

## **Reducing financial barriers to obstetric care in low-income countries**

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This article is based on a monograph “*Reducing Financial barriers to obstetric care in low-income countries*” edited by the 3 authors (Richard et al. 2008) and published by ITG press in the series Studies in Health Services Organisation & Policy ([www.itg.be/shsop](http://www.itg.be/shsop)).

### **Background**

The Millennium Development Goals (MDG) set a target of reducing maternal mortality ratios (MMR) by three-quarters between 1990 and 2015 (UN 2005). So far, relatively little progress has been made. A recent study of trends in MMR from 1990 to 2005 found a significant decrease of 2.5% per year globally, but with no significant decrease in sub-Saharan Africa, which fell by 1.8% from 921 per 100,000 in 1990 to 905 per 100,000 in 2005 (Hill et al. 2007).

***Maternal and newborn health is also intricately linked.*** Of the 130 million babies born worldwide each year, about 4 million die in their first month of life – and 98% of those deaths are in developing countries (Women Deliver 2007). Lack of skilled care at delivery and maternal mortality and morbidity are key factors in these deaths. A long-term study in Matlab, Bangladesh, found a strong correlation between maternal survival and child survival to age ten. Increases in child mortality of 50 per 1,000 in sons and 144 per 1,000 in daughters were found to be associated with a mother's death (Over et al. 1992).

***Maternal ill-health not only affects household welfare but also national productivity.*** The WHO estimates totals of \$95 million and \$85 million are lost each year by Ethiopia and Uganda respectively due to poor maternal health (WHO 2006a). Globally, \$15 billion is estimated to be lost every year due to reduced productivity related to the death of mothers and neonates (Gill et al. 2007). Country estimates range from \$1.50 per person per year in Ethiopia to almost \$5 in Senegal.

***Maternal health care is cost-effective.*** The World Development Report 1993 estimates a cost of \$60 per Disability-adjusted life year (DALY) for maternal services (ante-, intra-, and post-partum), which could avert 3% of the global burden of disease. This estimate makes it one of the five most cost-effective health interventions in low income countries (World Bank 1993). A recent analysis of maternal and child health strategies suggests that preventive interventions at the community level for newborn babies and at the primary care level for mothers and newborn babies are extremely cost effective (Adam et al. 2005).

***Maternal mortality is both sizeable and preventable.*** Maternal causes are responsible for 18% of deaths in women in less developed countries (World Bank 1993), 75% of these are estimated to be preventable with a basic package of maternity care delivered by the primary health care system (health centres and hospital). Skilled attendance at all births is considered to be the single most critical intervention for safe motherhood, as it allows a timely response to potentially fatal emergencies (UNFPA 2007). The concept of '*skilled attendance*' is more ambitious than just ensuring deliveries with trained personnel, implying also the presence of an '*enabling environment*', encompassing appropriate equipment, supplies, drugs and transport for referral (Graham et al. 2001), which are challenging to achieve in resource-poor environments

### **Access to appropriate care**

Lack of access to quality care is the main obstacle to reducing maternal mortality in low and middle income countries (Paxton et al. 2005). The average for skilled attendance at delivery for all developing countries was 42% in 1990, rising to 52% in 2000. However, the average for sub-Saharan Africa was 40% in 1990, rising to just 43% in 2000 (WHO 2006b). Some countries, like Ethiopia, have rates as low as 10%.

Two types of barriers are critical: physical and financial. In poor countries, the density of health infrastructures equipped and staffed with competent, available and committed personnel is low (Koblinsky et al. 2006). For women, this often means that facilities are '*too far to walk*' (Thaddeus & Maine 1994); as a result they prefer to deliver at home rather than

embarking on a long, expensive and painful journey from under-equipped health centres to poorly functioning district hospitals.

When women or their families decide to seek health care, the next obstacle is the cost of the services. In many settings, women have to pay out-of-pocket fees and this may result in delay – sometimes fatal – and catastrophic expenditure (Borghi et al. 2008).

Access to caesarean sections is also directly affected by household wealth. In a recent Impact evaluation in Indonesia, less than 1% of the poor delivered by caesarean, compared to 4% of the rich (Impact 2007). In a study of DHS data for 42 developing countries, caesarean rates were extremely low among the very poor: they were below 1% for the poorest 20% of the population in 20 countries and were below 1% for 80% of the population in six countries (Ronsmans et al. 2006). Only in five countries did the very poor have caesarean rates exceeding 5%.

Some countries have been classified as having ‘marginal exclusion’ (with only the poorest lacking access), while others have ‘massive deprivation’ (meaning that all but the richest lack access) (Koblinsky et al. 2006). Donors and governments are looking for cost-effective and sustainable approaches which can reduce persistently high maternal mortality and reduce inequalities in access and health.

### **Reducing financial barriers to maternal care**

Developing health systems with an appropriate number of quality health services is a priority and the direct benefits for women and their families would include maternal and newborn mortality and morbidity reduction. This is a long-term investment, which in itself will not necessarily decrease the financial burden faced by many women during pregnancy. It must be addressed urgently to increase the coverage of maternal health services (Borghi et al. 2008).

A multivariate analysis of 40 low-income countries found that government health expenditure as a percentage of total health expenditure was significantly associated with utilization of skilled birth attendants and caesarean section rates, but not antenatal care, allowing for factors such as per capita health expenditure (Kruk et al. 2007). This supports the view that public subsidies of various sorts are likely to be necessary to improve access and skilled attendance.

There is too a gender-related equity argument that women face higher access costs and barriers (such as lack of control over cash), relative to men, in many regions, and would therefore benefit disproportionately from measures which reduce the costs that they face (Kutzin 2000, Nanda 2004). Some studies have found that distance and user fees deterred women from seeking care to a greater extent than they deterred men (Mwabu et al. 1993). The

UN Millennium Project has called for the elimination of user fees for basic health services as a '*quick win*' that can diminish health inequities related to poverty and gender discrimination (UN 2005).

There is increasing recognition of the risks of high out-of-pocket expenditure forcing households into, or deeper into, poverty (Xu et al. 2003). Maternal costs, especially when complications occur, can be very expensive and are the kind of catastrophic cost which can plunge a household into poverty or force it to rely on risky coping strategies (Ensor & Ronoh 2005). A recent review by WHO found that the direct costs of maternal health care range between one and five percent of total annual household expenditures, rising to between five and 34% if the woman suffers a maternal complication (WHO 2006a). From a poverty reduction point of view, there is therefore a case for exempting maternity care. To what extent such a strategy should focus only on the poorest or be implemented universally is a matter of context.

## **New initiatives**

Although national tax-based or social health insurance is considered the best approach to pooling risk for health financing, a lot of countries in sub-Saharan Africa or South Asia have to rely on a wider mix of financing mechanisms. In particular, compulsory insurance presents challenges in rural area because of low incomes, limited formal sector employment and minimal health care infrastructure (Borghi et al. 2006).

In response, a number of new policies have been adopted to selectively target increased access on maternal and, especially, obstetric care. In Senegal and Ghana, national exemption strategies for delivery care were adopted in 2004-5. Evaluations have found that costs for households, although reduced, are still high because of a range of implementation problems (including under-funding of the policy, in the case of Ghana, and, in Senegal, a very limited provision of support, especially for normal deliveries) (Witter et al 2008). Exemption strategies by definition are also limited to facility-based costs (Witter 2009). Community health insurance (CHI) could play a complementary role by taking additional costs not covered by the national fee exemption policy (such as transport). However coverage of CHI remains low and access is not guaranteed if households cannot afford the premium (Soors et al. 2008). In Guinea, a CHI was developed to specifically protect women and their families from excessive expenditures (Ndiaye et al. 2008). This system called MURIGA is progressively scaling up in terms of district coverage. The results – in terms of access to basic

and comprehensive obstetric care – appear encouraging, although the proportion of adherents remains as low as in more general CHI.

Some new initiatives have tried to be more comprehensive and to encompass the costs of transport, laboratory tests and costs for the child (Ouédraogo et al. 2008, Renaudin et al. 2008). This is the case for the cost-sharing system for Emergency Obstetric Care in Burkina Faso where women have to pay a flat-fee that covers all the costs of the c-section. Costs are shared among four actors: local authority, ministry of health, household, and management committee of health centres. This system is district-driven and cannot be implemented without the willingness of the district team and local authority (Ouédraogo et al. 2008). In Mauritania, with the Obstetric Risk Insurance, women are encouraged to prepay a flat fee early in pregnancy that covers antenatal care consultations and all the costs of normal or complicated deliveries. A large proportion of the benefits returns to the personnel as incentives to compensate for the lost of unofficial payment (Renaudin et al. 2008).

New approaches target the poorest pregnant women. In Cambodia, a vouchers system and a Health Equity Funds (HEF) were implemented with the aim of protecting the poorest. The number of vouchers and HEF beneficiaries represented a large share (32.5% in 2007) of total reported facility deliveries and increased sharply over time. But an evaluation study questions the effectiveness of targeting of the poor. When the selection process (individual targeting) is too complex (61% of the expected home visits were performed), poor woman can be excluded, leading to inequity (Por et al. 2008). In India, in 2005 the government introduced a conditional cash assistance programme called the Janani Suruksha Yojana (JSY) to promote institutional deliveries. Under this program, poor women who have attended 3 antenatal clinics and who delivered in a health facility were to receive money soon after delivery to take care of their indirect costs (Devadasan et al. 2008). A process evaluation shows us the difficulty of assuring cash flow and an efficient distribution of the benefits, when implementation is taking place on such a large scale. It also highlights the important gaps between the original objective of the scheme and the implementation process. While the central government developed broad guideline, each state has modified it: home deliveries included, private excluded, difference of cash amount, etc.

In the case of Bolivia, a variety of packages for free care have been developed over the past decade, promoting access for priority groups such as mothers and children. Although these are called social health insurance, they are funded not by membership but by national and local revenues, and to that extent are similar to the national exemption policies. A significant and sustained increase in access has been achieved, but overall coverage of services remains

relatively low and indicators for rural areas still lag far behind those of urban areas (Pooley et al. 2008).

## **Learning lessons from local innovations**

The aim of book on which this article is based was to contribute to a better knowledge of current strategies to reduce financial barriers to maternal health care. We have tried to select different experiences, ranging from fee exemption to cash-assistance, from district-based to national, from Africa to Asia, from policies covering all pregnant women to those targeted at poor households. This selection gives a range of different experiences and of the lessons we learned from them.

At the same time we are aware that: (1) financial barriers are not the only barriers and that social, cultural, quality and physical barriers should be addressed at the same time, (2) initiatives have to take account of wider health system, national and global developments. It is now widely recognised that ‘functioning, responsive health systems are an essential prerequisite for addressing maternal and child health at scale and in a sustainable way’ (UN Millennium Project 2005). This in turn implies tackling the political, social and economic environments in which those systems are embedded.

This study focuses on financial barriers because of the growing international sense that without addressing these, progress will never be made towards the Millennium Development Goals and better health for women (especially, but not only, those in poorer households). Evidence is needed on what works, and where. If we look at the successes stories of Sri Lanka and Malaysia in reducing maternal mortality, equitable access and the move towards universal coverage is a key component in the interdependent strategies needed to decrease maternal deaths, as well as being an important health systems goal in its own right (Pathmanathan et al. 2003).

## **References**

Adam T., Lim S, Mehta S, Bhutta Z, Fogstad H, Matthews M, Zupan J & Darmstadt G (2005) Cost effectiveness analysis of strategies for maternal and neonatal health in developing countries, *British Medical Journal* **331**,1107.

Borghi J, Ensor T, Somanathan A, Lissner C & Mills A (2006) Mobilising financial resources for maternal health. *Lancet* **368**, 1457-65

Borghi J, Storeng K & Filippi V (2008) Overview of the costs of obstetric care and the economic and social consequences for households. *Studies in Health Services Organisation & Policy* **24**, 23-46.

Devadasan N, Eliasa MA, Johna D, Grahacharya S & Ralte L (2008) A conditional cash assistance programme for promoting institutional deliveries among the poor in India: process evaluation results. *Studies in Health Services Organisation & Policy* **24**, 257-74.

Ensor T & Ronoh J (2005) Effective financing of maternal health services: a review of the literature *Health Policy* **75**, 49-58.

Gill K, Pande R & Malhotra A (2007) Women deliver for development, *Lancet* **370**, 1347-57.

Graham W, Bell J & Bullough C (2001) Can skilled attendance at delivery reduce maternal mortality in developing countries? *Studies in Health Services Organisation & Policy* **17**, 90-130

Hill K, Thomas K, AbouZahr C, Walker N, Say L, Inoue M & Suzuki E (2007) Estimates of maternal mortality worldwide between 1990 and 2005: an assessment of available data, *Lancet* **370**, 1311-9.

IMMPACT (2007) Indonesia: resident midwives help avert maternal deaths when financial barriers are removed - evaluation factsheet, Immpact, Aberdeen.

Koblinsky M, Matthews Z, Hussein J, Mavalankar D, Mridha M, Anwar I, Achadi E, Adjei S, Padmanabhan P, Marchal B, De Brouwere V & Van Lerberghe V (2006) Going to scale with professional skilled care, *Lancet* **368**, 1377-86.

Kruk M, Galea S, Prescott M & Freedman L (2007) Health care financing and utilization of maternal health services in developing countries, *Health Policy and Planning* **22**, 303-10.

Kutzin J (2000) *Obstacles to Women's Access: Issues and Options For More Effective Interventions to Improve Women's Health*, World Bank, Washington, D.C..

Mwabu G, Ainsworth M & Nyamete A (1993) *Quality of medical care and choice of medical treatment in Kenya: an empirical analysis*, World Bank, Washington, D.C.

Nanda P (2004) Gender dimensions of user fees: implications for women's utilisation of health care, *Reproductive Health Matters*, **10**, 127-34.

Ndiaye P, Kaba S, Kourouma M, Barry AN, Barry A & Criel B (2008) MURIGA in Guinea: an experience of community health insurance focused on obstetric risks. *Studies in Health Services Organisation & Policy* **24**, 117-48.

Ouédraogo C, Richard F, Compaoré J, Wissocq C, Pobel D, Ouattara F, Gruénais ME & De Brouwere V (2008) Cost-sharing scheme for emergency obstetric care in Secteur 30 health district, Ouagadougou, Burkina Faso. *Studies in Health Services Organisation & Policy* **24**, 49-82.

Over M, Ellis RP, Huber JH & Solon O (1992) The consequences of adult ill-health, in *The health of adults in the developing world* (eds Feachem R, Kjellstrom T, Murray CI, Over M & Phillips MA), Oxford University Press, New York, pp 161-205.

- Pathamanathan I, Liljestrand J, Martins JM, Rajapaksa LC, Lissner C, de Silva A, Selvaraju S & Joginder Singh P (2006) Investing in Maternal Health: learning from Malaysia and Sri Lanka. The World Bank, Washington.
- Paxton A, Maine D, Freedman L, Fry D, Lobis S (2005) The evidence for emergency obstetric care. *Int J Gynecol Obstet* **88**,181-93.
- Pooley B, Ramirez M & de Hilari C (2008) Bolivia's Health Reform: a response to improve access to obstetric care. *Studies in Health Services Organisation & Policy* **24**, 199-222.
- Por I, Horeman D, Narin S & Van Damme W (2008) Improving access to safe delivery for poor pregnant women: a case study of vouchers plus health equity funds in three health districts in Cambodia. *Studies in Health Services Organisation & Policy* **24**, 225-55.
- Renaudin P, Abdelkader MO, Abdelaziz SMO, Mujtaba MO, Saleck MO, Vangeenderhuysen C & Prual A (2008) Risk sharing as solution for providing access to emergency obstetric care: experience with obstetric risk insurance in Mauritania. *Studies in Health Services Organisation & Policy* **24**, 85-114.
- Richard F, Witter S & De Brouwere V (2008) *Studies in Health Services Organisation & Policy* **24**. ITG Press, Antwerpen 304 p.
- Ronsmans C, Holtz S & Stanton C (2006) Socioeconomic differentials in caesarean rates in developing countries: a retrospective analysis, *Lancet* **368**, 1516-23.
- Soors W, Waelkens MP, Criel B (2008) Community health insurance in sub-Saharan Africa: Opportunities for improving access to emergency obstetric care? *Studies in Health Services Organisation and Policy*, **24**, 149-64
- Thaddeus S & Maine D (1994) Too far to walk: maternal mortality in context. *Soc Sci Med*, **38**,1091-110.
- UN (2005) Millennium Development Goals, United Nations, New York. Millenium Development Goals. <http://www.un.org/millenniumgoals> (accessed 29/09/2008)
- UN Millennium Project (2005) Who's got the power? Transforming health systems for women and children, Task Force on Child Health and Maternal Health, UNDP, New-York.
- UNFPA (2007) Skilled attendance at birth: fact sheet, UNFPA, Geneva. [http://www.unfpa.org/mothers/skilled\\_att.htm](http://www.unfpa.org/mothers/skilled_att.htm) (accessed 20/10/2008)
- WHO (2006a) Moving towards universal coverage series, maternal, newborn health and poverty. WHO, Geneva. [http://www.who.int/reproductive-health/universal\\_coverage/index.htm](http://www.who.int/reproductive-health/universal_coverage/index.htm) (accessed 17/10/2008).
- WHO (2006b) Making a difference in countries: strategic approach to improving maternal and newborn survival and health. WHO Making Pregnancy Safer, Geneva. [http://www.who.int/making\\_pregnancy\\_safer/publications/StrategicApproach2006.pdf](http://www.who.int/making_pregnancy_safer/publications/StrategicApproach2006.pdf) (accessed 17/10/2008).



Witter S, Armar-Klemesu M & Dieng T (2008) National fee exemption schemes for deliveries: comparing the recent experiences of Ghana and Senegal. *Studies in Health Services Organisation and Policy* **24**, 167-98.

Witter S (2009) Service- and population-based exemptions: are these the way forward for equity and efficiency in health financing in low income countries? *Advances in Health Economics and Health Services Research*, **21**, 249-286. Innovations in health systems finance in developing and transitional economies. Eds. Dov Chernichovsky and Kara Hanson.

World Bank (1993) World Development Report: Investing in health, World Bank, Washington, D.C.

Women Deliver (2007) Unfortunate facts of life. Women Deliver factsheet. [www.womendeliver.org/fact/Unfortunate\\_Facts\\_of\\_Life\\_factsheet\\_\(A4\).pdf](http://www.womendeliver.org/fact/Unfortunate_Facts_of_Life_factsheet_(A4).pdf) (accessed 29/09/2008).

Xu K, Evans D, Kawabata K, Zeramdini R, Klavus J & Murray C (2003) Household catastrophic health expenditure: a multicountry analysis. *Lancet*, **362**, 111-7.