

EDITORIAL

Preventing primary postpartum hemorrhage in unskilled births in Africa

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Available evidence indicates that Africa accounts for the highest burden of maternal mortality in the world. Primary postpartum hemorrhage (PPH) accounts for an estimated 25% of maternal mortality, and is a major cause of postpartum disability in sub-Saharan Africa. PPH and maternal anemia are also indirect contributors to maternal deaths due to other causes. Thus, it is conceivable that any intervention aimed at preventing PPH will reduce maternal mortality by more than one quarter in sub-Saharan Africa. To date, nearly 90% of PPH are due to inadequate uterine contractions occurring at the time of delivery. The routine administration of uterotonics followed by controlled cord traction is the method recommended by the International Federation of Obstetricians and Gynecologists (FIGO) and the International Confederation of Midwives (ICM) for the prevention of PPH¹. Uterotonics are also the mainstay of treatment of PPH after it has occurred.

The World Health Organization recommends the administration of intravenous oxytocin and ergometrine as first and second line uterotonics for the prevention and treatment of PPH². However, these uterotonics can only be administered in deliveries taken by skilled birth attendants in orthodox health facilities. Since oxytocin and ergometrine require parenteral administration, these recommendations are futile when deliveries are carried out by unskilled birth attendants.

Therein lies the problem in sub-Saharan Africa, where large proportions of births occur at home or are attended by unskilled traditional birth attendants. Nigeria and Ethiopia, two densely populated countries in Africa with the highest maternal mortality rates, also have between 50-60% of births either unattended or attended by unskilled birth attendants. Indeed, several studies conducted in locations across sub-Saharan Africa, have identified delivery by unskilled providers as the most important risk factor for PPH fatalities^{3,4}. During such births, women are unnecessarily exposed to the risk of dying from PPH, in part because the two recommended drugs cannot be administered by unskilled providers to prevent or treat PPH.

One long term measure to address this problem is to increase the proportion of births attended by skilled providers in health facilities in Africa. However, within the context of the developmental realities in many parts of Africa, this will take several years to materialize in the continent. Thus, short and medium term measures must be identified to rapidly redress the problem, and reduce the burden of PPH-related maternal mortality in the continent. One such measure is to increase access to misoprostol tablets for women being attended at the time of delivery by unskilled birth providers. Misoprostol is a powerful uterotonic that has been recommended by the WHO as third line medication for the prevention and treatment of PPH⁵. Indeed, recent studies have shown that results obtained with oral misoprostol when used for the prevention and treatment of PPH are similar to those obtained with intramuscular oxytocin⁶.

Misoprostol has the advantage that it is presented in tablet forms and is active through several routes of administration - oral, buccal, sub-lingual, vaginal and rectal. This makes it ideally suited for use by unskilled birth attendants. Furthermore, misoprostol is relatively cheap as compared to ergometrine and oxytocin, and is free from significant side effects.

Multiple studies reaffirm that unskilled birth attendants are able to successfully use misoprostol for the prevention and treatment of PPH. A community based study in Java, Indonesia, has shown that oral misoprostol can be given by unskilled birth attendants for the prevention and treatment of PPH. After months of misoprostol use, significant reduction in maternal mortality was observed in the region, mainly

due to the use of misoprostol for prevention and treatment of PPH by unskilled providers⁷. A similar study in rural Tanzania has shown tremendous promise in reducing maternal mortality, when traditional birth attendants are taught to administer oral misoprostol for the prevention and treatment of PPH⁸. An ongoing study in Benin City, Nigeria⁹ is also providing evidence indicating that traditional birth attendants can safely administer rectal misoprostol for treatment of PPH. This later study consists of two arms - an intervention group, where TBAs are taught to administer 1000 micrograms of rectal misoprostol for treatment of PPH, and a control group, where TBAs are asked to do what they have always done to treat PPH. TBAs in the two arms are then requested to refer continuing PPH not amenable to treatment to orthodox health facilities nearest to them. The results from 350 patients enlisted in the study so far, have shown a significant decline in PPH referrals to orthodox health facilities in the intervention sites as compared to the control sites. Thus, we believe that misoprostol is an essential intervention that can be scaled up in communities with high rates of unskilled birth attendance for the prevention and treatment of PPH.

Misoprostol has now been registered for the prevention and treatment of PPH in four African countries - Ethiopia, Tanzania, Uganda and Nigeria - all burdened with high rates of maternal mortality. However, registration alone is insufficient to maximize the benefits of misoprostol. In Nigeria, the uterotonic has yet to be well advertised at national and sub-national levels, with recent results of a community-based study showing that less than 5% of primary health care workers in the country have knowledge of the drug¹⁰. Misoprostol is also presently not on the essential drug list in Nigeria, and is therefore not on the public drug purchasing list in the country.

A call is being made for the promotion of misoprostol as an interim measure for the prevention of PPH and related mortality in African countries with high rates of unskilled birth attendance. This should consist of registration of misoprostol in countries where the drug has not yet been registered, its inclusion in the essential drug list of countries, dissemination of misoprostol information, training of unskilled providers on prevention and treatment of PPH, and measures to increase the availability of misoprostol in public and private health institutions in Africa. The long term measure to reduce PPH is to increase the proportion of pregnant women using skilled birth attendants and orthodox health facilities at the time of delivery. This can be achieved through formal and informal education, and the socio-economic empowerment of women. Reducing maternal mortality due to PPH in Africa is a major priority and a developmental imperative and is one of the most essential steps needed to achieve the MDG 5 in the continent.

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