

# Community-Based Misoprostol Distribution to Prevent Postpartum Hemorrhage in Bangladesh: From Pilot to Scale

*“This time, I had less bleeding than with my previous delivery. I did not face any problem; rather, I felt good,”* says Rashida (Khuruskul Union, Cox’s Bazar District), a satisfied user of misoprostol, after the delivery of her baby.

## Introduction

Maternal mortality rates have started to decline in Bangladesh, but this remains a serious concern, with approximately 194 maternal deaths per 100,000 live births (Streatfield et al., 2011). About 31% of maternal deaths are due to hemorrhage, mostly postpartum hemorrhage (PPH), which mainly occurs during the third stage of labor. The most common cause of PPH is uterine atony (70%), which can be managed effectively by practicing active management of the third stage of labor (AMTSL). One of the components of AMTSL is injection of oxytocin. It is not possible to use this in a home setting, however, where deliveries are often assisted by unskilled birth attendants. In Bangladesh, 77% of pregnant women deliver at home (Streatfield et al., 2011). Alternatively, taking misoprostol orally immediately following the birth of a baby also reduces the occurrence of PPH.

## Preparatory Phase

In 2006, the National PPH Prevention Task Force was formed under the guidance of the Directorate General of Health Services (DGHS) to coordinate efforts by the government, nongovernmental organizations (NGOs) and the public sector to prevent PPH and help facilitate the introduction of international best practices, in particular AMTSL and misoprostol use. In May 2008, the Directorate of Drug Administration approved misoprostol as a means for PPH prevention and included it in the updated Essential Drug List. At the same time, EngenderHealth and the National PPH Prevention Task Force developed a guideline on misoprostol use for PPH prevention. Based on the approved guideline, a misoprostol use implementation plan for piloting was developed and approved by the DGHS and the Directorate General of Family Planning (DGFP).

### Government Policy on Skilled Birth Attendants

As part of its efforts to lower maternal mortality and reach Millennium Development Goal 5, the Government of Bangladesh places an emphasis on delivery by community skilled birth attendants (CSBAs) at home and development of a new midwifery cadre to increase skilled attendance at facilities. Thus far, 6,535 of the planned 13,500 CSBAs have been trained, and the Ministry of Health and Family Welfare (MoH&FW) aims to complete training the remainder by 2015. At the same time, Prime Minister Sheikh Hashina committed to double the percentage of births attended by skilled health workers by 2015 by training an additional 3,000 midwives, staffing all 427 subdistrict health centres to provide around-the-clock midwifery services, and upgrading all 59 district hospitals and 70 mother and child welfare centers (MCWCs) as centers of excellence for emergency obstetric care services.

## Pilot Phase

After misoprostol had been approved as a means for PPH prevention, the National PPH Prevention Task Force and EngenderHealth set out to design a model for using the tablets for community-level PPH prevention among women who opt to deliver at home or who fail to reach a

health facility. It is important to note that at this point, ICDDR,B had already conducted a feasibility and acceptability study of misoprostol for PPH prevention in Bangladesh during 2006–2007 (Quaiyum et al., 2011). As such, the objective of this two-stage pilot was to develop a program implementation model with government and NGO health and family planning fieldworkers distributing misoprostol tablets to pregnant women and to assess the approach’s effectiveness, gather lessons learned, and provide recommendations for national scale-up.

The first phase of the pilot took place in Tangail District from November 2008 to June 2009. The implementation strategy for this and the second phase (as well as the scale-up) included the following components:

- Identification and registration of pregnant women by trained government and NGO field workers
- Counseling of pregnant woman, intended birth attendants, and family members, using tested behavior change communication materials
- Distribution of misoprostol tablets by trained fieldworkers to pregnant women after 32 weeks of pregnancy (The drug is distributed late in pregnancy, to minimize the chances of women’s forgetting about, losing, or misusing the drug.)
- Follow-up of women by trained fieldworkers after delivery
- Back-up of the fieldworkers by trained facility-based health care providers, in case of complications



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A formal evaluation of the pilot project showed that government and NGO fieldworkers can safely distribute misoprostol<sup>1</sup> at the community level when they are well-trained and supervised. Based on the lessons learned from the Tangail pilot and to develop the capacity of government and NGO partners, a second phase of the pilot initiative was conducted in Cox's Bazar District from November 2009 to September 2010.

**Table 1: Misoprostol use in the two pilot districts**

District	No. of pregnant women registered*	No. of women delivered	No. of women delivered at home	No. (and %) of women who took misoprostol
Tangail	22,050	19,066	16,513	15,605 (95%)
Cox's Bazar	25,320	19,188	17,477	16,689 (95%)

\*In both districts, 70% of pregnant women were registered by the fieldworkers.

Evaluation of the pilots showed that women who used misoprostol were generally very pleased, as it reduced excessive bleeding, and widely accepted the use of misoprostol after delivery. The small minority of women who did not take the drug mentioned that they forgot to take it, were afraid of the side effects, or were prohibited from taking it by relatives or a traditional birth attendant. In both pilots, no one took the drug during pregnancy. Misoprostol users experienced no deaths or significant complications. Fewer than 0.5 % of users experienced minor side effects. Using national maternal mortality data, it is estimated that during the two pilots, 19 PPH-related maternal deaths were averted in the project areas. Fieldworkers, supervisors, and program managers all believed that the program model should be scaled up to other parts of Bangladesh.

### **National Scale-Up**

Upon successful completion of the pilots, following a request from the MoH&FW, the Mayer Hashi project<sup>2</sup> developed a national scale-up plan, in collaboration with the National PPH Prevention Task Force and other partners. This was presented and approved at the National PPH Prevention Task Force meeting in September 2010. In 2011, community-based distribution of misoprostol for the prevention of PPH was included in the operational plans of both DGHS and DGFP in the new health sector program, with implementation budgets. The scale-up plan will be implemented in a phased way and began in July 2011 in four districts—Barisal, Comilla, Cox's Bazar, and Maulavibazar.

The pilot interventions demonstrated excellent potential for scale-up throughout Bangladesh, and this is now underway. A number of challenges remain to be addressed as the scale-up proceeds, including raising country-wide community awareness, ensuring the availability of misoprostol through the government's logistics distribution system, training large numbers of field- and clinic-based staff through the government systems; monitoring and supervising the new program; incorporating misoprostol reporting into the government's management information system; and marketing/distributing misoprostol for PPH prevention in a special package, with a specific name, shape, and color of the tablet (to avoid misuse). The DGFP and DGHS will continue to work closely with Mayer Hashi and with other partners to address these challenges, strengthen the program, and reduce maternal mortality.

### **References**

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<sup>1</sup> The misoprostol tablets for the pilot interventions, as well as for the initial phase of the scale-up, were locally produced by Gonoshasthya Pharmaceutical Ltd. and were donated by Venture Strategies Innovations (VSI), Berkeley, California, USA.

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