

Improving skilled birth attendance: An evidence brief for Ethiopia

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Abstract

Background: Skilled birth attendance in Ethiopia is the lowest in the world (WHO 2007). Little attention has been given to demand-side barriers of healthcare (socio-cultural, geographical and financial) by policy makers or researchers, even though such barriers are particularly important to poor communities. Finding ways to overcome demand-side barriers could help address this problem.

Objective: The objective of this policy brief was to summarize the best available evidence describing the problem and potential solutions for addressing the problem of low level of skilled birth attendance in Ethiopia.

Methods: This policy brief brings together global research evidence (from systematic reviews) and local evidence to inform deliberations about improving skilled birth attendance in Ethiopia. We searched for relevant evidence describing the problem, the impacts of options for addressing the problem, barriers to implementing those options, and implementation strategies to address these barriers.

Results: Policy options include the following: (i) Community mobilization probably increases the proportion of institutional deliveries (ii) Cultural adaptation of birthing places might address one of the reasons why some women do not go to a birth facility, particularly in rural populations. The effects of cultural adaptations of birthing services on increasing skilled birth attendance are uncertain hence need further investigation. (iii) Maternity waiting homes might address the problem of long distances between where people live and birthing facilities for rural populations with limited access to emergency obstetric care. The effects of maternity waiting homes are uncertain hence need further investigation. (iv) Conditional cash transfer programs may increase institutional deliveries. The costs and cost effectiveness of all four options are uncertain. Rigorous evaluation and monitoring of resource use is, therefore, warranted.

Implementation strategies include production of clear guidelines (manuals) for all options, quality improvement programs, establishment of a culturally competent primary healthcare system by developing relevant cultural competence guidelines and mobilization of financial resources.

Conclusions: Socio-cultural, distance and financial barriers are among the major causes for the low level of skilled birth attendance in Ethiopia. A clear strategy addressing these barriers is crucial to improve skilled birth attendance in Ethiopia.

Keywords: skilled birth attendance, institutional delivery, Ethiopia

Introduction

This is a summary of an evidence brief for policy that addresses the need for improving skilled birth attendance in Ethiopia by addressing the root causes of the low level of skilled birth attendance: socio-cultural, distance and financial barriers. The methods used to prepare this policy brief are described in detail elsewhere (Fretheim *et al.* 2010; Lavis *et al.* 2010). This policy brief assesses a health system problem, potential policy options and their impacts, and strategies for implementing those options. The policy brief brings together global research evidence (from systematic reviews) and local evidence to inform deliberations about improving skilled birth attendance. The purpose of this report was to inform deliberations among policy makers and stakeholders, and specifically as a background document to be discussed at meetings (policy dialogues) of those engaged in developing policies for improving skilled birth attendance.

The problem: Skilled birth attendance in Ethiopia is the lowest in the world (WHO 2007). Little attention has been given to demand-side barriers of healthcare (socio-cultural, geographical and financial) by policy makers or researchers, even though such barriers are particularly important to poor communities. Finding ways to overcome demand-side barriers could help to address this problem. The objective of this evidence brief is to summarize the best available evidence describing the low levels of skilled birth attendance in Ethiopia and to outline potential solutions to address the problem.

Size of the problem: Approximately 90% of births in Ethiopia occur at home, without skilled birth attendance (Central Statistical Agency and ICF International 2012). This level is amongst the highest in the world (WHO 2007), and even in developing countries approximately 59% of all mothers receive skilled birth attendance (Stanton 2008). The maternal mortality ratio in Ethiopia is among the highest in the

world with 676 deaths per 100,000 live births (Central Statistical Agency & ICF International 2012), or 19,000 maternal deaths per year (Koblinsky *et al.* 2010) - levels worse than the average maternal mortality for developing countries of 290 deaths per 100,000 births (IRIN 2012). This level also falls far short of the MDG 5 target set for the country, of 350 deaths per 100,000 live births (FMoH 2006). It is estimated that approximately 16%-33% of all maternal deaths could be avoided through the primary or secondary prevention of complications during delivery by skilled attendance (Graham *et al.* 2001) .

Factors underlying the problem: The effects of poverty in Ethiopia – one of the poorest and least developed countries in Africa (UNDP 2011) – cannot be overemphasized, including the effects on maternal healthcare. Studies have noted that additional factors may also impact on the low level of skilled birth attendance in Ethiopia, and these can be classified into four categories, namely: 1. Socio-cultural factors, 2. Economic accessibility factors 3. Physical accessibility factors and 4. Poor health care delivery

Socio-cultural factors: These factors have a direct influence on decisions of mothers to seek healthcare or not to seek healthcare (Gabrysch and Campbell 2009). According to the latest Demographic and Health Survey of Ethiopia (Central Statistical Agency and ICF International 2012), 61% of women believed that delivery at a health facility was not necessary, while 30% stated that it was not customary. The decision by mothers to seek skilled birth attendance is also influenced by their level of education. Highly educated mothers (i.e. those who have received tertiary education) are most likely to give birth assisted by a skilled provider (74%). The decision to take mothers to a health facility may also be made by a husband or relatives, and requests to go to a health facility by mothers who are experiencing difficulties in labor may be ignored (Bedford *et al.* 2013).

In a qualitative study in Southern Wollo, one of the zones in the Amhara region (Bedford *et al.* 2013), the following beliefs and perceptions were identified as deterrents to mothers delivering at health facilities:

1. The perception that health facilities do not allow relatives or neighbors to accompany mothers into the delivery unit, which is thought to make mothers feel lonely in spite of the presence of care providers during labor.
2. The perception that health facilities prohibit mothers delivering in a kneeling position, and instruct them instead to lie on their back with their legs open. Physical exposure of this kind is considered by mothers to be invasive, especially in front of people unknown to them.

3. The perception that internal physical examinations during delivery are disliked by mothers, as mothers do not want to show their bodies to people they do not know.

Economic accessibility: Family income is also associated with the utilization of skilled birth attendance because of the costs of transportation and care, and the opportunity costs incurred (Gabrysch and Campbell 2009). In the latest Demographic and Health Survey in the country, 46 % of mothers in the highest wealth quintile attended skilled birth compared to the 2% for the lower wealth quintile (Central Statistical Agency and ICF International 2012). Health centers are supposed to provide free maternity services by policy since 2005 (FMoH, 2010). But in reality, among facilities that provide delivery care, 65% charge for some aspect of care including drugs and supplies. Indirect costs such as costs for transport, lodging and food are as much burden as the fees themselves. As a result, as much as 40% of sick people may not seek care due to associated costs (Pearson *et al.* 2011).

Physical accessibility: Ethiopia's road network is not well developed. The majority of rural dwellers (83.9% of the total population) [Government of Ethiopia 2008)] are therefore left isolated and with little or no access to health facilities. Lack of transport to the nearest health facility (71% of respondents) and the distance to a health facility (66% of respondents) are the most important factors hindering the use of skilled birth attendance (Central Statistical Agency and ICF International 2012). Urban residency is closely associated with higher levels of skilled birth attendance: in urban areas, 50% of births occur at health facilities, compared to just 4% in rural areas (Central Statistical Agency and ICF International 2012).

Healthcare delivery problems: Although more than 30,000 health extension workers (HEWs) in Ethiopia, contribute to healthcare provision through family planning, antenatal care and HIV testing services, their contribution to the improvement of skilled birth attendance remains insignificant (Medhanyie *et al.* 2012). In addition, health facilities typically face shortages of supplies and equipment for obstetric care due to poor coordination and management (FMoH, 2006). Lack of immediate treatment and onwards referrals, and a lack of the desired skills among care providers, are deterrents to going to health facilities (Bedford *et al.* 2013). Lack of maternity waiting rooms may also contribute to the low utilization of skilled birth attendance.

Mothers who present at health facilities when in the early stages of labour are often turned away and asked to return later. Instances in which, for example, mothers are sent back home on a stretcher because there are no maternal waiting rooms; can give health facilities a bad image (Bedford *et al.* 2013).

Policy Options: Options to increase skilled birth attendance in Ethiopia include: community mobilization, the cultural adaptation of birthing services, the use of maternity waiting homes, and the use of conditional cash transfers (CCT). These four options and their potential impacts on skilled birth attendance are described below.

Policy option1: Community mobilization.

Community mobilization empowers people to organize themselves, recognize opportunities, identify their collective potential, and utilize available resources to realize a shared goal through unified action. Mobilization strategies are diverse, may result in differing intensity levels of engagement and ownership (Rosato *et al.* 2008), and requires an understanding of the social structure of local contexts (Hounton *et al.* 2009). It has also been suggested that community mobilization has substantial potential to change behaviors and enable access to healthcare (Lawn *et al.* 2009), and can potentially increase the number of facility-based births. Different community mobilization strategies have been used in many low-income countries, particularly in Asia, to increase use of maternal and neonatal services (Lee *et al.* 2009).

Impacts of community mobilization: A systematic review evaluated the impact of community mobilization on institutional (facility-based) deliveries (Lee *et al.* 2009). They found that (Steinmann 2010) community mobilization probably increases the proportion of institutional deliveries and its effect depends on the intensity of the mobilization efforts.

Option 2: Cultural adaptation of birthing services.

Child birth in different communities is associated with different practices that are deeply rooted in the cultures and traditions of the community. Some cultural practices in Ethiopia, for example, include eating porridge, putting butter on the head of the mother and conducting a coffee ceremony (FMOH, 2013). Some norms include, giving birth in a sitting position instead of lying down on one's back with open legs, and giving birth among families instead of among strangers (Bedford *et al.* 2013). Absence of these traditional practices and norms discourages women from going to health facilities for delivery. Hence, availing these traditional practices in health facilities is likely to encourage women to give birth in health facilities.

Impacts of Cultural adaptation of birthing services:

We were not able to find a systematic review of the impacts of cultural adaptation of birthing services. Only one study from Peru has evaluated an intervention to culturally adapt a birthing facility. This study found that cultural adaptation of birthing facilities, such as introducing a rope and bench for a vertical delivery position, allowing family and traditional birth attendants in the delivery process and use of local language at health facilities, increased facility based deliveries from 6% to 83% in nine years (Gabrysch *et al.* 2009). Cultural adaptation of birthing places might address one of the reasons why some women do not go to a birth facility, particularly in rural populations. The effects on increasing skilled birth attendance are uncertain hence the need for further research.

Option 3: Building maternity waiting homes.

Maternity waiting homes are residential facilities, located within easy reach of a health facility, where women defined as "high risk" can await their delivery and be transferred to a nearby medical facility shortly before delivery, or earlier should complications arise. Many consider maternity waiting homes as a key element of a strategy to overcome distance barriers in rural settings to improve access to care for mothers. Besides emphasis is also given to education and counseling regarding pregnancy, delivery and care for the newborn (van Lonkhuijzen *et al.* 2009; WHO 1996) provision of maternity waiting homes has been practiced in many low-income countries: Zimbabwe, Zambia, Tanzania, former Zaire, Ghana, Ethiopia, Nigeria, Liberia, Malawi, Mozambique, Papua New Guinea, Nicaragua, Cuba, Peru, Honduras and Lao (Van Lonkhuijzen *et al.* 2009).

Impacts of maternity waiting homes: There are no systematic reviews on the effect of maternity waiting homes on skilled birth attendance. However there is a systematic review on the effect of maternity waiting homes for improving maternal and neonatal outcome on low-resource settings which found no randomized control trials on the effect of maternity waiting home on perinatal and maternal mortality and morbidity in low resource countries (Van Lonkhuijzen *et al.* 2009). It was found that for rural populations with limited access to emergency obstetric care, maternity waiting homes might address the problem of long distances between where people live and birthing facilities (Dudley 2011). The effects of maternity waiting homes on increasing skilled birth is uncertain hence the need for further research.

Option 4: Conditional cash transfer to mothers giving birth at health facilities. Conditional cash transfer programs (CCT) give money to poor people in return for fulfilling specific behavioral conditions such as children's school attendance, up-to-date vaccinations or regular visits to a health care facility by pregnant women. The purpose is to make a positive impact on the recipients' health, education or other socio-economic well-being depending on the condition applied. In preventive and primary health care, regular visits to health facilities and timely immunization levels are the most commonly used conditions. CCT started in the late 1990s mostly in Latin America, including in Mexico, Brazil, Colombia, Honduras, Nicaragua and Ecuador. CCT have also been implemented or are being considered in other LMIC, such as Bangladesh, Kenya, Cambodia, Turkey, South Africa, Indonesia and Côte d'Ivoire. There is some encouraging evidence coming mostly from Mexico, where, CCT appear to have successfully reduced infant morbidity and mortality, as well as obesity, hypertension and diabetes in adults. In Honduras and Colombia, a reduced incidence of diarrhea among children (by 3-10%) is attributed to CCT (Doetinchem *et al.* 2008).

Impact of conditional cash transfer: We could not come across a systematic review which dealt with skilled birth attendance as a direct outcome of conditional cash transfer intervention. However a systematic review on impact of conditional cash transfers on care-seeking behavior and immunization coverage (Lagarde *et al.* 2007) has shown favorable result that conditional cash transfer programs can be effective in increasing the use of preventive services and can sometimes improve immunization coverage and health status (Pantoja 2008).

Conditional cash transfer programs could provide incentives for women to go to birthing facilities. Conditional cash transfer programs may increase skilled birth attendance.

Implementation considerations: Community mobilization, cultural adaptation of birthing services, maternity waiting homes, and conditional cash transfers are four potential solutions to improve skilled birth attendance in Ethiopia. Implementing these options requires other changes, including policy changes. Strategies for implementing the options should take advantage of factors that enable their implementation as well as addressing barriers. Enablers of improving skilled birth attendance in Ethiopia include:

1. Strong political commitment from the government for maternal child health in general and skilled birth attendance in particular
2. Rapid economic growth in the country
3. The establishment of the 'Health Development Army' in the country, which can be used for community mobilization
4. More than 30 thousand health extension workers working at the grass root level, who can be used for all four options
5. Major funding opportunities and public-private sector collaboration globally
6. A number of global and local partners and civil society organizations working on maternal health
7. An increasing number of skilled health workers in Ethiopia

Barriers to the four options and implementation strategies that address those barriers are summarized in Tables 1 to 5.

Table 1: Barriers and implementation strategies for all options

Barriers	Descriptions	Implementation strategies
Strategies or guidelines	There are no strategies/and or guidelines in place to implement the options except for community mobilization	Formative research to understand local culture, beliefs and practices and design suitable strategies and manuals (ACCESS 2010).
Financial resources	There may be insufficient financial resources to implement all the options	Pilot study to evaluate costs and cost-effectiveness before full scale implementation Resource mobilization through coordination of governmental and non-governmental organizations. Establish a consortium of stakeholders for maternal health to pool resources and use them for achieving the common goal of increasing the level of skilled birth attendance in Ethiopia Cost sharing with the community (Poovan <i>et al.</i> 1990).
Poor quality of care	Poor quality of care could discourage mothers from seeking skilled birth attendance (Kruk <i>et al.</i> 2010)	Interventions to improve the quality of care in birthing facilities
Sustainability	Implementation of options may be halted when a decision maker is replaced	Integrating the options into the institutional structure
Inadequate supervision	Since all the options are new and are not institutionalized they may require more supervision	Integrating the options into the institutional structure and providing adequate supervision (ACCESS 2010)
Competing priorities	Options might end up as one time efforts due to competing priorities	Integrating the options into the institutional structure (ACCESS 2010)

Table 2: Barriers and implementation strategies for option 1: Community mobilization

Barriers	Descriptions	Implementation strategies
Cultural barriers	Presence of heterogeneous culture might necessitate culture sensitive community mobilization strategies	Conducting formative research to understand local culture, beliefs and practices and design suitable strategies and manuals (ACCESS 2010)
Sustainability	As activists are volunteers, lack of accountability therefore sustainability could be a challenge	Integration of community mobilization into the institutional structure (ACCESS 2010)
Absence of institutional structure for community mobilization		Integration of community mobilization into the institutional structure (ACCESS 2010)
Burn-out of health extension workers	Health extension workers who could be key players in community mobilization are already overworked	Involving other stakeholders, such as community and religious leaders, social institutions, volunteers, civil societies (Hounton <i>et al.</i> 2009). Reducing workload of health extension workers by redesigning the health extension program, introducing motivation packages and increasing the number of health extension workers.

Table 3: Barriers and implementation strategies for option 2: Cultural adaptation of birthing services

Barriers	Descriptions	Implementation strategies
Absence of strategic plan	There are no strategic plans or manuals in place for cultural adaptation of birthing places	Strategic plans with clear goals, policies and management accountability for cultural competence should be put in place (Anderson <i>et al.</i> 2003).
Cultural beliefs, norms and values	There could be various cultural beliefs, norms and values in a certain area where they should all be accommodated in one health facility	Mapping cultural beliefs, values and norms of local communities (Hounton <i>et al.</i> 2009) and adapting birthing services to the various cultural beliefs, values and norms prevalent in a community
Inappropriate norms	Current standards of health care practice may be in conflict with the option	Establishing a culturally competent primary health care system by developing relevant cultural competence guide (Marshall 2005)
Motivation to change	People may not be motivated to go to health facilities regardless of the changes in health facilities	Dissemination of information that is designed to motivate the community to change their practice; financial or other incentives
Attitude of care providers	Possible resistance from care providers to allow cultural adaptations in health facilities	Establishing a culturally competent PHC system by developing relevant cultural competence guidelines (Marshall 2005). Care providers at all levels should receive ongoing education and training in culturally appropriate service delivery and/or culturally competent curriculum should be developed for health care providers.
Lack of motivation of care providers	Health workers may not be motivated to change their practices	Dissemination of information regarding the size of the problem with relevant comparisons. Dissemination of information that is designed to motivate health workers to change their practice; providing incentives, reduce the burden of changing practices

Table 4: Barriers and implementation strategies for option 3: Building Maternity waiting homes

Barriers	Descriptions	Implementation strategies
Culture	Absence of culturally appropriate practices in maternity waiting homes (WHO 1996)	Cultural adaptation of maternity waiting homes (Gabrysch <i>et al.</i> 2009)
Competency of care providers	Absence of the capacity for identification and referral of high risk women (WHO 1996)	Establishment of an effective system of community health services, staffed by providers who have been specifically trained in the identification and referral of high risk pregnancies (WHO 1996).
Blueprints for maternity waiting homes	Lack of a "blueprint" of what a maternity waiting home should constitute and provide	Developing a national guideline for maternal waiting homes
Inadequate internal communication	Lack of proper referral system might result in missing high risk women; maternity waiting homes might be occupied with women not at risk (WHO 1996)	Establishment of an effective system of community health services, staffed by providers who have been specifically trained in the identification and referral of high risk pregnancies (WHO 1996)
Absence of a guideline	Absence of standardized medical care, indications for admission, and documentation	Developing a national guideline for maternal waiting homes

Table 5: Barriers and implementation strategies for option 4: Conditional cash transfers (CCT)

Barriers	Descriptions	Implementation strategies
Fiscal sustainability	Fiscal sustainability could be a challenge (Handa & Davis 2006)	Carefully designed exit strategies consistent with CCT program objectives (Handa & Davis 2006)
Motivation to change	Participation of mothers could be low due to socio- cultural barriers	Adjusting the design of CCT programs to the heterogeneous socio-cultural factors prevailing in the country
Poor capacities of health facilities	Health facilities might find it difficult to meet additional demand likely to arise when beneficiary households try to meet the conditions.	Pilot study to assess possible rise in demand and the capacity of health facilities before full-scale implementation
Implementation capacities	Capacities for managing cash transfer schemes are weak in low-income countries. The health system may not be able to meet the additional administrative demands related to conditionality (Schubert & Slater 2006).	Preparing CCT implementation guidelines Organizational change and capacity building on CCT of the relevant bodies within the civil service (Handa & Davis 2006).
Feasibility	CCT may be difficult to implement	Link cash transfers to existing and complementary programs Pilot study to assess the feasibility of CCT
Over reporting skilled birth attendance	Abuse of money allotted for would be mothers is a possibility by over reporting skilled birth attendance	Put an appropriate auditing mechanism in place
Cumbersome bureaucracy	Burdensome paperwork to provide cash to mothers may discourage mothers not to come to a health facility again	Minimizing paper work

Discussion

This policy brief was discussed by policy makers, researchers, civil society, professional organizations, academics, and development partners at a policy dialogue meeting in Adama, Ethiopia, 5th June 2014. The following points were the major issues raised during the dialogue.

One of the major problems in the health system is there is a poor quality of health care: mothers are not satisfied with the care delivery in the country or mothers are maltreated by care providers, health facilities in the country are not mother friendly, health facilities are poorly equipped. So what is the point of increasing skilled birth attendance if mothers do not get quality care? As a result a mother might not see the difference between giving birth at home and a health facility. The use of risk approach, targeting high risk mothers to deliver in health facility, was mentioned as an option to reduce maternal mortality. However, it was also mentioned that during delivery all mothers are at risk therefore interventions should target all mothers. Besides it was also mentioned that the policy

brief is not about high risk mothers but about increasing skilled birth attendance in the country.

One of the barriers for all the policy options except for community mobilization is lack of evidence. Lack of evidence therefore should be mentioned as a barrier for all options and generating local evidence on the options should also be considered as implementation strategy.

Conflict of interest

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