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From evaluating a Skilled Care Initiative in rural Burkina Faso to policy implications for safe motherhood in Africa

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Summary Evaluation findings from a particular setting need to be generalized into policy implications if they are to find widespread use. Skilled attendance at delivery is widely regarded as one of the most important intervention strategies for safe motherhood in low-resource settings, particularly in Africa, but implementations of such strategies are often not rigorously evaluated or interpreted into future policy. Initiative for Maternal Mortality Programme Assessment (Immpact) has applied a package of research-based monitoring and evaluation tools to assess the Family Care International Skilled Care Initiative in Ouargaye District, Burkina Faso. This evaluation research aimed to generate reliable, evidence-based policies for accelerating safe motherhood programmes in Burkina Faso and elsewhere in Africa. Five policy priorities were identified as representing real chances of improving the safety of motherhood: (1) enhancing national coverage of delivery by professionally skilled attendants; (2) to provide a network of 24-h basic emergency obstetric care within 5 km; (3) to have an effective referral system, equipped and resourced to undertake a reasonable number of Caesarean sections; (4) to promote community mobilization activities as a lever to increasing delivery care utilization; and (5) to implement strategies to remove financial barriers to delivery care. To meet Millennium Development Goal five by 2015, both supply and demand side constraints on the provision of quality maternity care have to be addressed, which in turn need greater political commitment and funding.

keywords safe motherhood, policy priorities, evaluation research, Burkina Faso, Africa

From evaluation evidence to policy

Our evaluation of Family Care International (FCI)'s Skilled Care Initiative (SCI), as implemented in eastern Burkina Faso from 2002 to 2006, has revealed a picture of maternal health that is far from well, but perhaps not atypical, at least in rural west Africa. Against this background, we need to consider the policy implications of our findings, to identify strategies that might address stubborn problems more effectively, and build on the encouraging signs emerging from the SCI evaluation.

Maternal mortality remained a major problem, with an MMR around 400 per 100, 000 live births (Bell *et al.* 2008) and any policy findings need to somehow address

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this unacceptable level of risk for pregnant women. While there were increases in the proportion of births attended by a skilled practitioner (Hounton *et al.* 2008a), Caesarean sections barely out-numbered maternal deaths, indicating a continuing and severe supply-side deficiency in emergency maternal services. As might have been expected, poorer women generally made less use of services, as did those living in more remote areas. However, we were unable to demonstrate any direct effects of SCI on maternal mortality (Hounton *et al.* 2008b), perhaps because of the relatively short timeframe of the intervention and evaluation. Although SCI's community mobilization activities seemed to be effective and cost-effective in terms of increasing skilled attendance (Newlands *et al.* 2008), the lack of any discernible effect on maternal mortality precluded any economic assessment in that respect. How can these evaluation findings be seen in the wider context of safe motherhood in sub-Saharan Africa?

Accelerating maternal mortality reduction in Africa: the policy stakes

Since the launch of the Safe Motherhood Initiative in 1987, global and national levels of maternal and perinatal mortality have largely stalled (World Health Organization 2005). The underlying factors are diverse and multidimensional, including lack of political commitment and funds, weak health systems, shortage of health personnel, inaccessible maternal health services, substandard care, and a lack of reliable data to inform and monitor intervention strategies (De Brouwere *et al.* 1998; Van Lerberghe & De Brouwere 2001a).

Many of these detractions from safe motherhood focus attention on the role and responsibility of policymakers, who often find themselves in an unenviable situation in low-resource countries. However, where good policies are in place, progress is possible even in poor countries (Van Lerberghe & De Brouwere 2001b). Some poorer countries have been more successful in reducing maternal and perinatal mortality than others with greater resources (De Brouwere *et al.* 1998; Liljestrand & Pathmanathan 2004; Mavalankar & Rosenfield 2005). Political will and commitment sometimes seems able to transcend failure in maternal mortality reduction in the developing world (Shiffman 2007).

The commitment of global and national decision-makers is demonstrated in the two of the eight Millennium Development Goals (MDGs) devoted to women and newborn survival (Costello & Osrin 2005), and with the recent establishment of the Partnership for Maternal, Newborn and Child Health (http://www.who.int/pmnch/media/en, accessed June 30, 2007). Achieving the MDGs relating to safe motherhood needs the right policies in the right places at the right times. Various key strategies are known to reduce maternal and perinatal mortality (Bullough *et al.* 2005), including making available comprehensive emergency obstetric care with skilled attendance at delivery forming the pre-requisite basis for referral (WHO, ICM & FIGO 2004, Paxton *et al.* 2005). Although some countries, such as Egypt, Sri Lanka, and Honduras, have succeeded in ensuring professional skilled care during pregnancy, labour, birth, and the postpartum period (Liljestrand & Pathmanathan 2004; Campbell *et al.* 2005; Campbell & Graham 2006), sub-Saharan Africa unfortunately has yet to witness such progress. The coverage of skilled attendance at delivery (Koblinsky *et al.* 2006) stagnated at a level below 40% in sub-Saharan Africa between 1990 and 2000. Meanwhile it increased from 45% to 54% in Asia, Latin America and North Africa (Stanton *et al.* 2007). Why has progress stalled in sub-Saharan Africa? What are the policy issues and what needs to be done to get back on target towards MDGs four and five?

Revisiting existing safe motherhood policy and practice

In arriving at policy priorities to significantly reduce maternal and perinatal mortality in sub-Saharan Africa, history must not repeat itself by re-implementing strategies already proven to be ineffective. In this respect, three issues are of particular interest: professional human resources for health, user fees, and geographic access to maternity care.

The insufficient production of skilled health providers and on-going investment in non-professional health workers, such as traditional or village birth attendants and auxiliary midwives, are now widely recognized to have delayed progress towards safe motherhood in the developing world (De Brouwere *et al.* 1998; Koblinsky *et al.* 2006). Although the devolution of competencies and training health substitutes have been effective in the provision of emergency obstetric care (Pereira *et al.* 1996), countries that face severe shortages of health professionals need to plan for large scale training and accreditation of health professionals rather than over-relying on non-professional health workers. Burkina Faso is illustrative of many African countries where there is still investment in training and deploying auxiliary midwives, but the number of midwives satisfying the international definition of skilled attendants is desperately low and ill-deployed (Haddad *et al.* 2006). In Mali during 2002 for example, 429 midwives (of whom 62% worked in urban areas) were available nationally, instead of the more than 5000 required (Buttiens *et al.* 2004). In Burkina Faso in 2002,

a total of 576 midwives were deployed, mainly in urban areas (where only 18% of the population lives), rather than the more than 3000 required nationally. Overall, each peripheral district has an average of 20 primary health care facilities but often only two or three midwives. These numbers speak for themselves and, at the current production of around 70 new midwives annually in these countries, it would take several decades to reach the numbers required for universal coverage of all births by skilled health professionals as asked for in the MDG.

The introduction of user fees in health facilities was a key component of the Bamako Initiative and aimed to increase the responsibility of users of health services and to assist in cost-recovery for continuity of services (Haddad *et al.* 2006). Unfortunately, this intuitively obvious and appropriate policy at the first level has resulted in inequitable access and uptake of care at the referral level, where the cost of care often exceeds people's capacity to pay. Data from Burkina Faso attest that health expenses contribute to poverty, create newly poor households and further impoverish those already poor (Haddad *et al.* 2006). The poorer people are, the less they use public services, possibly later contributing disproportionately to the high level of maternal mortality observed. Research from Burkina Faso and other developing countries has indicated differential rates of utilization of health services by poverty quintiles. User fees tend to prevent the poorest mothers from accessing skilled and quality care. In Burkina Faso, for example, only 18% of mothers in the poorest quintile used skilled care at delivery compared with 75% in the richest quintile. In Niger the corresponding figures were 4% and 63% respectively, or 19% and 91% in Zambia (Population Reference Bureau 2004). When women reach health facilities, in many settings in Africa, essential drugs for the management of obstetric complications have to be purchased in private pharmacies at unaffordable prices. Thus alleviating financial barriers must become a priority for policymakers if their will is really to accelerate the reduction of maternal and perinatal mortality in the developing world.

The situation in the developing world is thus one where human resources for quality health care are insufficient and unskilled, and financial barriers to quality health services prevent access by those who need it the most. Against this background, it may be illusory to imagine attracting pregnant women to use health facilities if those facilities are far away. In Burkina Faso, in spite of the Government's increasing effort to subsidise emergency obstetric care, geographic barriers remain. Our evaluation showed that only 25% of women who lived more than 7 km from a health facility reported institutional deliveries. The average distance from communities to primary health care facilities is still nearly 10 km, rather than the 5 km limit recommended by the World Health Organization.

From research to evidence-based policy

The evidence from Immpact's evaluation of SCI needs to be generalized into policies. Five key policy messages emerge:

1. Although non-professional health workers have been effective in some contexts, countries need to embark on policies leading towards effective national coverage of delivery by professional skilled attendants, in order to offer quality maternity care to all pregnant women. Failure to do so will directly impede progress towards MDGs four and five.
2. Utilization of maternal health services falls off sharply with distance from home to facility. Outreach services are at best only an interim solution to this problem; countries need to embark on policies leading to universal 24-h coverage of basic emergency obstetric care within 5 km, and these facilities must have adequate logistic capacity for upward referral.
3. Referral-level maternal health services should plan and be resourced for undertaking emergency procedures such as Caesarean sections in numbers that considerably exceed existing numbers of maternal deaths in their catchment areas, in order to stand a reasonable chance of reducing MMR.
4. Utilization rates of maternal health services can be significantly increased if community leaders add their encouragement to women to do so. Social mobilization seems to be an important and cost-effective component of safe motherhood programmes.
5. Poorer women are at greater risk of dying, sometimes even when subsidy schemes are in place. Policies need to be in place to abolish user fees for the poorest women and consider how indirect obstacles such as transport availability and expenses can be overcome.

While none of these policy messages are particularly surprising, we must stress the importance of their evidence base. Although some of these messages are partly based on observed shortcomings, rather than successes, of the situation in Ouargaye and Diapaga, they nevertheless reflect community-based data. It is equally clear that they need to be implemented as a package; none of these measures alone could be expected to make a huge impact on safe motherhood. It is also clear that any meaningful attempt to move anywhere near MDG 5 would need to be a sustained, well-resourced programme rather than any kind of quick-fix solution.

Conclusion

Skilled attendance at delivery is widely regarded as the single most important intervention to promote safe motherhood in low-resource settings. For its implementation, it is essential to establish effective health policies that fit local resource situations and that ensure widespread access to critical health services (Mavalankar & Rosenfield 2005). Bringing affordable and functional services closer to women, ensuring continuity and availability of life saving surgery, and working closely with communities to identify context-specific barriers to accessing care are the policy priorities derived from Immpact's evaluation research in Burkina Faso. Such policies applied on larger scale and on sustainable bases are required before there is any chance of demonstrating declines in maternal mortality in the developing world.

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Conflicts of interest

The authors have declared no conflicts of interest.

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