Reducing financial barriers to obstetric care in low-income countries: the need for action

Fabienne Richard[1], Sophie Witter[2] & Vincent De Brouwere [1-3]

Background

The Millennium Development Goals (MDG) set a target of reducing maternal mortality ratios (MMR) by three-quarters between 1990 and 2015 (UN 2005). This is a global health challenge of the highest importance for many reasons.

CONTINUING HIGH AND PREVENTABLE MORTALITY AND MORBIDITY

The World Health Organization (WHO) estimates that 536,000 women die in 2005 from pregnancy-related causes, and almost all of these deaths occur in developing countries (WHO 2007). In Niger, the lifetime risk of death is estimated at one in seven (WHO 2007). 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). However, 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 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

[1] Quality and Human Resources Unit, Public Health Department, Antwerp, Belgium. Email : frichard@itg.be (correspondence should be addressed to this author).
[2] Immpact, Health Sciences Building, Foresterhill, University of Aberdeen, AB25 5DZ, Scotland.
[3] UMR 912 (INSERM-IRD-U2) "Economic and social sciences, health systems, societies", Marseille, France and Institut National d'Administration Sanitaire, Rabat, Morocco.

(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).

WIDE INEQUALITIES, GLOBALLY AND LOCALLY

Nearly all maternal deaths (99%) occur in the developing world, making maternal mortality the health statistic with the largest disparity between developed and developing countries (Safe Motherhood Initiative 2002). The high MMR, combined with high fertility rates, lead to a lifetime risk of dying in pregnancy of one in 16 in developing countries, compared to one in 2,800 in developed countries (WHO 2005). However, internal inequalities are a huge challenge too. Using an adaptation of the sisterhood method, one study found a strong correlation between maternal deaths and poverty in ten countries (Graham *et al.* 2004). In some datasets, the risk of dying of maternal causes was four times higher for the poorest quintile, compared to the richest. By contrast, non-maternal deaths were less strongly correlated with poverty.

This concern is reflected in inequalities of access to services too. Analysis of Demographic and Health Survey (DHS) data from more than 50 developing countries found that an average of 34% of deliveries in the lowest quintile households were attended by skilled personnel, as compared to 84% of the highest quintile. This discrepancy was greater than for any other basic maternal and child health intervention (Gwatkin *et al.* 2005).

CATASTROPHIC IMPACT ON HOUSEHOLDS AND COMMUNITIES

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). At the national level, 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.

COST-EFFECTIVENESS OF MATERNAL HEALTH CARE INTERVENTIONS

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). 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).

Why is progress so slow? Challenges to providing 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 of 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 barrier are critical: physical and financial. In poor countries, the density of health infrastructures equipped and staffed with competent, available and committed personnel is low (Koblinski 2006). For women this often means they are 'too far to walk' (Thaddeus & Maine 1994) and they prefer to deliver at home rather than embarking on a long and difficult journey to under-equipped health centres or poorly staffed district hospitals. When women or the family decision-makers decide to attend an appropriate health service, the next obstacle is money. In many settings,

patients have to pay out-of-pocket for everything, including a tip for the personnel, and this may result in delay, which can sometimes be fatal, and in catastrophic expenditure for the household (Borghi 2008).

Access to a caesarean is also directly affected by household wealth. In a recent evaluation in Indonesia, less than 1% of the poor delivered by caesarean, compared to 4% of the rich (Immpact 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.

Approaches to reducing financial barriers to maternal care

Physical barriers, quality of care barriers and financial barriers are often interlinked. Distance increases household access costs. Health facilities which lack basic supplies create knock-on costs for households which have to purchase items externally. Long-term investment in the health system is therefore urgent in many contexts both to increase effective coverage and to reduce the real out-of-pocket costs faced by households in accessing obstetric care. Reducing financial barriers makes no sense in the absence of the availability of services of adequate quality.

A multivariate analysis of 40 low-income countries found that government health expenditure as a percentage of total health expenditure was significantly associated with utilisation 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.

Approaches to reducing financial barriers also require sensitivity to cultural barriers and gender relations. In many areas, women have less

decision-making power and less control over household financial resources than men (Witter *et al.* 2008a). 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). They should therefore benefit disproportionately from measures which reduce the costs that they face (Kutzin 2000; Nanda 2004). 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).

Implementation of strategies to reduce financial barriers requires a careful balancing of 'depth' (the reduction of costs of various kinds) and 'width' (the range of beneficiaries). The extent to which such a strategy should focus only on the poorest or be implemented universally varies by context.

Aims and structure of this volume

The aim of this book is to contribute to a better knowledge of current experiments at national and sub-national level in reducing financial barriers to skilled maternal care. Many of these are not yet formally documented, and the quality of evidence available varies, but it is crucial that early innovations, successful or otherwise, are made public. It is important that policy-makers can have access to these experiences at a time when investment in the MDGs is intensifying.

The volume starts with an article setting the context, which gives an overview of the costs of obstetric care and their economic and social consequences for households (Borghi *et al.* 2008). The subsequent chapters present a variety of recent experiments in reducing financial barriers. In selecting these case studies, we aimed to reflect a variety of approaches and settings, ranging from fee exemption to cash assistance, from district-based to national, from Africa to Asia and Latin America, and from universal to targeted.

The policies and programmes include:

- a district-based obstetric cost-sharing scheme in Burkina Faso (Ouédraogo *et al.* 2008);
- an essential obstetric care insurance programme in Mauritania (Renaudin *et al.* 2008);

- a community health insurance (CHI) scheme for obstetric care in Guinea (Ndiaye *et al.* 2008);
- an overview of the application of CHI for obstetric care throughout Africa (Soors *et al.* 2008);
- national policies for user fee abolition for deliveries in Ghana and Senegal (Witter *et al.* 2008b);
- the development of a national social health insurance policy covering mother and child health in Bolivia (Pooley *et al.* 2008);
- the use of targeted vouchers and health equity funds for delivery of care in selected districts in Cambodia (Por *et al.* 2008);
- a national delivery incentive payment scheme targeted at poor women in India (Devadasan *et al.* 2008).

The concluding chapter looks at lessons learned and policy implications of these case studies (Witter *et al.* 2008c).

The lessons they generate are important, as part of a wider picture. 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, which are national and international in nature. If we look at the successes stories of Sri Lanka and Malaysia in reducing maternal mortality, financing is only one of the pillars in all the interdependent strategies needed to decrease maternal deaths (Pathmanathan *et al.* 2003). It is however a core component for 'functioning, responsive health systems' and for healthy women and healthy communities.

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, 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.

Gwatkin D, Wagstaff A & Yazbeck A (2005) Reaching the poor with health, nutrition and population services: what works, what doesn't and why. World Bank, Washington, D.C.

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

Graham WJ, Fitzmaurice AC, Bell JS & Cairns JA (2004) The familial technique for linking maternal death with poverty. *Lancet* **363**, 23-7.

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. *International Journal of Gynecology and Obstetrics* **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.

Ronsmans C, Holtz S & Stanton C (2006) Socioeconomic differentials in caesarean rates in developing countries: a retrospective analysis. *Lancet* **368**, 1516-23.

Safe Motherhood Initiative (2002) http://www.safemotherhood.org/ (accessed 17/10/2008).

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 & Policy* **24**, 149-64.

Thaddeus S & Maine D (1994) Too far to walk: maternal mortality in context. *Social Sciences and Medicine* **38**, 1091-110.

UN (2005) Millennium Development Goals, United Nations, New York, 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 (accessed 20/10/2008).

WHO (2005) World health report 2005: make every mother and child count, WHO, Geneva.

WHO (2006a) Moving towards universal coverage series, maternal, newborn health and poverty. WHO, Geneva. 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 (accessed 17/10/2008).

WHO (2007) Maternal Mortality in 2005. Estimates developed by WHO, UNICEF, UNFPA, and The World Bank. WHO, Geneva. http://www.who.int/whosis/mme_2005.pdf (accessed 29/09/2008).

Witter S, Mbengue F & Cross S (2008a) Community perspectives on a maternal fee exemption policy in Senegal *Submitted to African Journal of Midwifery and Women's Health*.

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

Witter S, Richard F & De Brouwere V (2008c) Learning lessons and moving forward: how to reduce financial access to obstetric care in different low-income contexts. *Studies in Health Services Organisation & Policy* **24**, 277-304.

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 (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.