program was introduced to complement two other schemes: the hospital-based Health Equity Fund (HEF), another voucher program<sup>vii</sup> run in three district hospitals, and the performance-based contracting (PBC) scheme, both introduced in late 2005. A nationwide delivery incentive scheme<sup>viii</sup> was also introduced at the end of 2007. The evaluation found that the vouchers improved access to antenatal care and safe delivery for poor women.<sup>54</sup> Vouchers supported 20 percent of health center deliveries in the three study districts and 45 percent of the total hospital deliveries. In all, 25 percent of all women delivering used the hospital and health center-based voucher schemes. In 2008, vouchers financed 41 percent of expected births among poor women.<sup>ix</sup>

It appears that vouchers may work best when combined with other programs. For example, the largest number (and highest increases) of facility deliveries occurred in 2008 when all three interventions were in place. Absolute increases in facility deliveries between 2006 and 2008 were 29 percent of expected deliveries in the study districts with all four interventions (voucher, HEF, PBC, delivery incentives), 14.5 percent in the two control districts (with PBC and delivery incentive only) and 9 percent in four districts with the delivery incentive only. Consequently, the authors conclude that while the overall increase in facility deliveries, particularly self-paid deliveries, can be explained by the improved performance due to the PBC and delivery incentive schemes, there appears to be an additional contribution when demand-side schemes are implemented as well.

Qualitative information from the evaluation provides insights into women's reasons for choosing to deliver at a health center, beyond the financial incentives. Women reported feeling safer delivering at a health center, and appreciated being able to get their baby vaccinated on-site. Additional benefits of the program included 24-hour service provision, promotion of facility deliveries in communities and stronger monitoring by health management teams to ensure no informal payments were being requested.

<sup>vii</sup> The HEF is targeted to the "very poor" and "poor" who receive a full or partial package that includes hospital user fees, transportation, food allowance and funeral costs.

<sup>viii</sup> Through this scheme, midwives and health personnel receive US\$12.5 or US\$15 for each live birth attended in a referral hospital or a health center, respectively, in addition to the user fees charged.

<sup>ix</sup> Of the 1,093 poor pregnant women who received vouchers in 2007, 78 percent used their vouchers for the first antenatal care visit, 61 percent for the second visit, 46 percent for the third visit and 45 percent for delivery. Facility deliveries increased from 16 percent of expected births in 2006 to 45 percent in 2008.

However, not all eligible poor women were reached, and not all of the vouchers distributed for deliveries were used. Reasons for nonuse of vouchers included dissatisfaction with health center staff, perceived difficulty in finding transportation in the middle of the night, concern about whether the subsidy would fully cover transportation from remote areas and the lack of people at home to take care of the household.

The authors conclude that while vouchers have a strong potential for reducing financial barriers and improving access to skilled healthcare professionals, supply-side limitations and non-financial demand-side barriers also need to be addressed in order to achieve stronger impact and reach the most disadvantaged.

Ultimately, any system that subsidizes the cost and increases the demand for services should be scaled up only in areas with reasonably good public health services in place, which can absorb the increase in demand. Overall, vouchers may work best when demand is predictable, and when vouchers are combined with social marketing to increase awareness and encourage use.<sup>13</sup>

### **Conditional Cash Transfers Increase the Demand for Maternal Healthcare Services and Can Empower Women to Become More Active Healthcare Consumers.**

Like voucher programs, conditional cash transfers (CCT) function as social assistance programs, which seek to redistribute resources and provide purchasing power to low-income households or individuals. Yet the transfer is conditioned upon certain behaviors, such as school attendance or utilization of health services.<sup>55,56</sup>

Results from an experiment in Mexico suggest that providing cash to women conditioned upon specific behaviors, such as attending classes on maternal health care and/or accessing maternal healthcare services, increased the use of certain services. In the case of *Oportunidades*, introduced in 1997, cash transfers were paid to poor rural women conditional on their obtaining healthcare and nutritional supplements, and participating in health education sessions.<sup>55</sup>

Eligibility for the program was determined in two stages: first, marginalized communities were identified, and then low-income households within those communities were selected. An important feature was that the provision of cash transfers was made directly to the mother of the family.<sup>57</sup> According to Adato et al.,<sup>58</sup> the choice of making the mother the recipient of the transfer was deliberate and based on the assumption that when resources are controlled by women, greater improvements in child health and nutrition are achieved than when resources are controlled by men.

The results of the evaluation showed that beneficiaries received 12 percent more antenatal procedures than non-beneficiaries. Total quality scores (measured as a percent of procedures received during the visits) and those of each domain (history taking and diagnostics; physical examination; prevention and case management) were also higher among beneficiaries.<sup>59</sup> The authors believe that the difference in quality was due to the empowerment of the women beneficiaries as a result of the education requirement. During the education sessions, women learned what they should expect from maternal healthcare visits and were encouraged to be more active healthcare consumers.<sup>59</sup> This finding is consistent with results of a qualitative study, which reports that participating women experienced increased self-confidence, freedom of movement and freedom of association.<sup>57</sup>

## Improving and Expanding Services

### **Training and Posting Skilled Community-Based Attendants Can Increase Coverage among the Poor in Remote Areas.**

Community-based skilled delivery care is intended to increase the availability of skilled attendants at the community level in order to reach the poorest and most remote populations. Bringing services closer to the community is expected to increase utilization of maternal health-care services by reducing barriers created by distance and, by extension, the transportation and opportunity costs of reaching health facilities.

The Indonesian *Bidam Di Desa* (the Village Midwife) Program was designed to increase professional delivery care to the poorest women by posting a trained midwife in every village in the country. The program was launched in 1989, and by 1996 it had trained more than 50,000 midwives throughout the country to operate as multipurpose healthcare providers, with specific responsibility for pregnancy, delivery and postpartum care.

Overall, the use of professional attendants during delivery increased among the poorest quintiles and those living in rural areas.<sup>60,61</sup> The program succeeded in increasing the use of professional care at delivery and reducing the socioeconomic inequalities in professional attendance at birth. Yet it appears that more should be done to reduce inequities, especially with respect to emergency obstetric care.

After 1991 (when the program was fully implemented<sup>x</sup>), the use of professional attendants increased among the poorest quintiles and those living in rural areas. The increase in professional attendance was statistically significant and equivalent to 11 percent per year among the poorest two quintiles compared to 6 percent per year for women in the middle quintile.<sup>60,61</sup> Moreover, half the increase in professional attendance occurred in health facilities. With respect to Caesarean sections, the rate remained less than 1 percent for the poorest two-fifths of the population, but rose to 10 percent for the wealthiest fifth, suggesting an unmet need for potentially lifesaving care. It should be noted that higher user fees in public hospitals since 1991 may have increased the costs of emergency obstetric care.

However, access to and use of services by the poor were not always uniform; in some areas, for example, 60 percent of the midwives' earnings came from private fees, which disproportionately impacted negatively on service utilization by poorer women. The authors conclude by recommending disproportionate public funding for subdistricts with a larger number of poor households and additional incentives for midwives to serve poor and remote populations.

In this example, decentralizing the availability of skilled attendants and bringing services closer to low-income populations had a significant impact on access and use overall. But complementary measures like cash transfers or vouchers may be needed to ensure that the very poor also have access to services, even where healthcare providers charge fees.

<sup>x</sup> The intervention achieved a ratio of one village midwife per 54 births per year.



### **Providing Incentives to Improve Providers' Behaviors Can Increase Uptake of Maternal Healthcare Services, but Additional Inputs May be Needed to Reach the Very Poor.**

Pay for performance (P4P) schemes are designed to improve utilization and quality of healthcare services by providing monetary incentives to healthcare providers. The rationale behind these programs, also called results-based financing (RBF) schemes, is that if payments are linked to specific performance indicators (such as an increase in service utilization), healthcare providers will be motivated to perform better on those outcomes.<sup>xi,62</sup>

Rwanda implemented and evaluated a P4P scheme from 2006 to 2008 in which providers received bonuses conditional upon the quantity and quality of maternal healthcare services provided.<sup>63</sup> The program provided case-based bonuses of US\$27-\$36 conditional upon the quality of the services provided. The evaluation showed a statistically significant impact on the probability of institutional delivery (21 percent increase from baseline), and a statistically significant impact on the quality of prenatal care. There was no impact on the likelihood of women seeking antenatal care, however. One reason for this difference may have been the level of financial incentive provided; less significant changes occurred for the services with low financial incentives (e.g. US\$0.09 for an antenatal visit vs. US\$4.59 for an institutional delivery). Given the high return for institutional deliveries, some providers enlisted community health workers to conduct outreach to women to deliver in a facility.<sup>xii</sup>

The study suggests that for uptake of services that are highly dependent on women's behaviors, financial incentives for facility-based providers alone may not be enough. Instead, incentives should also be considered for the clients and for community health workers to find and encourage women to use the health facilities. Additionally, provider incentives may be more effective in reducing income inequalities if higher amounts are awarded for increases in utilization among the poorest women. The *Janani Suraksha Yojana*, a central government program in India, has incorporated these incentives in its design (see Box 6).

### **Contracting Private Organizations to Deliver Maternal Healthcare Services Can Increase Use by Poor Women, But Attention Must be Paid to the Quality of Services Provided.**

Purchasing specific services from private providers is another, possibly more cost-effective, alternative to standard public financing and provision of healthcare services. Different models exist, but in all cases contracting nonpublic providers expands the supply of services and should increase access to and utilization of services by the most poor and marginalized populations. Expanding the range of available providers should also stimulate competition and therefore decrease costs and/or improve quality. Few evaluations exist that measure the impact of contracting out healthcare services<sup>66</sup> and only one was identified that specifically focused on maternal healthcare—a study in nine districts in Cambodia.<sup>67</sup> This study found that those districts in which non-governmental

<sup>xi</sup> For more information on ongoing RBFs, see <http://www.rbfhealth.org/rbfhealth/>.

<sup>xii</sup> Unfortunately, the study report did not indicate whether the program benefited the poorest women.

**Box 6****The Janani Suraksha Yojana (JSY) in India**

The JSY program was launched in 2005 under the umbrella of the National Rural Health Mission and as part of the Reproductive and Child Health Program Phase II. Main features of the program include cash payments to pregnant women and community health workers for institutional deliveries, careful targeting, the use of community health workers as a link between the government and pregnant women, and partnering with the private sector to ensure full coverage of the increased demand for services.

Targeting was designed so that both eligibility to receive the benefits and the amount of cash incentive depend primarily on geographic location, level of poverty, caste and ethnicity. The program provides benefits to all pregnant women in states with low institutional delivery rates and targets the most vulnerable<sup>xiii</sup> in states with higher institutional delivery rates. Also, the amount of cash received in the rural areas is higher than in the urban areas. Community health workers receive benefits in the most vulnerable parts of the country if they identify pregnant women, encourage institutional delivery, provide a postnatal care visit and arrange to immunize the newborn until the age of 10 weeks. While the scheme is meant to promote and increase the demand for institutional delivery, it is also designed to increase the supply of services by ensuring an adequate number of around-the-clock delivery services, and by subsidizing the cost of private sector specialists for emergency care if not available at the government health facility.<sup>64</sup>

Using data from the nationwide district-level household surveys conducted in 2002-2004 and 2007-2009, an evaluation found that JSY was not evenly implemented across the country, resulting in a range of less than 5 percent of parturient women receiving cash payments from the program in some states to a high of 44 percent in others. It was also evident from the evaluation that, while the poorest and least educated women were not always the most likely to receive the cash transfers, the program did have a significant effect on increasing antenatal care and in-facility births: JSY payment was associated with a reduction of 3.7 perinatal deaths per 1,000 pregnancies and 2.3 neonatal deaths per 1,000 live births. In the with-versus-without comparison, the reductions were 4.1 perinatal deaths per 1,000 pregnancies and 2.5 neonatal deaths per 1,000 live births.

The authors of the evaluation conclude that while the program shows promise, improved targeting will be required if the poorest women are to be equitably reached with assistance. Quality of care in maternal health facilities will also need to be improved.<sup>65</sup>

<sup>xiii</sup> Women are classified as most vulnerable if below the poverty line (BPL), or of scheduled caste or tribe, and only if they are 19 years of age and older, and giving birth to their first or second child.

organizations (NGO) received public financing for delivering and managing maternal healthcare services experienced a much greater increase in antenatal care, tetanus immunization coverage and facility-based deliveries than districts where these services were run by the government. Two contracting models were implemented: In the “contracting-out model,” contractors had full responsibility for delivery, employment and management of specified services; in the “contracting-in model,” contractors provided only management support to civil service health staff. The control districts (with the “conventional model” of public provision) and the contracting-in districts received an additional budget supplement of US\$0.25 per capita.

The results indicate that contracted districts outperformed control districts and contracting out was more effective than contracting in. Antenatal care and tetanus immunization coverage increased by 400 percent in contracted-out districts as compared to 150 percent to 200 percent in control and contracted-in districts. However, facility delivery increased more in contracted-in districts (+225 percent) as compared to contracted-out (+142 percent) and control (no change) districts. Trained delivery care did not change dramatically in any of the three arms.

It was particularly interesting that among households with low socioeconomic status, women’s use of services in the contracted-out districts increased, and out-of-pocket payments for health care decreased.<sup>67</sup> One reason for this difference is that the NGOs, perhaps through greater efficiencies, did not charge user fees and also paid a living wage to their staff. In the control districts, on the other hand, where clients were charged user fees and under-the-table payments, employees were not paid a living wage and were allowed after-hours private practice. The contracted-in districts charged user fees but were able to provide higher salaries and ban private practice.

## Improving and Expanding Service Provision While Covering Costs for the Poor

### Partnering with Private Providers Can Reduce Supply Shortages, and When Accompanied by Targeted Cost Subsidies, Can Substantially Benefit the Poor.

An interesting example of a program that combined demand- and supply-side strategies is the *Chiranjeevi Yojana* (Long Lives to Mothers) scheme implemented and evaluated as a pilot in five districts in Gujarat, India, in 2005, and scaled up to the whole state in 2007.<sup>68</sup> The objective of the program was to improve rates of institutional delivery by simultaneously: i) increasing the supply of services accessible to poor women by paying private providers a fixed rate for deliveries, and ii) reducing the costs to families by covering some out-of-pocket costs.

Vouchers or below the poverty line (BPL) cards were used to target BPL families. Delivery in a private facility was designed to be a “cashless” event, where direct and indirect out-of-pocket costs (such as travel and incentives to an accompanying person) were covered. Private providers were enrolled in the program and reimbursed on a capitation payment basis at a fixed rate for deliveries. Sixty-one percent of private providers in the districts participated in the program, and approximately 28 percent of BPL deliveries in five districts were covered by the program. Institutional deliveries increased from 38 percent to 59 percent during the first 10 months of implementation of the scheme.<sup>69</sup>

The impact of the program on emergency obstetric care provision for the poor was evaluated along with a design that compared beneficiaries to non-beneficiaries in one district.<sup>68</sup> According to the study,<sup>xiv</sup> 96 percent of the beneficiaries used antenatal care services, and among those who experienced antenatal problems, 71 percent went to private facilities. Ninety-seven percent of deliveries among beneficiaries occurred in a private health facility; among non-beneficiaries, 77 percent of deliveries were conducted in private facilities, 21 percent at home and 1.8 percent in a government institution.

The scheme was not completely free as participants had to pay for medicines and some transportation costs, and not all eligible families participated. Nevertheless, the total average cost of a delivery for program participants was only 22 percent of that incurred by nonparticipants. In addition, the program was successful in addressing the shortage of medical specialists in Gujarat, and in targeting and reaching the poor in a context where acceptability of private care providers was already high.

<sup>xiv</sup> The paper doesn't provide statistical evidence to corroborate the results; statistical significance is not presented for all the differences in means between treatment and control groups.

### **Strengthening Healthcare Systems, Mobilizing and Educating Communities Can Increase Institutional Deliveries, Particularly Among the Poorest.**

The *Skilled Care Initiative (SCI)* implemented by the Ministry of Health and Family Care International in Burkina Faso between 2003 and 2006 simultaneously addressed supply- and demand-side barriers in order to increase both accessibility and utilization of maternal healthcare services. This comprehensive strategy involved three sets of activities: 1) strengthening healthcare systems to increase skilled care during birth; 2) offering high-quality, accessible and essential obstetric care close to where women live; and 3) mobilizing and educating communities to plan for and use routine and emergency maternal healthcare services.<sup>70</sup>

An evaluation of the program by Brazier et al.<sup>71</sup> found a significant increase in the proportion of facility-based deliveries, particularly among the very poor. The study employed a quasi-experimental design that compared utilization of delivery care in two rural districts: Ourgaye, where SCI was implemented, and Diapaga, where it was not. In Ourgaye, the proportion of births at a health facility increased from 29 percent in 2003 to 59 percent in 2006. The gains among households in the poorest wealth quintile were particularly striking, rising from 13 percent to 54 percent. In the comparison district, Diapaga, the authors did not find a significant increase in the proportion of facility-based deliveries nor a change in use across wealth quintiles.

One limitation of the study was that it could only evaluate the full package of interventions, not isolate which aspects of the program had the greatest impact. It is possible that combining community outreach with institutional strengthening had a synergistic effect in increasing facility-based deliveries, or that one aspect of the program was driving the positive result. Another limitation was in determining the quality of care women received, and if it was consistent across patients and health facilities. A similar study in 2008 found a significant increase in institutional deliveries, but no increase in Caesarean section uptake.<sup>72</sup> This may indicate that some women did not receive emergency obstetric care when needed.

These limitations aside, the SCI is among the few examples of a maternal healthcare intervention that was able to both increase the overall use of maternal health services and reduce the disparities in use between rich and poor.

## Reducing Gender Inequality and Empowering Women for Better Maternal Health

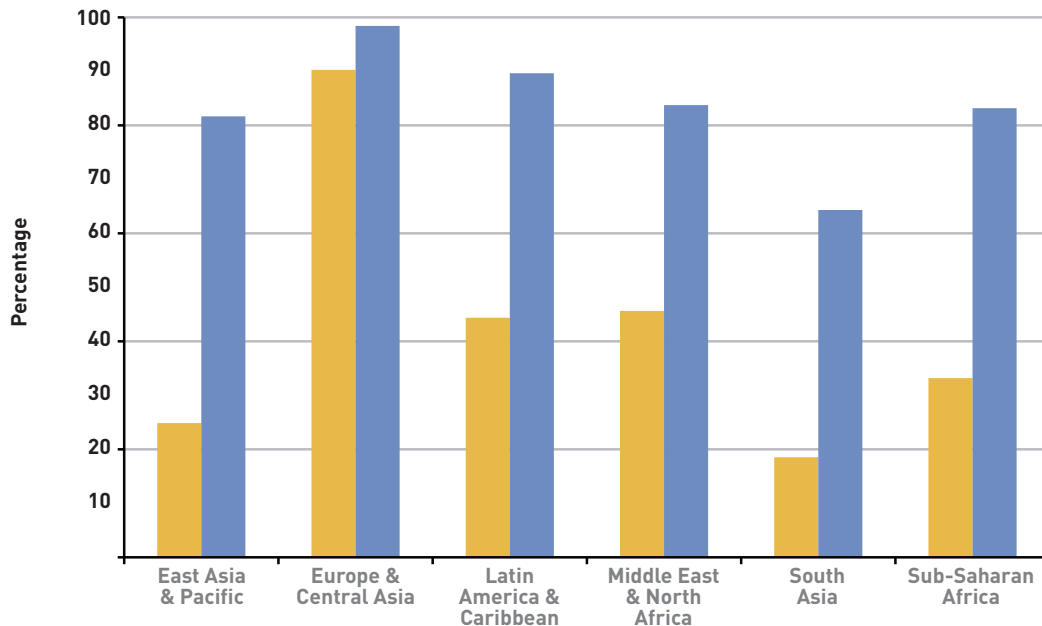
The previous sections reviewed strategies for increasing utilization of maternal health services by addressing financial and health systems barriers, particularly among the poor. This section shifts the emphasis to a set of approaches that seeks to reduce maternal mortality by removing “empowerment” barriers to maternal healthcare service access. The review finds that women’s education is especially effective in improving utilization of maternal health services, and the literature on this issue is extensive. Evidence on the links between utilization and other empowerment factors such as employment, autonomy and decision making is neither as clear nor as extensive but, because they are so important in limiting utilization, they are worth investigating further and more systematically. Meanwhile, programs that foster women’s active participation in addressing healthcare challenges are offering new insights into how to improve maternal health care.

### Women’s Education and Employment Increase Utilization of Maternal Healthcare Services

Many studies show that women’s education increases the use of maternal health services independent of a number of other factors.<sup>16,34,73-76</sup> Educated women are more likely than uneducated women to use antenatal, delivery and postnatal care.<sup>16</sup> As shown in Figure 9, in 49 out of 62 countries with data, the difference between the deliveries attended by skilled health personnel for women with the highest and the lowest education levels was 30 percentage points or higher. Improvements in secondary education for girls may be even more effective than primary education, and is especially important in countries where girls face greater discrimination and where son preference prevails.<sup>24</sup> Educated women are not only more likely to benefit from maternal health services, but they have greater autonomy, confidence and decision-making ability and power. Furthermore, studies in countries as diverse as Zimbabwe and Pakistan show a strong association between education and contraceptive use.<sup>77,78</sup>

If women are employed, can control the income they earn and are able to accumulate assets, they are less dependent on spouses and other members of their households and are better able to make their own health care decisions. For example, a recent study found women’s employment has a positive effect on maternal health and is associated with reduced maternal mortality and morbidity.<sup>16</sup> Unemployed women in the same study were more than four times as likely to die from causes related to pregnancy and childbirth than those who were employed.<sup>16</sup> Simkhada et al.<sup>80</sup> found women’s paid employment to be a statistically significant factor in use of antenatal care in seven of 28 studies they reviewed. Studies in Nigeria and Philippines show that women working as civil servants or white collar workers use antenatal care services more than housewives and the unemployed. However, much less research has been done on the links between employment and maternal health than on the links with education, and this knowledge gap needs to be filled.

Figure 9

**PERCENTAGE OF BIRTHS ATTENDED BY SKILLED HEALTH PERSONNEL**by Education Level of Mother and Region<sup>79</sup>

NOTE: Data from latest available year per country

■ Lowest Education Level    ■ Highest Education Level

### **Evidence on the Links Between Maternal Health and Other Dimensions of Empowerment is Limited, and Much More Research is Needed.**

As noted above, “empowerment” has been defined as “the expansion in people’s ability to make strategic life choices in a context where this ability was previously denied to them”<sup>12</sup> and includes dimensions of agency (the ability to act on one’s own desires) and processes of change.<sup>11</sup> The relevance of empowerment to health care use is borne out in a number of studies, which cite the importance of factors such as mobility, autonomy and control over decision making in utilization of healthcare services. Seven studies have been published since 2000 on this topic—three in India, two in Nepal and one each in Indonesia and Pakistan.<sup>34,75,81-85</sup> Dimensions of autonomy examined varied greatly between studies and included asset ownership, financial autonomy, decision-making power in the household and freedom of movement. Conclusions also differed: Four studies found women’s autonomy to be positively and significantly associated with use of antenatal care; three did not. Of the four studies that looked at the effects of autonomy on institutional or trained attendant delivery, all found a positive association. Disaggregating further, Mistry et al.<sup>75</sup> found women’s financial autonomy had a positive association with institutional and attended delivery, while decision making was not a significant factor.

Over the past five years, a growing number of programs have adopted gendered approaches to improve healthcare outcomes. In their review of 40 such programs, Rottach, Schuler and Hardee<sup>30</sup> found that gender-aware programs had better reproductive health outcomes, including maternal health outcomes, than programs that did not attend to gender issues in design and implementation. These authors classify gender-aware programs along a continuum that ranges from exploitative through accommodating to transformative. Gender-accommodating approaches typically do not seek to change norms and inequities, but endeavor within existing normative structure to improve outcomes for women. While perhaps not ideal, this approach may be strategically necessary as a first step in very conservative societies. Gender-transformative approaches, on the other hand, challenge existing gender inequalities and seek to overturn them. These approaches encourage critical examination of gender roles and norms, attempt to empower women and engage men, and seek to redress power imbalances, unequal resource distribution and allocation of duties between women and men.

Rottach et al.<sup>30</sup> examined four gender-transformative projects that sought to reduce maternal mortality and morbidity. Because decisions about antenatal and postnatal care are not typically made by young women themselves in these settings, the projects involved husbands and mothers-in-law, and sought to change the attitudes and practices of service providers as well. This strategy proved effective. In South Africa, for example, involving men as partners in maternity care and in couples counseling resulted in greater numbers of men assisting their partners in emergency situations. Communication between couples on topics such as sexually transmitted infections and sexual relations also improved. As a result of a social mobilization intervention in India, mothers-in-law became more supportive of healthcare seeking among their daughters-in-law.

The success of these and similar gender-transformative maternal health programs provides a new direction for policy and programs seeking to reduce maternal mortality and improve the well-being of women around the world. However, there is a critical need for more and better research on how assets, employment, women's autonomy and decision-making power affect both use of maternal health services and maternal health status. Greater consistency is also needed in how autonomy, mobility and decision making are defined, and how these variables are constructed. Evidence is also needed on whether and how intra-household gender power relations affect women's use of maternal healthcare services. Fortunately, data for such research are now available in the household characteristics module of the DHS surveys that asks women about their utilization of maternal care services, education, employment/occupation, land and home ownership as well as who makes financial and other decisions at home.



### **Engaging Women in Participatory Processes and Promoting Social Networking through Women's Groups Can Foster Greater Utilization of Maternal Healthcare Services.**

Collective action such as social networking may provide another avenue for helping women overcome gender barriers that restrict healthcare utilization. Community mobilization programs recently have been designed to develop and implement culturally appropriate approaches for improving the health of mothers and newborns. These interventions seek to raise awareness and strengthen community capacity to solve problems relating to maternal and newborn health. Such programs assume that the underlying causes of inequitable access to and use of maternal health care—such as discrimination, power imbalances and marginalization of women and minority groups—may be beyond an individual's control and require collective action.<sup>86</sup> Recent literature also indicates that social capital, which is created, for example, by participation in women's groups, can greatly assist in bringing about changes that are empowering for women, such as growth in self-confidence, capabilities and collective action.<sup>87,88</sup>

A low-cost, culturally acceptable participatory intervention in rural Nepal engaged women in solving their healthcare problems and fostered the adoption of positive healthcare behaviors.<sup>89</sup> The program selected and trained local women to organize and facilitate participatory meetings with groups of poor women to discuss neonatal and maternal healthcare problems, identify strategies and mobilize groups to take action. The facilitators were trained only very briefly in perinatal health issues and possible interventions, but they were mostly trained in communication techniques so they could be “brokers of information” and “catalysts for change.”<sup>89</sup> Strategies included the collection of community funds for maternal and infant care and the production and distribution of safe delivery kits. Manandhar et al.<sup>89</sup> reported the results of the cluster-randomized controlled trial, which evaluated the program between 2001 and 2003. In addition to lower neonatal mortality, the intervention resulted in increased use of antenatal care, more institutional deliveries and more births attended by a skilled professional. The primary outcome of interest, neonatal mortality, decreased by 30 percent, and the MMR ratio was about 80 percent lower in the intervention groups. In addition, the intervention areas had a 25 percent higher rate of antenatal care, a 5 percent higher rate of institutional delivery and a 6 percent higher number of births attended by a doctor, nurse or midwife.

## Strengthening Maternal Healthcare Systems: Conclusions and Recommendations

While it is critical for policies and programs to improve and expand services, as well as reduce the burden of cost for low-income women, these actions alone may not be sufficient to guarantee access to maternal health care by the poorest and most disempowered women. The evidence presented in this paper indicates that the disappointing progress made toward Millennium Development Goal 5 could be due to the failure of programs to take a comprehensive approach to the health of poor mothers.<sup>xv</sup> This approach positions women's needs and realities as the central drivers of policies and programs to increase maternal healthcare access and utilization. Such an approach addresses both programmatic and structural barriers to women's participation in maternal health care, and would include the following four components:

**1) Increase coverage of services to the poor and in rural communities:** A critical first step to increasing access to and use of any health service is to ensure it is available to those in need. Thus, governments need to expand the availability of services, particularly among poor communities in remote rural areas through, for example, partnering with private sector providers, incentivizing the provision of services in remote and underserved communities, and training and engaging community-based providers to deliver services and/or promote the use of maternal healthcare services.

**2) Improve quality and reduce the cost of care, particularly for the poor:** As shown in this review, a number of new facility- and community-based mechanisms that go beyond the removal of user fees have succeeded in increasing the utilization of maternal healthcare services; some have also successfully reached the very poor. Such programs need to be strengthened and scaled up. Successful strategies have included: elimination of user fees, offering incentives and conditional cash transfers to patients, and addressing informal fees and poor provider attitudes by offering performance-based incentives and paying a living wage.

Yet, even when maternal health care reaches poor and underserved populations, and even when it is affordable to them, strategies that reduce gender inequality through education and employment, and empower women through social support, networking, and participatory learning and action are required to maximize investments and ensure that gains in maternal health are improved and sustained over the long term. Therefore, the most effective programs will be those that also address the final two elements.

**3) Transform gender norms that undermine the ability of women to seek maternal health care:** For example, engage men as active agents in the well-being of their partners and children; develop community action around the importance of women's health to the health of the community as a whole, and the dangers of early marriage and childbearing.

<sup>xv</sup> The AIDS community has begun to discuss and consider the implementation of "combination HIV prevention," which includes behavioral, biomedical and structural approaches. This formulation might be a useful one for those within the maternal health community as well, as we seek innovative and effective ways to improve the life chances of mothers and achieve the MDGs.

**4) Foster and support the empowerment of women:** Women's low social status and disempowerment represent critical dimensions of inequity in access and utilization of maternal health care that are often overlooked in program design and, consequently, in program evaluation. Rigorous evaluations that use both qualitative and quantitative methods should be conducted to identify and measure different determinants of inequity and impact among different populations. It is important to detect differences in uptake among the poorest women, and among those who are most disempowered, to fully understand whether and how maternal healthcare programs are addressing poverty and gender inequality and how to design them to more effectively achieve the desired impact. Successful programs have included those that advocate for girls' education; expand employment opportunities for women and girls; create opportunities for the development of social capital among women; and support the implementation of programs providing viable and sustainable income generation for women.

Governments across the globe have demonstrated commitment to improving the lives of mothers globally. Yet this commitment needs to be followed by action. Now is the time to assess the evidence and build upon it to create a new approach to maternal health—an approach that is comprehensive and holistic, and which understands that the best program in the world will only be effective if those in need are able to utilize it. This paper shows that successful programs will not just seek to reduce maternal mortality, but also seek to improve maternal health and well-being. Such efforts will put the necessary programmatic elements in place, while also creating the enabling environment for use by eliminating the structural barriers posed by poverty and gender inequality. Such efforts will have a meaningful impact on maternal mortality, while creating the opportunity for real and long-lasting improvements in women's health and well-being overall.

## References

1. World Bank. 2009. Global Monitoring Report 2009: A Development Emergency. Washington, DC: The World Bank.
2. Kvale G, Olsen BE, Hinderaker SG, Ulstein M and Bergsjo P. 2005. Maternal deaths in developing countries: A preventable tragedy. *Norsk Epidemiology* 15 (2): 141-149.
3. World Health Organization. 2009. World Health Statistics 2009. Geneva: World Health Organization.
4. Ronsmans C, and Graham WJ. 2006. Maternal mortality: Who, when, where, and why. *Lancet* 368 (9542): 1189-1200.
5. Hogan MC, Foreman KJ, Naghavi M, Ahn SY, Wang M, Makela SM, Lopez AD, Lozano R, and Murray CJL. 2010. Maternal mortality for 181 countries, 1980-2008: A systematic analysis of progress towards Millennium Development Goal 5. *Lancet* 375 (9726): 1609-1623.
6. Hill K, Thomas K, AbouZahr C, Walker N, Say L, Inoue M, and Suzuki E. 2007. Estimates of maternal mortality worldwide between 1990 and 2005: an assessment of available data. *Lancet* 370 (9595): 1311-1319.
7. International Health Partnerships. 2009. Leaders Commit New Finance to Tackle Women's and Children's Health in the Developing World. Press release. New York, September 23. <http://www.internationalhealthpartnership.net/en/taskforce>.
8. World Health Organization. 1999. Reduction of Maternal Mortality: A Joint WHO/UNFPA/UNICEF/World Bank Statement. Geneva: World Health Organization.
9. McIntyre J. 2003. Mothers infected with HIV: Reducing maternal death and disability during pregnancy. *British Medical Bulletin* 67 (1): 127-135.
10. Freedman LP, Waldman RJ, de Pinho H, Wirth ME, Chowdhury AM, and Rosenfield A. 2005. Transforming health systems to improve the lives of women and children. *Lancet* 365 (9463): 997-1000.
11. Malhotra A, and Schuler SR. 2005. Women's Empowerment as a Variable in International Development. In *Measuring Empowerment: Cross-Disciplinary Perspectives*, edited by D Narayan, 71-88. Washington, DC: The World Bank.
12. Kabeer N. 2001. Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. In *Discussing Women's Empowerment - Theory and Practice*, edited by A Sisask, 17-57. Stockholm: Novum Grafiska.
13. O'Donnell O. 2007. Access to health care in developing countries: Breaking down demand side barriers. *Cadernos de Saúde Pública* 23 (12): 2820-2834.
14. Graham WJ, Fitzmaurice AE, Bell JS, and Cairns JA. 2004. The familial technique for linking maternal death with poverty. *Lancet* 363 (9402): 23-27.
15. World Bank. 2004. World Development Indicators 2004. <http://data.worldbank.org/indicator>.
16. Gill K, Pande R, and Malhotra A. 2007. Women deliver for development. *Lancet* 370 (9595): 1347-1357.
17. Ensor T, and Cooper S. 2004. Overcoming barriers to health service access: Influencing the demand side. *Health Policy and Planning* 19 (2): 69-79.
18. Ensor T, and Ronoh J. 2005. Effective financing of maternal health services: A review of the literature. *Health Policy* 75 (1): 49-58.
19. McNamee P, Ternent L, and Hussein J. 2009. Barriers in accessing maternal healthcare: Evidence from low- and middle-income countries. *Expert Review of Pharmacoeconomics and Outcomes Research* 9 (1): 41-48.
20. Quayyum Z, Nadjib M, Ensor T, and Suchaya PK. 2010. Expenditure on obstetric care and the protective effect of insurance on the poor: Lessons from two Indonesian districts. *Health Policy and Planning* 25 (3): 237-247.
21. Nahar S, and Costello A. 1998. The hidden cost of 'free' maternity care in Dhaka, Bangladesh. *Health Policy and Planning* 13 (4): 417-422.
22. Iyer A, Sen G, and Ostlin P. 2008. The intersections of gender and class in health status and health care. *Global Public Health* 3 (Suppl 1): 13-24.
23. Freedman LP, Graham WJ, Brazier E, Smith JM, Ensor T, Fauveau V, Themmen E, Currie S, and Agarwal K. 2007. Practical lessons from global safe motherhood initiatives: Time for a new focus on implementation. *Lancet* 370 (9595): 1383-1391.
24. Grown C, Gupta GR, and Pande R. 2005. Taking action to improve women's health through gender equality and women's empowerment. *Lancet* 365 (9458): 541-543.

25. Freedman L. 2003. Strategic advocacy and maternal mortality: Moving targets and the Millennium Development Goals. *Gender and Development* 11 (1): 97-108.
26. International Labor Organization. 2010. Global Employment Trends, January 2010. Geneva: International Labor Office.
27. Kishor S, and Subaiya L. 2008. Understanding Women's Empowerment: A Comparative Analysis of Demographic and Health Surveys (DHS) Data. Calverton, Maryland: Macro International Inc.
28. Shen C, and Williamson JB. 1999. Maternal mortality, women's status, and economic dependency in less developed countries: A cross-national analysis. *Social Science and Medicine* 49 (2): 197-214.
29. Ahmed SM, Adams AM, Chowdhury M, and Bhuiya A. 2000. Gender, socioeconomic development and health-seeking behavior in Bangladesh. *Social Science and Medicine* 51 (3): 361-371.
30. Rottach E, Schuler SR, and Hardee K. 2009. Gender Perspectives Improve Reproductive Health Outcomes: New Evidence. Washington, DC: Population Reference Bureau.
31. Iyer A, Sen G, and George A. 2007. The dynamics of gender and class in access to health care: Evidence from rural Karnataka, India. *International Journal of Health Services* 37 (3): 537-554.
32. United Nations Population Fund. 2000. State of the World Population 2000: Lives Together, Worlds Apart: Men and Women in a Time of Change. United Nations Population Fund.
33. Schuler SR, Bates LM, and Islam MDK. 2002. Paying for reproductive health services in Bangladesh: Intersections between cost, quality and culture. *Health Policy and Planning* 17 (3): 273-280.
34. Beegle K, Frankenberg E, and Thomas D. 2001. Bargaining power within couples and use of prenatal and delivery care in Indonesia. *Studies in Family Planning* 32 (2): 130-146.
35. Heise L, Ellsberg M, and Gottemoeller M. 1999. Ending Violence Against Women. *Population Reports Series L*, Number 11.
36. Espinoza H, and Camacho AV. 2005. Maternal death due to domestic violence: An unrecognized critical component of maternal mortality. *Revista Panamericana de Salud Pública* 17 (2): 123-129.
37. Ellsberg M. 2006. Violence against women and the Millennium Development Goals: Facilitating women's access to support. *International Journal of Gynaecology and Obstetrics* 94 (3): 325-332.
38. Boy A, and Salihu M. 2004. Intimate partner violence and birth outcomes: A systematic review. *International Journal Fertility and Women's Medicine* 49 (4): 159-164.
39. Sharps PW, Laughon K, and Giangrande SK. 2007. Intimate partner violence and the childbearing year: Maternal and infant health consequences. *Trauma, Violence and Abuse* 8 (2): 105-116.
40. Sanchez SE, Qiu C, Perales MT, Lam N, Garcia P, and Williams MA. 2008. Intimate partner violence (IPV) and preeclampsia among Peruvian women. *European Journal of Obstetrics, Gynecology, and Reproductive Biology* 137 (1): 50-55.
41. Grown C, Gupta GR, and Kes A. 2005. Taking Action: Achieving Gender Equality and Empowering Women. New York: United Nations Millennium Project; Earthscan.
42. Singh S, and Samara R. 1996. Early marriage among women in developing countries. *International Family Planning Perspectives* 22 (4): 148-157.
43. Yates R. 2009. Universal health care and the removal of user fees. *Lancet* 373 (9680): 2078-2081.
44. Marriott A, Goodey B, and Green C. 2009. Your Money or Your Life: Will Leaders Act Now to Save Lives and Make Health Care Free in Poor Countries? Oxfam International.
45. Deininger K, and Mpuga P. 2005. Economic and welfare impact of the abolition of health user fees: Evidence from Uganda. *Journal of African Economies* 14 (1): 55-91.
46. Witter S, Adjei S, Armar-Klemesu M, and Graham W. 2009. Providing free maternal health care: Ten lessons from an evaluation of the national delivery exemption policy in Ghana. *Global Health Action*.
47. Gilson L, and McIntyre D. 2005. Removing user fees for primary care in Africa: The need for careful action. *British Medical Journal* 331 (7519): 762-765.
48. Lee AC, Lawn JE, Cousens S, Kumar V, Osrin D, Bhutta ZA, Wall SN, Nandakumar AK, Syed U, and Darmstadt GL. 2009. Linking families and facilities for care at birth: What works to avert intrapartum-related deaths? *International Journal of Gynaecology and Obstetrics* 107 (Suppl 1): S65-S88.

49. Witter S. 2009. Service and Population-Based Exemptions: Are These the Way Forward for Equity and Efficiency in Health Financing in Low-Income Countries? In *Innovations in Health System Finance in Developing and Transitional Economies*, edited by K Hanson and D Chernichovsky, 251-288. Bingley: Emerald Group Publishing Limited.
50. Savedoff W. 2004. Tax-Based Financing for Health Systems: Options and Experiences. Geneva: World Health Organization.
51. Carrin G. 2002. Social health insurance in developing countries: A continuing challenge. *International Social Security Review* 55 (2): 57-69.
52. Carrin G, Waelkens MP, and Criel B. 2005. Community-based health insurance in developing countries: A study of its contribution to the performance of health financing systems. *Tropical Medicine and International Health* 10 (8): 799-811.
53. Hsiao WC, Shaw RP, Fraker A, Hanvoravongchai P, Jowett M, Pinto D, and Ramachandra S. 2007. Social Health Insurance for Developing Nations. Washington, DC: The World Bank.
54. Ir P, Horemans D, Souk N, and Van Damme W. 2010. Using targeted vouchers and health equity funds to improve access to skilled birth attendants for poor women: A case study in three rural health districts in Cambodia. *BMC Pregnancy and Childbirth* 10 (1).
55. Adato M, de la Brière B, Mindek D, and Quisumbing A. 2000. The Impact of PROGRESA on Women's Status and Intrahousehold Relations. Washington, DC: International Food Policy Research Institute.
56. Fiszbein A, Schady NR, Ferreira FHG, Grosh M, Kelleher N, Olinto P, and Skoufias E. 2009. Conditional Cash Transfers: Reducing Present and Future Poverty. Washington, DC: The World Bank.
57. Adato M. 2000. The Impact of PROGRESA on Community Social Relationships. Washington, DC: International Food Policy Research Institute.
58. Adato M, and Bassett L. 2008. What is the Potential of Cash Transfers to Strengthen Families Affected by HIV and AIDS?: A Review of the Evidence on Impact and Key Policy Debates. Washington, DC: International Food Policy Research Institute.
59. Barbar SL, and Gertler PJ. 2009. Empowering women to obtain high quality care: Evidence from an evaluation of Mexico's conditional cash transfer programme. *Health Policy and Planning* 24 (1): 18-25.
60. Hatt L, Stanton C, Makowiecka K, Adisasmitha A, Achadi E, and Ronsmans C. 2007. Did the strategy of skilled attendance at birth reach the poor in Indonesia? *Bulletin of the World Health Organization* 85 (10): 774-782.
61. Ensor T, Nadjib M, Quayyum Z, and Megraini A. 2008. Public funding for community-based skilled delivery care in Indonesia: To what extent are the poor benefiting? *European Journal of Health Economics* 9 (4): 385-392.
62. Toonen J, Canavan A, Vergeer P, and Elovainio R. 2009. Learning Lessons on Implementing Performance Based Financing, From a Multi-Country Evaluation. Amsterdam: Development Policy and Practice.
63. Basinga P, Gertler PJ, Binagwaho A, Soucat ALB, Sturdy JR, and Vermeersch CMJ. 2010. Paying Primary Health Care Centers for Performance in Rwanda. Washington, DC: The World Bank.
64. Ministry of Health and Family Welfare, Maternal Health Care Division. 2006. Janani Suraksha Yojana. [http://mohfw.nic.in/janani\\_\\_suraksha\\_\\_yojana.htm](http://mohfw.nic.in/janani__suraksha__yojana.htm).
65. Lim SS, Dandona L, Hoisington JA, James SL, Hogan MC, and Gakidou E. 2010. India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: An impact evaluation. *Lancet* 375 (9730): 2009-2023.
66. Patouillard E, Goodman CA, Hanson KG, and Mills AJ. 2007. Can working with the private for-profit sector improve utilization of quality health services by the poor? A systematic review of the literature. *International Journal for Equity in Health* 6 (17).
67. Bhushan I, Keller S, and Schwartz B. 2002. Achieving the Twin Objectives of Efficiency and Equity: Contracting Health Services in Cambodia. Manila: Asian Development Bank.
68. Bhat R, Mavalankar DV, Singh PV, and Singh N. 2009. Maternal healthcare financing: Gujarat's Chiranjeevi Scheme and its beneficiaries. *Journal of Health, Population and Nutrition* 27 (2): 249-258.
69. Bhat R, Singh A, Maheshwari S, and Saha S. 2006. Maternal Health Financing-Issues and Options: A Study of Chiranjeevi Yojana in Gujarat. Ahmedabad: Indian Institute of Management.

70. Graham W, Themmen E, Bassane B, Meda N, and De Brouwere V. 2008. Evaluating skilled care at delivery in Burkina Faso: Principles and practice. *Tropical Medicine and International Health* 13 (Suppl 1): 6-13.
71. Brazier E, Andrzejewski C, Perkins ME, Themmen EM, Knight RJ, and Bassane B. 2009. Improving poor women's access to maternity care: Findings from a primary care intervention in Burkina Faso. *Social Science and Medicine* 69 (5): 682-690.
72. Hounton S, Chapman G, Menten J, De Brouwere V, Ensor T, Sombie I, Meda N, and Ronsmans C. 2008. Accessibility and utilisation of delivery care within a skilled care initiative in rural Burkina Faso. *Tropical Medicine and International Health* 13 (Suppl 1): 44-52.
73. Fotso JC, Ezeh AC, and Essendi H. 2009. Maternal health in resource-poor urban settings: How does women's autonomy influence the utilization of obstetric care services? *Reproductive Health* 6 (9).
74. Furuta M, and Salway S. 2006. Women's position within the household as a determinant of maternal health care use in Nepal. *International Family Planning Perspectives* 32 (1): 17-27.
75. Mistry R, Galal O, and Lu M. 2009. Women's autonomy and pregnancy care in rural India: A contextual analysis. *Social Science and Medicine* 69 (6): 926-933.
76. Sharma SK, Sawangdee Y, and Sirirassamee B. 2007. Access to health: Women's status and utilization of maternal health services in Nepal. *Journal of Biosocial Science* 39 (5): 671-692.
77. Maluccio J, and Thomas D. 1997. Contraception and Fertility in Zimbabwe: Family Planning Services and Education Make a Difference. RAND. [http://www.rand.org/pubs/research\\_briefs/RB5013/index1.html](http://www.rand.org/pubs/research_briefs/RB5013/index1.html).
78. Saleem S, and Bobak M. 2005. Women's autonomy, education and contraception use in Pakistan: A national study. *Reproductive Health* 21: 2-8.
79. World Health Organization. 2009. Part I: Health-related Millennium Development Goals. In *World Health Statistics 2009*, 9-31. Geneva: World Health Organization.
80. Simkhada B, Teijlingen ER, Porter M, and Simkhada P. 2008. Factors affecting the utilization of antenatal care in developing countries: Systematic review of the literature. *Journal of Advanced Nursing* 61 (3): 244-260.
81. Allendorf K. 2007. Couples' reports of women's autonomy and health-care use in Nepal. *Studies in Family Planning* 38 (1): 35-46.
82. Bloom SS, Wypij D, and Das Gupta M. 2001. Dimensions of women's autonomy and the influence on maternal health care utilization in a north Indian city. *Demography* 38 (1): 67-78.
83. Matsumura M, and Gubhaju B. 2001. Women's status, household structure and the utilization of maternal health services in Nepal. *Asia-Pacific Population Journal* 16 (1): 23-44.
84. Mumtaz Z, and Salway S. 2005. 'I never go anywhere': Extricating the links between women's mobility and uptake of reproductive health services in Pakistan. *Social Science and Medicine* 60 (8): 1751-1765.
85. Pallikadavath S, Foss M, and Stones RW. 2004. Antenatal care: Provision and inequality in rural north India. *Social Science and Medicine* 59 (6): 1147-1158.
86. Howard-Grabman L. 2007. *Demystifying Community Mobilization: An Effective Strategy to Improve Maternal and Newborn Health*. Washington, DC: USAID.
87. Cornwall A, and Edwards J. 2010. Introduction: Negotiating empowerment. *IDS Bulletin* 41 (2): 1-9.
88. Mabsout R, and van Staveren I. 2010. Disentangling bargaining power from individual and household levels to institutions: Evidence on women's position in Ethiopia. *World Development* 38 (5): 783-796.
89. Manandhar DS, Osrin D, Shrestha BP, Mesko N, Morrison J, Tumbahangphe KM, Tamang S, Thapa S, Shrestha D, Thapa B, Shrestha JR, Wade A, Borghi J, Standing H, Manandhar M, and Costello AM. 2004. Effect of a participatory intervention with women's groups on birth outcomes in Nepal: Cluster-randomised controlled trial. *Lancet* 364 (9438): 970-979.



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