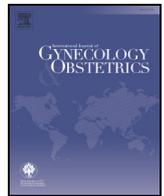




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## SPECIAL COMMUNICATION

## New global guidance supports community and lay health workers in postpartum hemorrhage prevention

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## ABSTRACT

New global guidance has emerged to support countries as they consider introducing or scaling-up misoprostol for postpartum hemorrhage (PPH). The World Health Organization (WHO) and the International Federation of Gynecology and Obstetrics (FIGO) recognize the critical role that community and lay health workers play in preventing PPH and increasing access to misoprostol where skilled birth attendants are not available. As case examples from Nigeria and Nepal illustrate, community engagement and empowerment are critical strategies in successful misoprostol for PPH programs, and must increasingly be viewed as part of efforts to improve maternal health and achieve Millennium Development Goal 5.

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## 1. Introduction

As countries strive to meet the Millennium Development Goals (MDGs) before the 2015 deadline, rapid and urgent action is needed to ensure that communities, particularly women, have equitable access to high-quality health supplies and services. While the goal of MDG 5—to improve maternal health—has witnessed impressive reductions in the global number of maternal deaths [1], rates of decline are marked by inequities, not only across regions, but also within countries.

Postpartum hemorrhage (PPH) is the leading cause of maternal death. Most cases of PPH can be effectively prevented or treated with uterotonic, such as oxytocin or misoprostol. Oxytocin is the recommended standard of care for PPH prevention and treatment; however, it requires cold storage and health providers with the skills and equipment to provide intravenous therapy.

In low-resource countries, misoprostol—a uterotonic that is delivered in tablet form and does not require refrigeration or a skilled healthcare provider to administer it—offers a unique opportunity for countries to improve maternal health and accelerate progress toward MDG 5. Misoprostol has the potential to transform the management of PPH, both at the health facility level and within communities, by allowing women to administer the drug themselves, and by task-

shifting to lay health workers, such as community health workers or trained traditional birth attendants.

In the past 6–9 months, new global recommendations have emerged to guide countries as they consider introducing or scaling up misoprostol for PPH. The International Federation of Gynecology and Obstetrics (FIGO) and the International Confederation of Midwives (ICM) support misoprostol as a safe and effective strategy for reducing PPH in low-resource settings where women give birth at home or in facilities that lack basic supplies and infrastructure [2]. The World Health Organization (WHO) recognizes the critical role that community and lay health workers play in preventing PPH and saving women's lives where skilled birth attendants are not available [3,4]. By recognizing the capacity and reach of lay health workers, such as trained traditional birth attendants, to administer misoprostol tablets to women in childbirth in their own communities, WHO's recommendation is grounded in evidence and pragmatism.

In 2012, WHO published two new guidelines: “WHO recommendations for the prevention and treatment of postpartum haemorrhage” [3] and “WHO recommendations: Optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting” [4]. Both provide the global maternal health community with clarity on the appropriate regimen and conditions for the use of misoprostol, while reinforcing the use of specific cadres of community and lay health workers to deliver misoprostol directly to women in labor to prevent PPH. The former specifies “in settings where skilled birth attendants are not present and oxytocin is not available, the administration of misoprostol (600 µg orally) by community health care workers and lay health workers is recommended for the prevention of PPH” [3].

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As countries adhere to these guidelines and begin to introduce and scale up misoprostol for PPH, it is critically important that communities be engaged as an essential partner in the delivery of primary health care. This strategy reflects a basic tenet enshrined at the seminal Alma-Ata conference nearly 35 years ago: “The people have the right and duty to participate individually and collectively in the planning and implementation of their health care” [5]. Empowering communities and individuals—to define health problems and needs, identify and design solutions, and implement and evaluate appropriate health interventions—enables them to influence and shape health services, improve their quality of care, and ensure that services are responsive to local needs, sensitive to cultural traditions, and acceptable to the people they serve.

Examples from nations ranging from Nigeria to Nepal illustrate how community-level stakeholders are shaping efforts to increase awareness, availability, and use of misoprostol, particularly in settings where a tradition of home birthing has limited the uptake of facility-based interventions to address common and often devastating childbirth complications. These case studies illustrate important strategies for preventing PPH through engaging community and lay health workers. They include the advance provision of misoprostol to pregnant women in their final trimester of pregnancy. Both WHO and FIGO recommend this strategy as a priority research area and note that more research is needed to determine the clinical effectiveness of self-administration of misoprostol after childbirth.

## 2. Nigeria: “The joy is immeasurable”

In Nigeria, maternal mortality is widely perceived as a major public health issue: a Nigerian woman’s lifetime risk of maternal death is 1 in 23 [6,7]. In rural communities of the North West region, where cultural and religious factors contribute to the seclusion of women and to fertility rates that are the highest in the country, many women have little contact with the health system. More than 90% of births take place at home, attended only by a traditional birth attendant or family member [8]. Emergency obstetric care is often unavailable. A woman’s lifetime risk of maternal death in the North West is consequently twice the national average [9]. Raising community awareness of the magnitude of maternal death is a first step; translating this into broad community acceptance of a solution requires working within sociopolitical structures and mobilizing support from local leaders.

A research team from the Population and Reproductive Health Partnership of Ahmadu Bello University and the Bixby Center for Population, Health & Sustainability at the University of California, Berkeley, conducted a series of community dialogues on maternal health, PPH warning signs, misoprostol, and the importance of prenatal care and delivery in health facilities. As a result of these dialogues, local leaders recognized the potential benefits of introducing misoprostol to address PPH. The research team subsequently launched an operations research project to demonstrate the safety of community-level distribution of misoprostol for preventing PPH at home births. Community members helped to define criteria for selecting community-based educators and birth attendants, and to identify appropriate, trusted community members to serve as drug keepers. They also identified the *moda*, a common household vessel, as the locally appropriate way to visualize excessive blood loss [10]. Drug keepers dispensed misoprostol tablets at no cost to traditional birth attendants, and pregnant women and family members in their last month of pregnancy.

By soliciting and following the community’s guidance, the project had community support at every stage, from formative research to dissemination of results. Through community dialogues, women and men helped define the most effective and appropriate ways to share messages about safe delivery and correct use of misoprostol. Messages were imprinted on women’s hijabs; pictorial flip-books and posters were distributed; and dialogues and dramatic presentations were performed and recorded on audiocassettes and compact discs.

Project results demonstrated the positive effect of these intensive community mobilization efforts. A survey at the end of the 12-month implementation period showed that 79% of the women who delivered at home took misoprostol after delivery for the prevention of PPH. At a community meeting, women spoke confidently and passionately about their new, more hopeful outlook on childbirth: one beneficiary said that she no longer suffered from nightmares during her pregnancy, and a village chief declared: “On this day...the joy is immeasurable as we share what we have done.”

Today, nearly 3 years after the close of the project, community members still request misoprostol tablets from the local research team. With only small consignments available, they are struggling to meet the demand.

## 3. Nepal: “I am helping my neighbors”

Only 1 in 5 Nepalese women receives skilled care during childbirth [11]. Geographic and cultural barriers restrict women’s ability to access timely care, resulting in high levels of maternal and neonatal death and illness. In 2007, the USAID-funded Nepal Family Health Program II, in partnership with the Government of Nepal, introduced a community-driven initiative to reduce the number of women dying from PPH—the cause of nearly a quarter of maternal deaths in the country. The program introduced misoprostol, promoted under the apt name of *Matri Surakchya Chakki*, or “mothers’ safety pills.”

The success of this program hinged on the acceptance, willingness, and agency of the cadre of Female Community Health Volunteers (FCHVs), whose job was to maximize the reach and acceptability of misoprostol in the target population. By engaging natural advocates and trusted community members among the established FCHVs, the project effectively corrected misconceptions and addressed the concerns of women and their families. Positive, accurate messages were then disseminated through community dialogues with women’s groups, and reinforced during home visits. FCHVs identified and educated pregnant women and their family members, notably influential mothers-in-law, in their catchment communities, and provided home-based prenatal care. Perhaps most importantly in these underserved and remote areas of Nepal, they distributed misoprostol tablets directly to expectant women during their eighth month of pregnancy.

The project achieved significant increases in coverage, particularly among women delivering at home [12]. Results also indicated an increase in institutional deliveries and in coverage of uterotonics more generally, including oxytocin. While multiple supporting factors influenced these outcomes, the gains made across the continuum of care began at the doorstep of an expectant woman’s home and had a ripple effect to the delivery room. One FCHV articulated her satisfaction in counseling women and distributing misoprostol in the community: “It’s easy to distribute products to people close by. I am helping my neighbors.” Informed by these results and a pragmatic approach to safe motherhood, the Government of Nepal has expanded community distribution of misoprostol, prioritizing remote districts with low rates of institutional delivery, and intends to scale the program nationally.

## 4. Conclusion

The experiences of Nepal and Northwestern Nigeria demonstrate the important role that community engagement strategies can play in successful programs for preventing PPH. These examples illustrate that communities and their leaders can be involved beyond their traditional role as educator: if adequately trained and supported, communities can be essential partners in shaping and implementing life-saving solutions for the pressing health problems that they face every day. For program planners, strengthening the community role means including community awareness, engagement, and mobilization activities from project inception.

As misoprostol for PPH programs expand, we have the opportunity to build on, replicate, and scale up efforts to include communities as full partners. By encouraging, supporting, and facilitating community-owned efforts to increase awareness of safe delivery and access to misoprostol and acting upon new global recommendations, we can accelerate progress toward MDG 5 to improve maternal survival for millions of women. This effort is urgently needed, and complements concurrent efforts to ensure that all women have the option and means to deliver their babies in professionally-staffed and well-equipped facilities.

#### Conflict of interest

The authors have no conflicts of interest.

#### References

- [1] World Health Organization, UNICEF, UNFPA, The World Bank. Trends in Maternal Mortality: 1990 to 2010. WHO, UNICEF, UNFPA and The World Bank estimates. Geneva: WHO; 2012. Available at: <http://www.who.int/reproductivehealth/publications/monitoring/9789241503631/en/index.html>.
- [2] International Federation of Gynecology and Obstetrics Safe Motherhood and Newborn Health Committee. Prevention and treatment of postpartum hemorrhage in low-resource settings. *Int J Gynecol Obstet* 2012;117(2):108–18.
- [3] World Health Organization. WHO recommendations for the prevention and treatment of postpartum haemorrhage. Geneva: WHO; 2012. Available at: [http://www.who.int/reproductivehealth/publications/maternal\\_perinatal\\_health/9789241548502/en/index.html](http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9789241548502/en/index.html).
- [4] World Health Organization. WHO Recommendations: Optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting. Geneva: WHO; 2012. Available at: [http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843_eng.pdf).
- [5] World Health Organization. Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, USSR; 6–12 September 1978. Available at: [www.who.int/publications/almaata\\_declaration\\_en.pdf](http://www.who.int/publications/almaata_declaration_en.pdf). Accessed January 25, 2013.
- [6] Population Reference Bureau. Lifetime risk of maternal death. PRB The World's Women and Girls 2011 Data Sheet. Available at: <http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=247>. Accessed January 25, 2013.
- [7] Hogan MC, Foreman KJ, Naghavi M, Ahn SY, Wang MR, Makela SM, et al. Maternal mortality for 181 countries, 1980–2008: a systematic analysis of progress towards Millennium Development Goal 5. *Lancet* 2010;375(9726):1609–23.
- [8] National Population Commission of Nigeria, ICF Macro. 2008 Nigeria Demographic and Health Survey. Abuja, Nigeria: National Population Commission and ICF Macro; 2009.
- [9] Federal Office of Statistics, UNICEF. Multiple cluster indicator survey 1999. Lagos, Nigeria: Federal Office of Statistics and United Nations Children Fund; 2000.
- [10] Prata N, Ejembi C, Fraser A, Shittu O, Minkler M. Community mobilization to reduce postpartum hemorrhage in home births in northern Nigeria. *Soc Sci Med* 2012;74(8):1288–96.
- [11] Population Reference Bureau. Births attended by skilled health personnel. PRB The World's Women and Girls 2011 Data Sheet. Available at: <http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=244>. Accessed January 25, 2013.
- [12] Rajbhandari S, Hodgins S, Sanghvi H, McPherson R, Pradhan YV, Baqui AH. Expanding uterotonic protection following childbirth through community-based distribution of misoprostol: Operations research in Nepal. *Int J Gynecol Obstet* 2010;108(3):282–8.