Community-Based Distribution of Misoprostol for the Prevention of Postpartum Hemorrhage:

Evaluation of a Pilot Intervention in Tangail District, Bangladesh

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Mayer Hashi

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Contents

Appendixes

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Acronyms and Abbreviations

AHI	Assistant Health Inspector
AMTSL	active management of third stage of labor
ANC	antenatal care
BCC	behavior change communication
BCCP	Bangladesh Center for Communication Programs
BDHS	Bangladesh Demographic and Health Survey
CC	community clinic
DD-FP	Deputy Director, Family Planning
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
EDD	expected date of delivery
EPI	Expanded Program on Immunization
FGD	focus group discussion
FIGO	International Federation of Gynecology and Obstetrics
FPI	Family Planning Inspector
FWA	Family Welfare Assistant
GOB	Government of Bangladesh
GPL	Gonoshasthya Pharmaceutical Limited
HA	Health Assistant
HI	Health Inspector
HIV	human immunodeficiency virus
ICM	International Confederation of Midwives
IEC	information, education, and communication
LMP	last menstrual period
MDG	Millennium Development Goals
MIS	management information system
MO (MCH-FP)	Medical Officer (Maternal and Child Health-Family Planning)
MOH&FW	Ministry of Health and Family Welfare
NGO	nongovernmental organization
NIPORT	National Institute for Population Research and Training
PI	principal investigator
POPPHI	Prevention of Postpartum Hemorrhage Initiative
PPH	post partum hemorrhage
RMO	Resident Medical Officer
TBA	traditional birth attendant
UFPO	Upazila Family Planning Officer
UH&FPO	Upazila Health and Family Planning Officer
UH&FWC	Union Health and Family Welfare Center
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VSI	Venture Strategies Innovations
WHO	World Health Organization

Executive Summary

The 2007 Bangladesh Demographic and Health Survey showed **little progress in maternal health between 2004 and 2007.** Only 15% of births are delivered at a health facility. Leading causes of maternal mortality are hemorrhage, eclampsia, abortion, injuries, sepsis, and obstructed labor. The speed at which postpartum hemorrhage (PPH)–related deaths occur presents a major challenge to health systems, particularly in rural areas of Bangladesh, which have poor communication and transportation systems and lower level health facilities that lack skilled birth attendants, necessary drugs, and equipment. Misoprostol is a proven uterotonic drug that is increasingly used in clinical and home delivery settings to prevent and manage PPH. Misoprostol tablets are inexpensive, are easy to store (they do not need refrigeration), are stable under field conditions, and have an excellent safety profile. They also do not require a skilled service provider to dispense. The International Federation of Gynecology and Obstetrics and the International Confederation of Midwives jointly recommend that in home births without a skilled attendant, misoprostol may be the only available technology to control PPH.

The National PPH Prevention Task Force, the Directorate General of Health Services (DGHS), the Directorate General of Family Planning (DGFP), and the Mayer Hashi Project jointly selected **Tangail District** in which to pilot the community-based distribution of misoprostol for the prevention of PPH. Mayer Hashi is an Associate Award of the RESPOND Project, a global cooperative agreement supported by the U. S. Agency for International Development (USAID), and is implemented by EngenderHealth, the Bangladesh Center for Communication Programs, and the Population Council. The misoprostol tablets for the pilot were donated by Venture Strategies Innovations (VSI), Anaheim, California, USA. The misoprostol pilot was implemented by the DGHS, DGFP, and nongovernmental organization (NGO) field workers, with technical assistance from the Mayer Hashi Project, from November 2008 through June 2009. Initial activities of the pilot were started with the support of the ACQUIRE Project and the Prevention of Postpartum Hemorrhage Initiative (POPPHI), also both funded by USAID.

The broad objective of the Phase 1 implementation of the misoprostol pilot in Tangail District was to assess the effectiveness of **using government and NGO field workers at the community level in distributing misoprostol tablets** and ensuring their appropriate use by immediate postpartum women. Tangail District is located in the central region of Bangladesh. Eight out of 12 subdistricts, known as *upazilas*, were selected for the misoprostol pilot. The project interventions included the following: orientation of the district- and upazila-level managers and facility-based service providers; training of the government and NGO field workers and their supervisors; identification and registration of pregnant women by the field workers; education of pregnant women, family members of the pregnant women, and community members by the field workers; distribution of misoprostol tablets to the pregnant women by the field workers; monitoring and supervision of the field workers by supervisors; and follow-up by the field workers with clients who had received misoprostol tablets. Mayer Hashi Project staff provided technical assistance for every activity.

This evaluation is intended to **assess the process, approaches, and strategies followed in the implementation of the pilot,** by the review of relevant project documents and activity reports and through interviews and focus group discussions (FGDs) with clients, service providers, supervisors, and program managers. The overall goal of the evaluation was to assess the effectiveness of the community-based misoprostol intervention program strategies and to gather lessons learned and provide recommendations for the national scale-up.

Misoprostol tablets were distributed to pregnant women at or after 32 weeks of pregnancy, to ensure that the women would not forget them, misplace them, or misuse them. Analysis of the project reports, monitoring data, and FGD findings with field workers and supervisors revealed that the distribution of tablets across intervention areas throughout the project period was satisfactory (i.e., women received the tablets on time, and field workers experienced no stock-outs).

Based on the record review, an analysis of the project monitoring data suggests that among the 12,961 out of 19,497 registered pregnant women who received misoprostol tablets in the project areas, by June 2009, 11,764 women had given birth, and the remaining 1,197 pregnant women had not yet done so. Findings showed that 92% (9,228 out of 10,040) of pregnant women who received misoprostol tablets and had a home birth used the misoprostol tablets after the delivery of the baby to prevent postdelivery bleeding. **The study found excellent compliance regarding use of the three tablets at the same time.** All but one of the misoprostol tablet users who were interviewed followed instructions to take all three tablets at the same time.

Analysis of the in-depth interviews of misoprostol users and nonusers revealed **that all 31 women interviewed had heard about the possibility of excessive vaginal bleeding occurring after childbirth, though their depth of knowledge varied.** They also had a range of beliefs about postpartum bleeding, with some women believing that during pregnancy "bad blood" accumulates in the body and has to leave the body after pregnancy. All of the women interviewed had good basic knowledge about misoprostol and about when to take it, although some women were confused as to whether to take it before or after delivery of the placenta. Most women who used misoprostol reported that they had less postpartum bleeding after this pregnancy compared with their last pregnancy, and they were satisfied with the misoprostol.

Findings suggest that **several people played a role in the decision-making process concerning use of the misoprostol tablets.** Women who used the tablets often decided themselves to take the tablets, but women who did not were frequently prevented from using the tablets by others, such as mothers-in-law, mothers, *dais* (traditional birth attendants), and husbands. These findings indicated that family members and other influential individuals should be targeted in behavior change communication (BCC) activities, so they can be informed about misoprostol. The current program already aimed to involve these other decision makers, and future expansions should continue to emphasize including these family members and birth attendants.

Review of project documents, official communications, and discussions with key informants at the national level revealed that the **Mayer Hashi Project proceeded systematically to introduce misoprostol as part of the program to reduce maternal mortality.** Findings suggest that field workers received misoprostol tablets as needed on a monthly basis and that the government supply system was able to ensure safe storage and regular distribution of tablets with BCC materials such as leaflets, stickers, posters, reporting forms, referral slips, and registers. It is important to note that the reporting system and the forms need to be aligned with the existing forms and systems under government management information system (MIS); it was also suggested that an additional column be included in the existing MIS form to accommodate data for misoprostol tablets.

FGDs and interviews revealed positive reactions from managers, field workers, and clinic staff who participated in orientations. Participants found **the training very useful and helpful in clarifying their understanding of the concepts of misoprostol use and in implementing the interventions.** The assignment of working areas to the health and family planning workers and NGO workers to avoid duplication of effort and to ensure coverage worked well for the most part, although some duplication occurred initially. In a few areas, workers continued to cover their full area assigned by their department rather than move on to assigned working area for misoprostol distribution. (The working areas for misoprostol distribution were smaller, to ensure complete coverage.) This created some duplication in the first one or two months of the project, but the problem was quickly corrected. Field workers did not encounter significant obstacles in identifying and registering pregnant women, although they found that most women did not know the date of their last menstrual period and, as a result, it was hard to calculate their expected date of delivery. Most participants in the field worker FGDs stated that they were able to register nearly all pregnant women in their areas.

Courtyard meetings (Utthan Baithak) were organized to create awareness among women and their families about PPH and the role of misoprostol in preventing PPH. Monitoring data suggest that field workers conducted a total of 2,443 courtyard meetings. However, analysis of the 31 users and nonusers interviewed suggest that only 12 women, or someone in their family, attended courtyard meetings, because either such meetings were not organized in their area or they did not know about them. Flipcharts, stickers, and leaflets were used in the BCC activities and were generally appreciated. Many women reported that the stickers and

leaflets made them aware of the use of the misoprostol tablets after delivery to prevent excessive postdelivery vaginal bleeding. The intended audiences very much appreciated the materials. A few religious people noted that the sticker shows part of a woman's leg, and this was offensive to them.

The side effects and complications due to the use of misoprostol were very low. The monitoring data show that only 39 women (0.4%) suffered from minor side effects (e.g., fever, shivering) and recovered by using a home remedy, and only 25 women (0.3%) suffered from complications and were referred to a hospital. **Among the misoprostol users, no maternal deaths were reported**, while eight cases of maternal death were reported during the pilot period in the project area due to other causes. A Mayer Hashi staff physician conducted verbal autopsies for all eight cases. It is estimated that seven PPH-related maternal deaths were averted in the project area by the use of misoprostol tablets.

Most of the field workers and supervisors interviewed indicated that the **nearby referral hospitals are ready** (i.e., have trained providers, equipment, and supplies) **to provide referral services in case any complications from misoprostol use arise.** They also believed that the pilot program was successful and had achieved its objectives in distributing the misoprostol tablets through the field workers at the community level. They based this on the fact that most of the pregnant women who delivered at home received and used the misoprostol tablets, faced no major problems using the tablets, and were able to prevent excessive postdelivery bleeding. This experience suggests that the project interventions should be scaled up to other areas of the country.

This evaluation report concludes with a number of recommendations:

- The misoprostol program should be continued and expanded to other parts of the country, to help achieve Millennium Development Goal (MDG) No. 5.
- The training curriculum, leaflet, stickers, and "*insert*" for the misoprostol tablets need to be reviewed, modified, and updated to address audience concerns.
- The program should advise women to take misoprostol tablets within five minutes after delivery of the baby rather than "*immediately after delivery.*"
- A balanced strategy should be used for communicating the side effects of misoprostol, comparing them with the consequences of PPH. Efforts should be in place to remove misconceptions around delivery and PPH.
- Birth attendants and other decision makers should be involved in the interpersonal communication sessions with the pregnant woman about the use of misoprostol.
- To reduce the workload of the field workers and ensure 100% coverage of pregnant women, alternative cadres of manpower or community networking could be explored for future expansion.

Introduction

A recent review of levels of and trends in maternal mortality in 181 countries between 1980 and 2008 reported that worldwide maternal mortality decreased from 526,300 deaths in 1980 to 342,900 deaths in 2008 (Hogan et al., 2010). The global maternal mortality rate decreased from 422 per 100,000 live births in 1980 to 251 per 100,000 in 2008. The review reports that in 2008, more than 50% of all maternal deaths occurred in only six countries: India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of Congo. The HIV epidemic contributed to considerable increases in maternal mortality in eastern and southern Africa. Although rates of maternal mortality have started to decline in Bangladesh (as in many developing countries), maternal mortality remains a serious concern, with approximately 320 maternal deaths occurring for every 100,000 live births (NIPORT et al., 2003).

The 2007 Bangladesh Demographic and Health Survey (BDHS) showed little progress between 2004 and 2007 in maternal health indicators, and while achievement of Millennium Development Goal (MDG) No. 5 is still possible, strong improvement will be required before this can be achieved. According to the BDHS, nearly half of all pregnant women (48%) had not had a single antenatal care (ANC) visit (NIPORT et al., 2009), while only 21% of pregnant women had made the four or more ANC visits, as recommended by the World Health Organization (WHO) (up from 16% in 2004 [NIPORT et al., 2005]).

The proportion of births taking place in health facilities continues to be small, though it is increasing. The proportion of births occurring in a health facility was reported at 4% in 1993-1994 (Mitra et al., 1994), 9% in the 2004 BDHS, and 15% in the 2007 BDHS. This increase is primarily due to an increase in births occurring in private facilities and those operated by nongovernmental organizations (NGOs). The proportion of births assisted by medically trained personnel-doctors, nurses, midwives, paramedics, and community skilled births attendants-increased from 13% in 2004 to 18% in 2007. Deliveries assisted by a skilled attendant are more common in urban areas (37%) and among women with secondary or higher education (47%) (NIPORT, 2009). Leading causes of maternal mortality are hemorrhage, eclampsia, abortion, injuries, sepsis, and obstructed labor. Maternal malnutrition is an underlying cause of many deaths. Only 21% of mothers receive postnatal care from a medically trained person within 42 days (NIPORT, 2009). The BDHS shows widening gaps between the rich and the poor on several indicators.

Blood loss of more than 500 ml during the first 24 hours postpartum peried is commonly defined as a marker for postpartum hemorrhage (PPH) (WHO, 2003). A woman may die from PPH within two hours if she does not receive immediate and adequate medical care. The speed at which PPH-related deaths occur presents a major challenge to health systems in rural areas of Bangladesh and other developing countries, where communication and transportation systems often are poor and lower level health facilities may lack skilled birth attendants and necessary drugs and equipment. In Bangladesh, about 28% of maternal deaths are due to bleeding, primarily during the postpartum period (NIPORT et al., 2003). Though excessive postpartum vaginal bleeding can be caused by tears in the vagina and cervix, clotting disorders, and retained placenta, the most common cause of PPH is uterine atony (uterine inertia/inability to contract), which mainly occurs during the third stage of labor (the period between after delivery of the baby and before delivery of the placenta). Hence, it is essential to actively manage the third stage of labor by use of uterotonic (uterus-stimulating) drugs to overcome uterine inertia by increasing uterine contractions, thereby reducing the risk of excessive postdelivery vaginal bleeding.

Although PPH is life-threatening, most PPH can be prevented with appropriate care and treatment through active management of the third stage of labor (AMTSL). Among the available uterotonic drugs to be administered during AMTSL, oxytocin[1] is the drug of choice. However, oxytocin needs to be refrigerated and

[1] Oxytocin is a posterior pituitary extract. It works by causing the uterus to contract. It is used to increase the strength of contractions of the uterus. It can be used during childbirth to speed delivery or after childbirth to control bleeding.

must be administered by injection. Most rural health facilities in Bangladesh do not have a refrigerator in which to store oxytocin, and only 4% of facilities store oxytocin drug at the appropriate temperature of 2^{o}–8^{o} C (Sabir et al., 2008). In addition, as previously noted, 85% of Bangladeshi women deliver at home (NIPORT, 2009), and 82% of births are assisted by untrained birth attendants, who are not allowed to administer an injection (NIPORT, 2009). In settings such as Bangladesh, strategies to reduce the risk of PPH at home delivery are urgently needed.

Misoprostol is a proven uterotonic that is increasingly used in clinical and home delivery settings to prevent and manage PPH. Misoprostol tablets are inexpensive, are easy to store (they do not need refrigeration), are stable under field conditions, and have an excellent safety profile (El-Rafaey et al., 1997). In addition, misoprostol does not require a skilled service provider. The International Federation of Gynecology and Obstetrics (FIGO) and the International Confederation of Midwives (ICM) jointly recommended that in home births without a skilled attendant, misoprostol may be an appropriate technology for controlling PPH (ICM/FIGO, 2006), and WHO has recommend that in the absence of AMTSL, misoprostol should be offered by a health worker trained in its use for PPH prevention (WHO et al., 2007). Several studies in the South Asia region (e.g., rural India, Nepal) found that misoprostol could be a good alternative to oxytocin injection and an effective uterotonic drug to reduce PPH at the community level. These studies found that trained community volunteers are good distributors of misoprostol. Community volunteers with minimal training can teach illiterate pregnant women to self-administer misoprostol tablets effectively and appropriately (Derman et al., 2006).

Methodology of Phase 1 Implementation

The National PPH Prevention Task Force, the Directorate General of Health Services (DGHS), the Directorate General of Family Planning (DGFP), and the Mayer Hashi Project jointly selected Tangail District in which to pilot the community-based distribution of misoprostol for the prevention of PPH. The pilot was implemented by the DGHS, the DGFP and NGO field workers, with technical assistance from the Mayer Hashi Project, from November 2008 through June 2009.

Objectives

The broad objective of the Phase 1 implementation of the misoprostol pilot in Tangail District was to assess the effectiveness of using government and NGO field workers at the community level to distribute misoprostol tablets and ensure their appropriate use by immediate postpartum women. The specific objectives of the Phase 1 implementation were to:

- Develop and test an effective system of distributing misoprostol at the community level, using the existing government and NGO health and family planning field service delivery systems
- Create demand for use of misoprostol by the immediate postpartum women to prevent PPH at the community level
- Document experiences of misoprostol distribution and use by the immediate postpartum women at the community level in selected subdistricts, known as *upazilas*, of Tangail District.

Intervention Area

Tangail District is located in the central region of Bangladesh. The district consists of 12 upazilas, 103 unions, and 2,431 villages. Eight of the 12 upazilas were selected for the misoprostol pilot: Tangail Sadar, Basail, Madhupur, Ghatail, Kalihati, Gopalpur, Bhuapur, and Dhanbari (see Figure 1). Four upazilas in which the government's demand-side financing program for maternal health[2] is being implemented were not included.

The total population of Tangail District is about 3.2 million, and the intervention covered about 2.8 million people in the eight upazilas. The total estimated number of live births in the eight selected upazilas was 21,834 per year (see Appendix 1), of which approximately 18,559 deliveries were estimated to occur at home (85%, as per the 2007 BDHS).

Figure 1: Map of Tangail District

Implementation Process

The misoprostol pilot in Tangail District consisted of three phases: preparation, implementation, and evaluation. The preparation took more time than foreseen, in particular, to raise the awareness of policymakers, program managers in the Ministry of Health and Family Welfare (MOH&FW), and other stakeholders on the use of misoprostol for PPH prevention, to obtain their buy-in and support for the pilot, and to develop the training and behavior change communication (BCC) materials. The intervention implementation and evaluation phases proceeded on schedule.

[2] The demand-side financing program for maternal health is a government program in which the government provides vouchers to pregnant women to cover the costs of ANC, prenatal care, and institutional delivery services, including travel costs to and from the clinic. This program was being implemented in four upazilas of Tangail District while the misoprostol pilot was being conducted. To avoid any mixing of messages between the two initiatives, it was deemed better to implement the misoprostol pilot in upazilas not covered under demand-side financing.

Preparatory Phase

The following activities were undertaken during the preparatory phase.

Advocacy with the policymakers and program managers: In October 2006, a national stakeholders meeting on PPH prevention decided that to reduce maternal mortality in Bangladesh, international best practices—in particular, AMTSL and misoprostol—should be introduced. As a follow-up to this meeting, a PPH Prevention Task Force was started, with broad representation of stakeholders and with EngenderHealth as the secretariat. EngenderHealth and the PPH Prevention Task Force started their advocacy activities with the MOH&FW to test the effectiveness of community-based distribution of misoprostol tablets through field workers. Continuous advocacy efforts by the PPH Prevention Task Force and EngenderHealth, under the ACQUIRE Project, resulted in MOH&FW policymakers and program managers supporting the proposal to pilot the intervention in phases in three districts.

Development of "misoprostol use policy" and Phase 1 implementation plan: The Mayer Hashi Project, with technical assistance from the PPH Prevention Task Force, developed a misoprostol use policy protocol and a Phase 1 implementation plan. The protocol was submitted to the DGHS on March 6, 2008, and approved in a meeting of the DGHS Technical Committee on May 5, 2008 (see Appendix-2). The protocol contained a clear guideline for implementing the pilot intervention. DGHS and DGFP implemented the intervention with technical assistance from the Mayer Hashi Project and with financial assistance from USAID.

Development of training curriculum, information, education and communication (IEC) materials, monitoring checklists, and tools: A number of training and BCC materials were developed under the project, including a training manual for the field workers, a flipchart, a leaflet, and a sticker (see Appendix 3). Both DGHS and DGFP fully participated in preparing these documents. A number of consultative meetings were held to agree on the content of the documents.

The flipchart was developed to assist field workers in creating awareness at the community level in group sessions as well as during individual counseling. To increase the awareness of the community members, particularly family members of the pregnant women, a leaflet and sticker on the use of misoprostol were also developed and distributed in the community.

A draft training curriculum for the field workers was developed under the guidance of the National PPH Prevention Task Force. The curriculum was field tested in the pilot project at Tangail District and will be updated based on the findings of field testing during the subsequent phase in the Cox's Bazar District. In addition, a monitoring checklist and several other tools (e.g., pregnant women registration and follow-up forms) were developed and used in the pilot project.

Advocacy for collection of misoprostol tablets and repackaging: The Mayer Hashi Project continuously advocated for repackaging misoprostol tablets. The misoprostol tablets used for the pilot were donated by Venture Strategies Innovations (VSI), a nonprofit international organization based in the United States. VSI procured the misoprostol tablets from Gonoshasthya Pharmaceutical Limited (GPL), a pharmaceutical company located in Bangladesh, and donated those to EngenderHealth/Bangladesh for use in the pilot project. Although the tablets are available on the market in 10 tablets per one blister (200 mcg in each tablet), GPL made a special packet of three 200 mcg tablets with an insert in the local language (see Appendix 4). VSI donated 492,372 tablets (164,124 packets of three tablets) in two installments during 2008 and 2009. EngenderHealth/Bangladesh collected the repackaged misoprostol tablets from GPL.

Intervention Implementation

The implementation phase lasted for eight months, from November 2008 through June 2009. The interventions were carefully chosen so that the government and NGO field workers could implement them with minimal involvement from the Mayer Hashi Project. The following describes the intervention implementation process.

Orientation and planning workshop for the district- and upazila -level managers: At the onset of the project, a district-level orientation and planning workshop was conducted for district- and upazila-level managers to provide an intensive orientation on the program implementation process, technical issues related to the use of misoprostol tablets for PPH prevention at the community level, and the role of district and upazila managers in the pilot project implementation. Resource persons from the national level and from the Mayer Hashi Project conducted the sessions. During the workshop, a plan was finalized for the upazila-level training program for the field workers and the orientation for the facility-based service providers.

Training of government and NGO field workers and their supervisors: The next step was a day-long training for the field workers and their supervisors, which was held at the upazila level. The training sessions involved PowerPoint presentations and pictorial materials, followed by a question-and-answer session and group work. The contents of the training included the background of the project and the rationale of community-based interventions; technical details on PPH and on PPH prevention; technical details of misoprostol; the project implementation process, including area distribution; identification and registration of pregnant women; distribution of misoprostol and follow-up of postpartum women; community awareness activities; record keeping and reporting; and the field workers' roles and responsibilities in the implementation of the program. In addition, the training provided detailed discussion on how to fill in the registers for pregnant women and the monitoring forms. Supervisors were taught what to monitor and how to supervise the field workers' registration of pregnant women, got acquainted with the new working areas for the field workers, and learned how to distribute, follow up, and report on the use of misoprostol tablets.

The field workers also received their first supply of misoprostol tablets, stickers, leaflets, flipcharts, and a bag in which to carry everything. As a result, field workers were able to start implementation of the activities immediately after their training. Facility-based service providers joined the field workers during the technical sessions of the training program to receive an orientation on the details of misoprostol, the management of its side effects, and their roles in managing complicated and referred cases.

Distributing field worker's working areas: During the training, the existing working areas of the field workers were distributed among the field workers of government organizations and NGOs to avoid overlap and to ensure that all areas were covered for the distribution of misoprostol tablets. In Bangladesh, DGHS and DGFP each distributed working areas to their field workers for community-based health and family planning services. These areas often did not correspond. At the same time, NGOs were assigned to work in certain areas, and their field workers sometimes covered areas that overlapped with the Government of Bangladesh (GOB) field workers. For the purpose of this project, to ensure that all pregnant women in Tangail were visited by a field worker from DGHS, or DGFP, or an NGO, the field workers' working areas were mapped out and distributed. This generally meant that field workers covered a slightly smaller area for the misoprostol project than they normally do, as the DGHS and DGFP areas often overlap. As for the distribution of misoprostol, it was important to ensure that all pregnant women were registered and visited by one worker and that the women received only one packet of three misoprostol tablets. The distribution of working areas among the health, family planning, and NGO workers was conducted in a participatory manner in the presence of program managers and supervisors.

Identifying and registering pregnant women: After being prepared through training and acquiring the necessary supplies, the trained government and NGO field workers identified the pregnant women (self-reported) in their working areas and registered them by using the supplied "Misoprostol use and follow-up" auto-carbon register forms. The information to be recorded over the course of a woman's pregnancy included the woman's name, age, and address; her expected date of delivery; the date she received misoprostol tablets; place of delivery; the status of misoprostol use; any side effects or complications after she used misoprostol tablets; and places she was referred to if any complications occurred, including contact details. Mayer Hashi Project staff collected one of the duplicate completed forms for monitoring and record keeping. Mayer Hashi Project staff maintained a detailed database of all registered pregnant women, and updated it regularly based on the monthly reports from the field workers.

Conducting BCC activities: To create awareness among pregnant women, their families, and the community as a whole, the field workers conducted four types of BCC activities:

- ***Courtyard meetings (Utthan Baithak)*** for community members, including pregnant women.[3] During these meetings, presenters discussed complications during delivery, PPH, advantages of hospital delivery, and the use of misoprostol tablets after home delivery to prevent PPH.
- ***Interpersonal communication*** with pregnant women during home visits using a flipchart on PPH prevention through misoprostol use.
- ***Distribution of leaflets*** containing information on PPH prevention through misoprostol use.
- ***Pasting of stickers*** onto the houses of pregnant women. During registration, the trained field workers pasted one sticker inside and another outside the house of a pregnant woman. The sticker inside the house was intended to help remind the woman and her family members that she needed to take the misoprostol tablets immediately after delivery of the baby. The sticker on the outside of the house was intended not only to raise community awareness, but also to help the community members assist the pregnant woman with remembering to take the tablets immediately after delivery. It was also thought that the stickers would help the field workers and supervisors to easily recognize houses with pregnant women during their field work.

Distributing misoprostol tablets to the pregnant women: During registration, trained field workers calculated each pregnant woman's expected date of delivery, to establish dates for tablet distribution and follow-up visits. Misoprostol tablets were distributed to all registered pregnant women at or after 32 weeks of their pregnancy.

Ensuring monitoring and supervision: The pilot project used government channels for monitoring and supervision, with additional monitoring and supervision conducted by Mayer Hashi Project representatives. NGO supervisors also supervised and monitored their own field workers. Supervisors from the GOB, NGOs, and Mayer Hashi Project made random field visits to provide support and supervise ongoing program activities. Regular monthly meetings with all field workers and project staff were held during the project period.

To ensure quality field work, trained GOB and NGO field workers not only maintained the prescribed auto-carbon register form during registration, tablet distribution, and follow-up visits, they also attended regular monthly meetings at the union and upazila levels to discuss and resolve any emerging issues related to program implementation. During the monthly meetings, reports from each field worker were collected, and Mayer Hashi Project staff distributed drugs and IEC materials among the field workers, based on demand. These meetings were also used as an opportunity for on-the-job training.

Following up with clients who received misoprostol tablets: After the registered pregnant women had delivered their babies, field workers followed up with all who had received misoprostol tablets to see whether they had taken the tablets and to check on their health and pregnancy outcome, as well as to determine any need for referral or additional follow up. During follow-up visits, field workers collected all relevant information for the register. In addition, field workers recorded the women's delivery outcomes and experiences in using

[3] In Bangladeshi villages, several houses usually are located at one place, with a shared open courtyard in front of them. Field workers organized meetings in such courtyards that involved members of the community, including pregnant women, mothers-in-law, and birth attendants.

misoprostol. To confirm that the women had used the tablets, field workers collected the empty catch cover and strip of used tablets. Mayer Hashi Project staff then collected these during the monthly meeting. The field workers also collected unused tablets during the follow-up visits and distributed those tablets among newly registered pregnant women.

Evaluation

The pilot activities were evaluated under the Mayer Hashi Project. The evaluation is specifically geared toward learning why some women used misoprostol tablets and some did not and the efficacy of the project strategies. These are key questions to consider in further expansion and scale-up of the project. Based on the experiences of the Phase 1 implementation plan in Tangail, DGHS and DGFP have already introduced misoprostol tablets in the Cox's Bazar District, which could be followed by gradual national scale-up.

Evaluation of the Pilot Intervention

The evaluation of the pilot intervention is intended to assess the implementation process, approaches, and strategies followed in the Phase 1 implementation plan, by reviewing the relevant project documents, activity reports, and monitoring data, and through interviewing users and nonusers, service providers, supervisors, program managers, and project staff. For a program that has been up and running for a certain period, a formative evaluation is a good tool for assessing how the project is being run and how it could be improved.

Evaluation Objectives

The overall goal of the evaluation was to assess the effectiveness of the community-based misoprostol intervention program strategies and to gather lessons learned and provide recommendations for the national scale-up. The specific evaluation objectives were to accomplish the following:

- Review and document the process, approaches, and strategies followed during Phase 1 implementation.
- Gather views of program managers and stakeholders on the distribution and use of misoprostol tablets at the community level.
- Understand the views and experiences of the pregnant women about their use and nonuse of misoprostol tablets.
- Make recommendations regarding modification of strategies and national scale-up of these interventions and the sustainability of the activities in Phase 1 upazilas.

Evaluation Area and Study Population

The evaluation was conducted in sample unions of the eight upazilas in Tangail District where Phase 1 was implemented-namely, Tangail Sadar, Ghatail, Kalihati, Bhuapur, Madhupur, Basail, Gopalpur, and Dhanbari. The following three categories of study populations were used:

- Government and nongovernment field workers who distributed misoprostol tablets (e.g., health assistants (HAs) under DGHS, family welfare assistants (FWAs) under DGFP, and depot-holders under NGOs
- Supervisors, program managers, and policymakers involved in program design/implementation and upcoming scale-up
- Women who delivered at home during the period of November 2008 through June 2009, irrespective of whether they took misoprostol

Evaluation Methods

The study used qualitative methods of data collection, namely in-depth interviews, key informant interviews, and focus group discussions (FGDs). The tools and guidelines for each method were revised through field testing (see appendixes 7-10).

Key informant interviews: Program managers at the upazila and district levels were interviewed by trained interviewers to solicit their views regarding program implementation, supervision, monitoring, and reporting mechanisms, including issues relevant to policy implications.

In-depth interviews with women: Women in the sample unions of eight upazilas who received misoprostol tablets during the period of November 2008 through June 2009, regardless of whether they used the tablets or not, were interviewed to obtain information regarding women's knowledge of and practices regarding misoprostol tablets, their opinions about the distribution system, and follow-up they received from the field

workers. Women who received misoprostol but did not use it were asked why they did not use the tablets, whereas women who used the tablets were asked about their experiences in using the drug.

Focus group discussions: FGDs were conducted with the front-line field staff (HAs, FWAs, and depot-holders) of both government organizations and NGOs, to explore their perceptions of, opinions about, and experiences with misoprostol tablet distribution and the follow-up system they used in the community, and with the field supervisors (assistant health inspectors [AHIs], and health inspectors [HIs], family planning inspectors [FPIs]) to understand their views regarding program implementation, supervision, monitoring, and the reporting mechanism.

Sampling

In this formative evaluation, respondents were selected by convenience sampling. Nonrepresentative samples of pregnant women (users and nonusers) were selected randomly from the register of pregnant women for in-depth interviews. During the actual interview process, two additional misoprostol users and one nonuser were interviewed to collect additional opinions. Interviewers conducted a total of 31 in-depth interviews with users and nonusers of misoprostol, 12 key informant interviews with upazila-level managers, and 12 FGDs with government and NGO field workers. More detailed information on the respondents by data collection method is provided in Appendix 5.

Data Collection Procedure

The data were collected in November 2009. Four female interviewers and two male supervisors, two moderators, and two note-takers were recruited for the data collection. Two teams composed of two female interviewers and one male supervisor interviewed the misoprostol users or nonusers.

Training of data collectors: The interviewers, field supervisors, moderators, and note-takers received a three-day training on the project objectives, identification of the sample, data collection procedures, tools, and ethical procedures involved in data collection. Mock interviews were conducted at the training session, and actual interviews were arranged in the field on the second day. The moderators and note-takers were also trained in understanding FGD guidelines, selecting participants, and arranging and managing FGDs.

Interviews and conduction of FGDs: The field supervisors and the male interviewers interviewed the upazila-level managers. Senior-level program managers were interviewed by the principal investigator (PI). Two teams comprising one moderator and one note-taker conducted the FGDs with field workers and supervisors. The interviewers collected information by conducting face-to-face interviews with the selected respondents by using a semi-structured questionnaire. Along with taking notes on the FGD discussion, interviewers audio-recorded the FGDs, with permission from the respondents.

Quality control of the data collection: To ensure quality of the data collection, the following measures were undertaken:

- Qualified and experienced interviewers, moderators, and supervisors were recruited, and preference was given to those who had previous experience in conducting similar studies.
- The data collection team received thorough hands-on training, both in the classroom and in field settings, using a structured training manual.
- Only two interviews were conducted per day, and the supervisor checked each interview daily in the field. Only one FGD was conducted per day by each of the two teams, and the transcripts/synthesis were completed in the same day.
- Supervisors rechecked completed forms/questionnaires on a daily basis.
- The interviewers were thoroughly trained on the ethical issues related to collecting data from human beings and on compliance issues.

Ethical Considerations

The study adhered to the protocol of research ethics that involves human participants. On-site supervision of all data collection was ensured, as well as adherence to EngenderHealth's confidentiality and informed consent procedures. At the time of misoprostol distribution, no written informed consent was taken for a follow-up interview because the evaluation plan was developed only after the intervention occurred, as a retrospective qualitative evaluation. Although clients had not been told that they might be contacted following the intervention, the women were contacted first by field workers (HA/FWA/NGO workers) who live within the community to determine whether they would like to participate in a follow-up interview. If the woman agreed, then and only then did the interviewer call on her to conduct an interview. For those women who agreed, interviewers obtained informed oral consent before conducting the interview or FGD, as well as before doing any audio recording (Appendix 7). The anonymity and volunteerism of participating in the study was strictly maintained.

Findings from the Document Review

Review of project documents and official letters/memos and discussion with key informants at the national level revealed that the Mayer Hashi Project **proceeded systematically** to introduce misoprostol as part of the program to reduce maternal mortality. At the time the pilot project began, no policy on the community-level use of misoprostol to prevent PPH existed, although the drug was available in the country for other indications. The Mayer Hashi Project took the lead in providing technical assistance to the DGHS, DGFP, and the National PPH Prevention Task Force to develop the "misoprostol use policy," which stipulates how the drug can be used at the community level. Several consultative meetings were organized with relevant stakeholders to draft this policy. In August 2008, the misoprostol use policy and Phase 1 implementation plan were approved by the DGHS Technical Committee, MOH&FW. The committee mandated the Mayer Hashi Project to pilot the interventions in phases across three districts-Tangail, Cox's Bazar, and Barisal. The pilot districts were selected by the DGHS, DGFP, and National PPH Prevention Task Force.

Findings from the Review of Project MIS and Monitoring Data

Orientation of district- and upazila-level managers: Project documents and activity reports revealed that a total of 56 participants, including the Civil Surgeon, the Deputy Director for Family Planning (DD-FP), and other upazila-level managers (e.g., the Upazila Health and Family Planning Officer [UH&FPO], the Upazila Family Planning Officer [UFPO], the Resident Medical Officer [RMO], the Obstetrics and Gynecology Consultant, and the Medical Officer for Maternal and Child Health [MO-MCH]) from eight upazilas of Tangail District participated in a day-long orientation and planning workshop.

The day-long workshop was **positively evaluated** by the sampled district and upazila-level managers (i.e., interviewed participants mentioned that the workshop provided enough guidance for implementing, supervising, and monitoring the project activities and had a scope to plan the activities jointly). One of the program managers commented that "aspects related to PPH and technical issues were nicely presented." A minority of managers interviewed (four out of 12) thought that the duration of the orientation was not long enough. Among them, two were from NGOs.

Capacity-building of field workers: Project documents and activity reports revealed that 28 training sessions were conducted and 1,428 participants from eight upazilas received training under the project. Of the 1,428 participants, 592 were government and NGO field workers and their supervisors, and the remaining 836 were managers and facility-based service providers such as medical officers, senior staff nurses, and family welfare visitors who attended the technical session of the training. The trainings were conducted at the upazila level, which the participants think is a good place for the training, and nobody raised any concern about the venue.

All participants in the eight FGDs with field workers **confirmed that the training was good and that the quality was excellent.** Similar findings came out of the FGDs with supervisors and all 12 interviews with program managers. The FGD participants reported they had received sufficient information on PPH, misoprostol, and strategies used to implement the interventions (how to register pregnant women; distribute leaflets, stickers, and misoprostol tablets; and follow up with clients). In addition, participants liked the interactive sessions, the use of pictorial materials, and the group work. One participant in a field workers' FGD commented: "The quality of the training was good; it provided enough information on PPH issues, drug use, directives for project activities, leaflets, stickers, and distribution of misoprostol tablets and follow up clients."

The field workers, supervisors, and program managers made a number of suggestions on how to further improve the training. For example, participants in seven out of eight field workers' FGDs mentioned the need

to increase the duration of the training, and participants in another five FGDs suggested refresher training after two to three months. Similar findings came out of the FGDs with the supervisors like AHIs, FPIs, and HIs and the program manager interviews. Participants in one field workers' FGD suggested that traditional birth attendants (TBAs) be included in the training program.

Findings from distributing working areas: As explained earlier, to avoid duplication and to ensure that all areas were covered, field workers' working areas were distributed among the HAs, FWAs, and NGO workers. Findings from eight field worker FGDs suggested that the activity was well accepted by almost all participants. With a few exceptions, nobody declined to work in the areas assigned for this project. Field workers found **several benefits in the distribution of working areas**, including decreased workload and the avoidance of duplication of work. They also found that this process created a good working environment among health, family planning, and NGO workers, as the distribution was done jointly at the end of the training.

Prior to the implementation of this project, the workers from the different departments did not collaborate. However, for the misoprostol project, they worked together, met at least monthly, and discussed a variety of program-related issues. This contributed to increased mutual understanding and a better atmosphere. A few participants in two field worker FGDs mentioned some problems, including work overlap (pregnancy registration and tablet distribution), and others said they had to temporarily relinquish their own known and nearest working areas to other field workers. However, in general, FGD participants mentioned that the distribution of working areas was participatory, useful, and required for such a community-based intervention. One participant in a field workers' FGD said: "[An] advantage was that I was given a smaller area, so that I could register and distribute tablets to all pregnant women. That way, I could follow them up and find if there was any problem. Therefore, area distribution was advantageous for us."

The necessity of distribution of working areas was confirmed by most supervisors, with the exception of one group. In one of the supervisor FGDs, participants doubted the benefit of distributing the working areas. One commented that "overlapping occurred, [the] same person took misoprostol from [an] FP worker, [and] even from the health staff as well." However, the reasons for duplication of pregnancy registration and misoprostol distribution suggest that some field workers still visited their existing areas, which had been given to others for this project, and during such visits, they may have provided misoprostol tablets to the pregnant women they met, resulting in duplication. When supervisors identified cases like this, the extra drugs were collected from the pregnant women, and such cases were discussed in the monthly meetings, to ensure that this would not happen again.

Identification and registration of pregnant women: It was estimated that a total of 21,834 pregnancies would occur in eight upazilas of Tangail District during the project period. However, during the project, 592 field workers registered 19,497 pregnant women (89%), slightly fewer than anticipated (for details, refer to Appendix 6). On average, each field worker registered and followed up with 33 pregnant women in his or her working area over a period of eight months. Nearly all participants in the field worker FGDs mentioned that they were able to register most of the pregnant women in their areas. They mentioned capturing a range of 80–90% or more. This finding was supported by the findings from the supervisor FGDs. Those field workers who thought that their registration was not 100% complete mentioned three reasons: (1) some of the women in their area had left for their parents' house (mentioned in four out of eight FGDs), (2) the workload was too heavy (mentioned in three out of eight FGDs), and (3) the areas were too large to cover (mentioned in three out of eight FGDs).

Findings from four of the eight field worker FGDs showed that the field workers **encountered no significant obstacles in identifying and registering pregnant women.** However, participants in the other four FGDs described encountering some problems, especially during registration, as some women had left for their parents' house, and the field workers were unable to contact them. In addition, during registration, some of the pregnant women were unable to state the date of their last menstrual period (a common phenomenon in the rural areas of Bangladesh), and as a result field workers found it difficult to calculate the expected date of delivery. A few women also expected to receive money or food when they were registered, because they said

this was part of a government program. For example, one participant in the field worker FGDs commented: "While we went to register pregnant women, they asked if there were any other benefits. They heard that babies are given nutritious food in some areas, money is given for baby, etc."

Distribution of misoprostol tablets: Project documents and monitoring data indicate that misoprostol tablets were distributed to pregnant women only on or after 32 weeks of pregnancy, to avoid any misuse or the possibility of women's forgetting about the tablets or losing or misplacing them. Among the 19,497 registered pregnant women in the project area during the pilot period, 12,961 (67%) pregnant women (see Appendix 6) received the misoprostol tablets. At the request of the DGHS, the field workers received a number of misoprostol packets equal to the number of registered pregnant women, so that they could distribute the drug to all registered pregnant women, even after the official end date of the pilot project (i.e., following June 2009). The field workers received the misoprostol tablets directly from Mayer Hashi Project staff during the monthly meetings at the union level, based on their demand.

Analysis of the project reports, monitoring data, and FGD findings with field workers and supervisors revealed that **distribution of tablets across intervention areas throughout the project period was satisfactory,** registered pregnant women who delivered at home received the misoprostol tablets, and there were no reports of supply shortages from the field workers or their supervisors. In addition to distributing tablets directly to pregnant women during home visits, field workers distributed misoprostol to the registered pregnant women while attending the Utthan Baithaks, Expanded Program on Immunization (EPI) sessions, and satellite clinics.

The field worker FGDs revealed some minor issues during distribution of misoprostol at the start of the pilot. However, participants in all four supervisor FGDs indicated that they did not observe any problems. The problems field workers found included the following: women who were not convinced they should take the tablets due to various misconceptions ("It's a 10 month's accumulation of blood; why should I stop it?" or "If there are side effects, why should I take it?"); attempts by a traditional birth attendant (*dai*) or quack to prevent the women from taking the tablets; and some women's or other community members' worries that the tablet would be harmful. **Any issues were generally resolved through thorough counseling.** One of the field worker FGD participants described the situation as follows: "We had to explain it to the *dais* as well. After [that], she would observe a case or two initially, later on would say, OK, keep some tablets for me so that I could distribute those as well." Participants in four of the field worker FGDs said that they did not face any problems. One said: "As we are the government workers who are providing the misoprostol tablets, people accept it, because they [think] government always does the right thing for the welfare of the public. So there was no problem." Her comment was supported by all other participants from the FGDs.

Specifically, the types of resistance that field workers faced during distribution of misoprostol tablets included the following: women not wanting to take the tablets once they heard about the side effects; *dais* or quacks suggesting that the women not take the tablets; elders or mothers advising the women not to take the tablets, telling them that the tablets may be harmful; and misconceptions concerning excessive postdelivery bleeding. A participant from one of the field worker FGDs said: "When I told people about these tablets and said that this will prevent bleeding after delivery, then women said if this 10 month's accumulated blood doesn't come out, it might cause harm to her body. It is better if a certain amount of blood comes out of the body during delivery. Then I had to explain to them that this is not bad blood and stopping bleeding will not harm, rather [it] will prevent deterioration of her health."

Another participant mentioned: "In one of my villages, women said we would not take this tablet without consulting our *dai*; if she says to take it, then I will. Then we had to go to the dai and motivate her that there will be no problem, no bleeding, and will be helpful for the mother. Later on, she agreed and they took it. These could not be given without consulting the *dais*. We also told the *dais* that later on you would be trained on this. That is how they were managed later on."

Use of misoprostol tablets by pregnant women: Analysis of the monitoring data, accessed during the record review, suggests that among the 12,961 registered pregnant women who received misoprostol tablets in the

project areas, 11,764 women gave birth. Of these women, 10,040 (85%) delivered at home, and 1,724 (15%) delivered at health facilities. The remaining 1,197 registered pregnant women had not given birth by the end of June 2009. Of those pregnant women who received misoprostol tablets and had a home birth, 9,228 (92%) used the tablets after delivery (see Appendix 6). **Findings also show that the trend in misoprostol use across the eight upazilas was very comparable,** except in Gopalpur upazila, where slightly fewer registered pregnant women who delivered at home used misoprostol (85%) (for details, refer to Appendix 6).

Side effects and complications: The monitoring data show that 39 women (0.4%) suffered from minor side effects (e.g., fever, shivering) and recovered through use of a home remedy, and only 25 women (0.3 percent) suffered from complications and had to be referred to a hospital. These complications included retained placenta (10), postpartum eclampsia (three), severe lower abdominal pain (two), lack of typical bleeding following delivery (two), and PPH due to other causes (eight). In the two cases in which women experienced lack of typical postpartum bleeding due to misoprostol use (an outcome unexpected by either the women or their delivery attendants), the women were referred to health facilities, where they were confidently managed by the service providers who had been informed during their training that this could happen.

Maternal deaths: There were eight reported cases of maternal death during the pilot period in the project area. A Mayer Hashi Project staff physician conducted verbal autopsies for all eight cases. Of these eight, five died due to PPH (four women who did not take misoprostol and one woman who took the tablets late—one day after delivery), and three died due to other causes. Of these latter three cases, all had taken misoprostol, but one died due to eclampsia and the other two died due to cardiac failure resulting from severe anemia after delivery. Thus, based on the available information, no deaths appear related to misoprostol use.

Deaths averted by misoprostol use: Based on the national maternal mortality rate (320 maternal deaths per 100,000 live births), it was estimated that 38 of the 11,764 pregnant women in the project area would have died due to pregnancy- and delivery-related causes during the pilot period. Of these 38 women, again based on the national average, eight women would have been expected to die due to PPH (22%[4]). Similarly, among the 9,228 women who had used misoprostol to prevent PPH, 30 women would die due to pregnancy- and delivery-related causes. Among these 30 deaths, seven would have been due to PPH. Encouragingly, no one died among the 9,228 women who took misoprostol after delivery to prevent PPH. Thus, seven maternal deaths appear to have been averted through the use of misoprostol—a rate of 23.3%. Although three deaths occurred among the misoprostol users, these women died due to other causes. On the other hand, five women died due to PPH among the 2,536 women who did not take misoprostol despite the field workers' having given it to them. The rate of death due to PPH among these women was as expected (25%).

Views of Misoprostol Users and Nonusers

The characteristics of the interviewed misoprostol users and nonusers showed that, on average, users were 22 years of age, while nonusers were 24 years old. Both groups averaged three years of education and two children. None of the women were illiterate, and none of them had more than five years of education.

Analysis of the in-depth interviews of misoprostol users and nonusers revealed that **all 31 women interviewed had heard about the excessive vaginal bleeding**[5] that may occur after childbirth. However, findings suggest that both misoprostol users and nonusers had heard about a wide range of consequences from excessive postdelivery vaginal bleeding. The majority (14 out of 16 users and nine out of 15 nonusers) had heard that such excessive postdelivery bleeding causes women to become sick or weak, or it causes harm to the body. Some also had heard that excessive postdelivery bleeding could lead to convulsions (three out of 16 users and five out of 15 nonusers), tetanus (two out of 16 and three out of 15, respectively), vertigo (two

[4] Bangladesh Bureau of Statistics 2008

[5] The average amount of blood loss after the birth of a single baby in vaginal delivery is about 500 ml. Loss of more than about one pint of blood during or after the third stage of labor (when the placenta is delivered) is considered excessive. Severe blood loss usually occurs soon after delivery. Soaking through more than one sanitary napkin an hour for several hours in a row, bleeding bright red blood for more than just a few days, or passing large clots is considered hemorrhaging, as opposed to normal postpartum bleeding.

out of 16 and two out of 15), and death (two out of 16 and four out of 15). Interestingly, four out of 16 users and seven out of 15 nonusers indicated that they thought bleeding after delivery is good for their health. One of the women who did not use misoprostol said: "This is the accumulated menstrual blood of [the] previous 10 months; this is rotten blood, as it is not cleared monthly. It is good to pass bad blood. Some people say if bad blood goes out, the abdomen becomes clean, there will be no pain in the lower abdomen, [the] body's pain will be lessened, [the] body remains lighter and healthy, and feels comfort." On the other hand, one of the women who used misoprostol heard that "it is too bad for the body to bleed after delivery. Body will become weak if it bleeds excessively; she will not be able to stand, will feel sick, there may be vertigo, [she] may fall down. There may be convulsions. [The] body becomes too cold; [she] may need to go to the hospital for a blood transfusion if it bleeds too much."

Several **misconceptions about postdelivery bleeding** seem to be prevalent in the community. For example, women refer to postdelivery bleeding as "bad blood," "rotten blood," or "accumulated menstrual blood of 10 months," and they have heard or believe such statements as "if more blood goes out, it clears the abdomen"; "if there is reduced bleeding, it will cause pain in the body"; "it is better to allow bad blood to go"; "excessive bleeding causes tetanus"; "if it bleeds excessively, menstruation does not come early"; "clotted/black blood is good, but fresh blood is bad"; "it is good if one bleeds after delivery"; "[the] body becomes lighter if bad blood goes out"; and "this is [the] wish of Allah, this cannot be stopped." Interviews with the nonusers indicated that these beliefs are key factors for women's nonuse of misoprostol after delivery.

There were no substantial variations between the beliefs of the users and nonusers concerning the complications or consequences of postdelivery excessive bleeding. **Almost all respondents believed that a woman may die due to excessive postdelivery bleeding,** that a woman could become severely weak, and that she could experience vertigo, tetanus, or convulsion. Interestingly, about half of respondents believed that tetanus could develop due to blood loss. All these are indications that some modifications in the communication and training materials are necessary.

To assess knowledge and awareness among misoprostol users and nonusers, interviewers asked these women how excessive vaginal bleeding following delivery could be prevented or stopped to save a woman's life. Analysis of the responses revealed that women have some correct knowledge and certain misconceptions. Almost all said that the patient should be taken to a hospital or that a doctor should be called when excessive postdelivery bleeding occurs (14 out of 16 users and 15 out of 15 nonusers). In addition, they mentioned that a medicine should be taken (12 out of 16 users and eight out of 15 nonusers). Seven out of 16 misoprostol users and four out of 15 nonusers (about one-third) mentioned misoprostol tablets as a means of prevention. While this is encouraging, considering the Bangladeshi rural context, it is not enough, because the majority of respondents did not spontaneously mention misoprostol.

All women interviewed received the misoprostol tablets between the seventh and the ninth months of their pregnancies. Based on the questions asked during the interviews, **knowledge about the use of misoprostol seems to have been good** among both users and nonusers. As such, nearly all women interviewed knew that the misoprostol tablets should be taken immediately after the delivery to prevent excessive bleeding. Many women also knew that there is a need to check if a woman has a second baby in the womb. This indicates that the efforts to educate pregnant women through *the Utthan Baithak*, leaflets, stickers, and interpersonal communication were successful. None of the users and nonusers indicated they knew of any other use for the tablets (i.e., taking the tablets during pregnancy as an abortifacient).

When asked what they were told by the field workers upon receiving the tablets, the women indicated they received a range of information. The findings suggest that **not all of what the women remembered is correct.** For example, a user said: "Told to take these three tablets immediately after delivery of the baby, so that it doesn't bleed too much; also told to be examined by the *dai* so that there is no second baby in the womb. If there is no [other] baby, then these three tablets had to be taken immediately after delivery of the baby. These tablets should not be given until the placenta is delivered. Placenta will get obstructed if the tablet is taken. This will cause harm to the mother."

Analysis of the findings from the interviews with the 16 misoprostol users revealed that **all of them used the tablets after delivery, as suggested during counseling.** Although the women were counseled to take misoprostol right after delivery, they took the tablets anywhere from immediately after to 30 minutes after delivery. Considerable delay in taking the tablets after delivery was observed in several cases. This may be due to confusion as to whether the placenta was delivered or not. This confusion was apparent in five out of 15 nonusers, who thought that misoprostol should be used after the expulsion of the placenta. One of the users said: "Took the tablets half an hour after delivery of the baby. There was no dai. My in-laws cut the cord. You know, cord cannot be cut before the placenta comes out. Placenta came out within 8 to 10 minutes later. It took almost half an hour for my in-laws to come. This half an hour I was alone. Could not hold the baby even, I was so weak. My in-laws came, wiped the baby and cut the cord. Then I took the tablet."

Findings from the in-depth interviews with misoprostol users and nonusers suggest that **field workers counseled women about the possible complications of misuse of misoprostol tablets** (nine out of 16 users and eight out of 15 nonusers). In most cases, the women mentioned refraining from using the misoprostol tablets while the baby was in the womb (seven out of nine users and four out of eight nonusers) and in a few cases, knew of the dangers of taking the tablets before delivery (two out of nine users and four out of eight nonusers). A number of users and nonusers mentioned that they were told about the side effects and their managements. One of the misoprostol users said: "If you take this tablet while the baby is in the womb, then the baby will die, you will also die. May need to do cesarean section in hospital. This tablet should not be taken while baby is in the womb. If there is fever and shivering, they suggested to just sponge the body with water or take a paracetamol tablet."

There was excellent compliance regarding use of three tablets at the same time. All but one of the misoprostol users followed the instructions to take all three tablets at the same time. The woman who did not take all three at the same time said she took two tablets together and, after 10 minutes, the remaining tablet. She said she opted not to take all three tablets at the same time because she worried about vomiting. The findings suggest that the clear instructions in the training and IEC materials indicating "use misoprostol tablets three at time" had a positive impact on compliance with correct usage of misoprostol.

Analysis of the users' experiences with misoprostol suggest that 13 out of the 16 users' **postdelivery bleeding was less or reduced compared with their previous delivery** (for those who had had a previous delivery). In two cases, current bleeding was greater than in the previous delivery, and in one case, there was no change. One of the misoprostol users who experienced reduced bleeding said: "I did not bleed much. Placenta came out with the baby. Took the tablets as soon as the placenta came out. Bleeding stopped within 15 to 20 minutes following taking the tablets. Scanty bleeding continued for 20 to 22 days. Bleeding was much less than the first baby. Scanty bleeding continued for 38 to 40 days during the first baby."

On the other hand, a user who had experienced excessive postdelivery bleeding said, "I bled a lot, delivered at 11 p.m., bled whole night, and bled a lot in the morning as well. Bleeding reduced after one day. Bled too much during delivery of my first son as well. Medicines were needed to take to stop bleeding. Bleeding reduced after consulted doctor. During the delivery of the first child, son, I had to spend Taka 2000. This was not the case during the delivery of the second child, daughter. Bleeding remained 'til 25 to 30 days during the second child, daughter."

Among the 15 nonusers, six women had more bleeding than in their previous deliveries, six had less bleeding, and the remaining three had similar bleeding. Of those who had excessive bleeding, none were hospitalized, and all recovered with home remedies, homeopathy, pharmacy medicines, or saline infusion.

Most of the misoprostol users (13 out of 16) were satisfied with the drug, as they had less bleeding than in their previous delivery, while a few (three out of 16) were unhappy because of greater bleeding, pain, and vertigo/dizziness. No significant complications or side effects were observed among 13 of the 16 users. Among the three women who experienced complications or side effects, one said that bleeding was profuse, one said

that placental expulsion was delayed, and one mentioned mild shivering. Two of the three women took medicines from the pharmacy to deal with these complications, while one accepted "*Jarfuk*" (prayer) from a *maoulavi* (religious leader). It should be noted that field workers and supervisors reported fever, shivering, *diarrhea*, abdominal pain, weakness, inability to move, continued excessive bleeding after misoprostol, and delayed or retained placenta as the side effects they witnessed among the women who had used the tablets. However, they said most of these side effects were managed by simple measures at home, while a few women went to a health facility/provider to manage these side effects.[6]

Analysis of the data collected from **misoprostol nonusers** revealed that they reported a number of reasons for not having used the tablets. In one-third of the cases (five out of 15), the pregnant women or family/community had **misconceptions** about the tablets; in one-fourth of the cases, the women forgot to take the tablets; and in the remaining cases, the women were prohibited or prevented from using the tablets by their husband, *a dai*, or family members. One woman said: "I did not take the tablets, as I was scared. Apa (sister) said there will be fever with shivering. Can I afford having fever? I am a lonely person. I have to do all the household work. That is why I did not take the tablets. If fever comes, whether I could cover myself with a blanket or take care of the baby."

Another woman said: "From the beginning, I decided not to take the tablet. Bad blood will remain in the body if this tablet is taken. That is why I did not take any measure. My only thought was not to take it. So, what else I should do? You know, body becomes lighter if this blood comes out. It is better if this nine-month-old waste blood goes out."

Another woman said: "This tablet is meant for expulsion of placenta. In my case, placenta delivered immediately after delivery of the baby. It was not delayed even 1 to 2 minutes. That is why it was not necessary to take the tablets."

One of the nonusers who forgot to take the tablets said: "Baby was delivered suddenly. I became unconscious as a result of bleeding after delivery, so I could not tell anybody about the tablets. Seeing me in such condition, my mother forgot about the tablets as well. I delivered in my parents' home. My husband was not present there during my delivery. As nobody remembered, I could not take the tablets. When it came to my mind, it was already two hours late. As it is prohibited to take the tablets after one to two hours, I did not take those."

One of the women who was restrained from taking the tablets said: "My husband, mother-in-law, and the *dai* did not give importance to it and did not allow me to take those. My husband saw a small paper inside the packet of the tablets where it was written that it should not be taken if there is allergy. He said you should not take it as you have allergy. My mother-in-law said, 'We did not take such tablets, we did not have any problems either. Some blood will pass, that is not a problem.' The *dai* also prohibited [it], as I did not have any problem during or after previous delivery."

Analysis of the in-depth interviews of misoprostol users and nonusers and of the FGDs with field workers suggests that **several people play a role in the decision-making process around using misoprostol** and, as such, should be involved in BCC activities. For the users, in nine cases, the woman herself made the decision to use the tablets; in six cases, the woman made this decision together with the field workers, mother-in-law, *dai*, and/or husband; and in one case, the *dai* decided. On the other hand, among the 15 nonusers, four women forgot to take the tablets after delivery; four mentioned that they themselves did not want to take the tablets; in two cases, the mother-in-law, husband, and *dai* prevented the woman from taking the tablets; in two cases, the woman's husband prevented her from taking them; in one case, the dai prevented her; in another case, a woman's misconception made her decide against taking the tablets; and in another, dented tablets made the woman decide not to take them.

[6] While it is not clear from these FGDs whether each individual side effect has been managed properly, overall this would be the appropriate management of most relatively minor expected side effects. Mayer Hashi staff was always on call to assist the district and upazila staff in case they did not know how to handle side effects or complications, so that instructions about proper management could be provided over the phone.

The field worker FDGs also revealed that several people generally are involved in the decision-making process and, as such, these people should be involved in the BCC activities so they can be informed about misoprostol. While the project attempted to reach out to these family influentials and *dais* during the courtyard meetings and include them in counseling sessions with the women during home visits, the fact that some of them tried to prevent women from using the tablets shows that these outreach efforts need to be improved.

The project design built in follow-up visits with the women postdelivery. Analysis of the interviews shows that **some of the women (six of 16 users and two of 15 nonusers) reported that field workers did not visit them after their delivery.** In addition, except in a few cases, a casual follow-up pattern is observed from the field workers. Although it is expected that the field workers will visit the postdelivery women as soon as possible, some field workers took as long as 45 days to visit them. One misoprostol user said: "Apa (sister) came to collect the cover of the tablets when the baby was 40 days old. No one came before that. Apa asked whether I did take the tablets or not. When I said I have taken them, she asked for the empty strip. I said I have lost that. Then she said 'I told you to keep that; how could you lose that?' She did not remind me about vaccinating the child that week. When they announced by miking [loudspeaker], I took the baby there and vaccinate her. Apa did not say anything else."

Educating Pregnant Women and Mobilizing the Community

Courtyard meetings (Utthan Baithak) were organized to create PPH awareness among women and their families and the role of misoprostol in preventing PPH. Monitoring data suggest that the trained field workers conducted a total of 2,443 courtyard meetings rather than the planned 2,980 meetings (596 field workers conducting at least one session per month over five months). Analysis of the interviews with the 31 users and nonusers suggests that in only 12 cases did a woman or someone in her family attend a courtyard meeting (eight out of 16 users and four out of 15 nonusers). Poor attendance at courtyard meetings seems to be related to several issues. Most women who were not able to attend such meetings said they did not do so because the meetings were not organized in their areas (six out of eight in the users' areas and seven out of 10 in the nonusers' areas). In a few cases, pregnant women could not attend because they were at their parents' house, outside of Tangail District. One of the respondents mentioned: "Such events did not take place in our area. Nobody informed us about anything like this. I don't know where courtyard meetings took place. Nobody told us. Apa came one day, gave us tablets and two papers, and said how to take the tablets."

Field workers reported in the FGDs that they conducted courtyard meetings widely in their areas. **During the project monitoring, Mayer Hashi Project staff found that these meetings were in fact quite informal and had low attendance.** Therefore, this activity was not continued until the end of the pilot project. While in theory courtyard meetings would be an effective way to spread information on PPH and misoprostol, in practice, this did not happen.

Field workers and supervisors indicated that they believed courtyard meetings were quite effective in raising awareness and acceptance of misoprostol in the community. They indicated that the courtyard meetings were helpful in clarifying questions and that the flipchart and leaflets generally were used in these meetings. Analysis of the in-depth interviews with users and nonusers revealed that the content of the courtyard meetings was not uniform. Some meetings were very superficial, while others provided detailed information on PPH and misoprostol, including advantages, cautions, side effects and how to manage them, and where to go if serious side effects occur. One of the misoprostol users said: "Apa said to take these tablets immediately after delivery of the baby. She said there will not be much bleeding after delivery if you take these tablets. Body will not be weak if bleeding is less. Mother's body will remain healthy. She told to take advice from the doctor if it still bleeds more after taking the tablets. She also told to go to hospital if the baby is not delivered within 12 hours after start of the delivery pain. She said mild fever may come after taking these tablets. There is nothing to be worried about this fever, there will be no harm; should be covered with a light blanket if there is fever; told to sponge the head; told to wipe the body with a wet cloth."

According to those interviewed, in all places except two, where courtyard meetings were conducted with participation of interviewees, field workers used the flipchart.

A total of 174,682 leaflets were distributed. Interviews with users and nonusers suggest that a majority of the interviewees received a leaflet. Most who received the leaflet indicated that they understood most of the content based on the pictures and text, and the leaflet helped them understand how and when to take the misoprostol tablets. This finding seems to indicate that the pictorial leaflet was an effective means of informing women and community members.

Among the 16 misoprostol users, six said that field workers did not paste a sticker on their homes to remind them to use the drug. Most nonusers indicated that they had seen the stickers, some had received them, but only two had pasted them on their house. Of the 10 women whose houses were pasted with a sticker, seven said they had no problem with it, while three women mentioned some concerns, including religious issues, children's queries, and fear as a result of the picture on the sticker. One woman said: "This is usual to feel sick while somebody is pregnant. I felt more scared seeing this picture. Two or three days after sticking that on the door, children tore that away. I was so scared that I prayed, 'Allah, let not such happen to me.' Whenever I glanced at this picture, it reminded me of the delivery of the baby; I felt scared."

Among the misoprostol users who had a sticker pasted on their house, all of them said it reminded them to use the tablets. These findings indicate that there is a need to modify the picture on the sticker in such a way that it will still remind women but not scare them or their children or raise religious concerns.

Findings from eight FGDs with field workers and four FGDs with supervisors suggest that there was a general consensus about the **usefulness of the sticker and the leaflet** in giving pregnant women and community members a better understanding of PPH and misoprostol. The pictorial leaflet and sticker reportedly were well accepted, with a few objections on religious grounds. A participant in one field worker FGDs said: "I was distributing the leaflets in the marketplace, and the religious leader (*Munshi*) objected. There were some pictures, that of bleeding. They said that those were too revealing (nude) and bleeding from pregnant woman is a private matter (the second and the fourth or fifth picture)." Another said: "When I pasted the stickers in front of the door, [the] father-in-law of the pregnant woman objected to pasting it there. Same happened in the house of a policeman as well. They said that it is better that you talk about it instead of pasting this." And another FGD participant said: "Children also ask embarrassing questions about the picture." For example, one said, "Children also ask about these. Ask why there is bleeding. Is the baby brought out cutting the abdomen? When they see it, the reaction you can observe among the children, is it good for the society?"

Supplying and Reporting of Misoprostol Tablets

Findings from eight field worker FGDs suggest that they received misoprostol tablets as per their need on a monthly basis. Initially, after the training, field workers were given 10 packets. Overall, no shortage was identified. Similar findings were also found from the four supervisor FGDs. Some of the participants in the field worker FGDs suggested continuing the present system of supplying the tablets from the Union Health and Family Welfare Center (UH&FWC), and some suggested supplying them via the upazila health complex. In general, FGD participants suggested involving the government supply system and ensuring safe storage and regular distribution of tablets with BCC materials such as leaflets, stickers, posters, reporting forms, referral slips, and registers. Similar opinions were expressed by the NGO field workers and their supervisors. It is important to note that supervisors and field workers have suggested that the reporting system and the forms need to be aligned with the existing forms and systems under government MIS, and they also suggested that an additional column be included in the exit MIS form to accommodate data on misoprostol tablets. The program managers recommended training/orientation of concerned individuals on MIS, forms, and reporting to improve MIS for misoprostol.

Field workers and supervisors were asked if **misoprostol tablets could be made available through Union**

Health and Family Welfare Centers (UH&FWCs), in addition to being available through the field workers. Seven out of eight participants in field worker FGDs agreed that misoprostol tablets could be made available through the UH&FWCs in addition to through field workers. One of the field workers said: "It will be useful if it is there at the UH&FWCs because we do not visit same village every day. We go there on specific time of the month. And if it is available at UH&FWCs, everybody will get those according to their need. Those are open every day. But we should give them the tablets 15 to 20 days prior to delivery."
Some field workers also suggested that misoprostol tablets be distributed through community clinics (CCs). On the other hand, participants in two out of four supervisor FGDs suggested not making the tablets available through the UH&FWCs. One of the supervisors said: "If tablets are distributed from FWCs, then many mothers will not come. In our country, UH&FWCs are far away from the homes of pregnant women. Husbands do not allow pregnant women to go out of the home during their pregnancy. Therefore, they will not go to collect the tablets from UH&FWC."

Reaching Pregnant Women and Communities with Misoprostol Information

There was a consensus among the groups in suggesting the need for the mass media to raise awareness of misoprostol. Most agreed that television would be the best medium for this.

Readiness of Referral Hospitals to Manage Complications of Postdelivery Women

Most of the participants in the eight field worker FGDs and four supervisor FGDs said that the nearby referral hospitals are ready to provide referral services in case any complications arise. However, two of the 12 managers worried that not all facilities are ready to manage referred cases, and they suggested strengthening the referral hospitals as well as the referral system.[7] Participants in the field worker and supervisor FGDs suggested preparing referral slips for the clients. They also suggested making available an ambulance and/or locally made van in which to transport referral clients, blood transfusion facilities at the referral hospital, and doctors available around the clock. Some also recommended provision of funds to support poor women for referral and treatment.

Success of the Misoprostol Pilot

The field workers, supervisors, and program managers indicated that they believe the **pilot program was successful and achieved its objectives** in distributing the drug through the field workers at the community level, for self-administration by pregnant women to prevent postdelivery bleeding. Field workers, supervisors, and program managers reported that they succeeded in raising awareness among pregnant women and their families about misoprostol use after delivery. Program managers mentioned that they had field reports on satisfactory acceptance of, use of, and increased demand for misoprostol tablets. They also mentioned no generalized major side effects or complications due to misoprostol use after delivery. This finding is supported by the Mayer Hashi Project monitoring data. All of the program managers recommended continuing the project with more government involvement.

In general, key activities, such as training health workers and field supervisors, distributing working areas among government and NGO workers, distributing tablets, raising awareness, and distributing leaflets and stickers, were well planned and implemented systematically. The role of Mayer Hashi Project in providing technical support and in monitoring and ensuring a supply of misoprostol tablets at the upazila to field levels was recognized by all of the field workers, supervisors, and program managers.

[7] Currently, in Bangladesh, a range of efforts are being implemented by the government, in collaboration with and supported by development partners, to strengthen basic and comprehensive emergency obstetric care facilities where referral cases can be handled.

Scaling Up Misoprostol Programming in Other Areas

Field workers, supervisors, and program managers suggested that the misoprostol program should be scaled up in other areas of Bangladesh, to reduce maternal mortality by preventing excessive bleeding after delivery. To do this, some challenges that were encountered in Tangail District will need to be addressed, including training large numbers of field staff, conducting advocacy at the policy level, making the budget available, revising BCC materials, raising awareness and removing misconceptions, obtaining an adequate supply of misoprostol tablets, and integrating misoprostol into the MIS. Some managers and field workers said that they see this new task as an integrated part of their routine work and did not see it as a burden, while others considered it an additional burden on the field workers, who might need to be compensated by providing incentives or whose workload might need to be reduced through the recruitment of additional field workers. Workload also emerged as an important issue from the field workers. One of the field workers said: "I think we have to do a lot of work now. We have to do EPI, maternal health, Kalazar, malaria programs, and such other different works. And when we will be assigned this job, our tasks will be increased. In such situation, we cannot accommodate time. We face problem in reporting. We share these issues in meetings. When workload will increase, we will demand for more workers. We will demand the catchment areas to be smaller. We will need training and many other things. Fulfilling these will become a challenge for the government."

Discussion and Recommendations

The pilot for community-based distribution and use of misoprostol for the prevention of PPH was conducted in eight upazilas of Tangail District. This formative evaluation examined the process of implementation, the effectiveness of the interventions, the demand creation activities, and the use of misoprostol tablets by postpartum women to prevent excessive bleeding. This exercise involved reviewing the project documents, monitoring data, and conducting interviews with users and nonusers of misoprostol, as well as with field workers, supervisors, and program managers, to document the lessons learned.

Study findings clearly reflect a **general acceptance of misoprostol** by the program managers, supervisors, and field workers as a means to manage PPH during home delivery. High acceptance and user satisfaction were also observed among the misoprostol users interviewed. Orientation of field workers made them confident and motivated to implement the program. No objections were observed against the misoprostol intervention from any level of the government. Except for a few initial overlaps in the distribution of working areas, which were worked out after a few months, the intervention was implemented smoothly.

The rate of use of misoprostol tablets was excellent. Ninety-two percent of women who delivered at home and received the tablets used them. In addition, 13 of the 16 users interviewed in this study were highly satisfied with the reduction in postdelivery bleeding they experienced compared with their previous delivery as a result of using misoprostol. Interviewers did not find any significant complications among the misoprostol users. In contrast, six of the 15 nonusers interviewed experienced excessive bleeding, which possibly could have been prevented if they used misoprostol.

Results of the courtyard meetings are a bit diffuse. While most of the supervisors and program managers found the courtyard meetings to be an effective means of raising awareness, a number of the women interviewed were not able to attend the meetings or said the meetings did not take place in their area. If these meetings are included in a future expansion of the program, a strict monitoring and supervision system needs to be ensured. In addition, content of the courtyard meetings should be planned beforehand and uniformly implemented throughout the project areas. When selecting the topics, planners need to include community misconceptions around maternal health, particularly during pregnancy, delivery, and the postdelivery period.

The women interviewed appeared to have a good knowledge of how postdelivery excessive vaginal bleeding could be prevented. However, although most of the women interviewed provided some logical responses concerning how to prevent PPH, only about one-third of them also mentioned use of misoprostol tablets as a means of PPH prevention. While their knowledge of the use of misoprostol was good, as discussed below, educational efforts should continue and be strengthened to ensure general awareness and knowledge among women and the community concerning pregnancy complications, PPH, and misoprostol.

Misoprostol users' and nonusers' knowledge about the use of the tablets was found to be very good, considering that these were rural women in Bangladesh. A key factor pointing to their knowledge of usage was that all women were able to remember that they should use the tablets immediately after delivery. It was also encouraging to note that many women mentioned that the possibility of a twin birth should be excluded before taking the misoprostol tablets. This indicates that the interpersonal communication, leaflets, and stickers had been effective. However, some confusion was also noted among the users and nonusers about whether misoprostol tablets should be taken before or after expulsion of the placenta. Since most of the women attributed the confusing information to the field workers, a refresher training for the field workers would be helpful to remove any ambiguity. Although most of the FGD participants suggested increasing the duration of the training, the evaluation team does not recommend doing so, considering the volume of the training contents; rather, we suggest conducting a refresher training two or three months after the initial training. A refresher training would help the field workers to renew their concepts, as well as provide an opportunity to discuss any emerging issues.

The one-day orientation was useful as a strategy to orient the district- and upazila-level managers and facility-based service providers before intervention started. This orientation helped to involve the managers in implementing and monitoring the program activities and increased awareness among facility-based service providers about the technical issues of misoprostol and how to manage complications. Some service providers raised concerns about increasing the duration of the orientation. Considering the contents of their orientation, the evaluation team believes that one day is enough to ensure that program managers fully inform the service providers about misoprostol and their responsibilities in managing any complications. Any questions that service providers may have after the training can be handled by the program managers during monitoring and supervision.

Analysis of the contents of the training manual, the flipchart, and the leaflet found that these are excellent materials for a community-level intervention. As a result of the communication efforts and clear instructions provided in the materials and in the training, the use compliance for misoprostol tablets was very high. Users found the pictorial contents of the BCC materials very useful to them, in particular the materials in which pictures reminded them when and how to take the misoprostol tablets. However, although the training manual and leaflet clearly state that "Misoprostol tablets should be taken if both baby and placenta come out together as well," it is not mentioned clearly either in the training manual or in the leaflet what should be done if women have delayed placental expulsion (i.e., retained placenta). In the training manual and on the flipchart, leaflets, and stickers, it is mentioned that misoprostol should be taken immediately after delivery of the baby, after ensuring that no additional baby is in the womb. Although it implies that the drug should be taken immediately after delivery of the baby and before the delivery of placenta, this is not mentioned clearly. As such, it was found that this created some confusion among some pregnant women and their attendants. The evaluation team suggests stating this more clearly when the BCC materials are revised.

A number of misconceptions about postdelivery bleeding are prevalent in the community. For example, women called postdelivery bleeding "bad blood" or said "it is an accumulation of menstrual blood of 10 months," and they have heard or believe such misconceptions as the following: "If more blood goes out, it clears the abdomen"; "if there is reduced bleeding, it will cause pain in the body"; "excessive bleeding causes tetanus"; "[the] body becomes lighter if bad blood goes out"; and/or "this is wish of Allah; this cannot be stopped." These beliefs were common among most women interviewed. Findings from the nonusers indicated that these **misconceptions were one of the key causes for misoprostol nonuse of and should be addressed more specifically in future communication efforts,** particularly during revision of the leaflets, and should be incorporated into the service providers' training curriculum. Women's misconceptions and beliefs and how to counter them should be included in the future training curriculum for the field workers and other service providers.

Two women in this study experienced complete cessation of bleeding after taking the misoprostol tablets following delivery. The possibility of this happening needs to be addressed during the training and orientation of field workers, supervisors, and service providers, informing them that **in rare cases, women may have a complete absence of bleeding or total cessation of bleeding after delivery due to taking misoprostol.** Furthermore, the training needs to include discussion about the difference between "stopping bleeding" and "stopping excessive bleeding," because "stopping bleeding" means complete cessation of bleeding while "stopping excessive bleeding" means that some bleeding will still occur after delivery, but it will be less.

The findings suggest that the description of misoprostol side effects during interpersonal communication deserves some caution and more elaboration. In addition, the "insert" developed to explain the misoprostol tablet needs review and modification. Findings suggest that a number of women did not take the tablets after hearing about side effects or reading about them in the leaflet or the "insert" inside the packets of tablets. A balanced strategy is needed on how to explain the side effects of misoprostol to community members and pregnant women, while comparing the side effects with the consequences of PPH. Pregnant women/readers should have clear knowledge about the gravity of the side effects and the percentage of users who may suffer from each of the side effects. Since excessive postdelivery bleeding is common and life-threatening, while the side effects due to misoprostol use are rare and minor, including in the insert a presentation comparing the

consequences of nonusage and the possible side effects of usage would be beneficial both for the field workers and for prospective users. The leaflet is a good and very important medium for such explanations and discussions during training of the various stakeholders.

Delivering a baby is a crucial period in a woman's life, and women as well as their families and birth attendants endure much mental stress during this time. Forgetfulness may be a common phenomenon among postdelivery women, and it is not easy for them to remember to take misoprostol tablets immediately after delivery. Although the sticker was developed as a trigger to help women and their attendants remember, it did not work in all cases. **Another strategy could be developed for helping pregnant women and their attendants remember that the women need to take the tablets after they deliver.** For example, having a pictorial list with delivery preparation arrangements hanging in the room where the woman will deliver is a good concept, and taking the misoprostol tablets should be included on such a list.

A number of people are involved in **decision making** regarding misoprostol use after delivery. Among them are the pregnant women themselves, mothers-in-law, *dais*, field workers, and husbands. While the women themselves were the main decision makers in many cases among the users who were interviewed, others sometimes played a key role in convincing the nonusers to abstain from using the tablets. This shows that the original strategy of communicating the messages about maternal health, PPH, and misoprostol to as wide an audience as possible was a good one. The field workers should always aim to include the whole family and the birth attendant when communicating their messages.

The distribution of working areas for registering pregnant women and distributing misoprostol tablets seemed a challenge, but in practice this went very well, with only a few initial overlaps. Interviews with the users and nonusers revealed that field workers sometimes also distributed tablets at satellite clinics or EPI centers or while doing other activities. This process weakened the counseling and could lead to incorrect use as well as noncompliance or misuse. This intervention can only be successful if the counseling is done thoroughly and is a key part of the intervention. This element should be stressed in the training, during supervision, and, if possible, during a refresher training.

The field workers gave various reasons for failing to register about 11% of the pregnant women, including that their working area was too large, that their workload was heavy, and that some women were absent from the houses they visited. During field visits, field workers found that some women had left for their parent's house for various reasons, including to give birth there. This is a concern with the present program in terms of coverage, because women may have moved out of the program area and, as a result, may have died due to PPH because they did not have access to misoprostol. In addition, some pregnant women may not have been registered due to the field workers' heavy workload. The evaluation team therefore recommends that alternative cadres of manpower or community networking be explored to cover all pregnant women in any future expansion. Future programs may use social workers, such as Ansar/Village Defence Party, or volunteers to increase coverage up to 100%.

Calculation of EDD was difficult, both because some women were unable to report their LMP and because some field workers were unable to do the calculation. Women do not always know the date of their LMP. However, even when this date has been estimated, field workers still often do not know how to calculate the EDD. We suggest that the technique of calculating EDD should be thoroughly discussed during training of field workers and supervisors in the future expansion.

The BCC materials were judged as excellent. There were a few reservations regarding the leaflets and stickers because of the images[8] and religious reservations, but, overall, the materials were very well accepted, both by low-literate and literate audiences. In addition, women, field workers, and supervisors suggested using television for communicating misoprostol-related messages.

[8] The picture shows part of a leg and postpartum blood under a woman who is lying down.

The evaluation revealed a very favorable policy environment for the misoprostol intervention. The supportive involvement of the district and upazila program managers was noteworthy, though supervision and monitoring visits could be further increased for further expansion of the intervention. This should be included in the monthly workplan of district and upazila managers.

The following recommendations emerged from the evaluation findings and should be considered for further expansion of the intervention:

1. Distribution of misoprostol at the community level contributes to reducing maternal mortality due to PPH. As such, this program should be **continued and expanded in other parts of the country to help achieve MDG-5.** To plan and finance the activities related to misoprostol distribution, these should be included in the next Five-Year Plan.

2. a. **The training curriculum, leaflet, stickers, and "insert" explaining the misoprostol tablets need to be reviewed, modified, and updated to address audience concerns.** The materials need to be further clarified, and additional messages could be included. The pictures could be modified, although it may be challenging to convey the message and make the picture acceptable to religious groups and others.

   b. There was some confusion regarding when to take the misoprostol tablets. Going forward, it is recommended that the **program include a very clear message** (i.e., that women are advised to take the tablets within five minutes after delivery of the baby, rather than "*immediately after delivery*"). Furthermore, to avoid confusion, this message should be consistently communicated in all materials-the training curriculum, flipchart, and leaflet: "Misoprostol tablets should be taken within five minutes after the delivery of the baby, regardless of whether the placenta comes out."

   c. A balanced strategy should be used for **communicating the side effects of misoprostol,** comparing them with the consequences of PPH. This should be done in interpersonal communication as well as in the insert in the tablet strip. Based on this information, women and their companions can develop a clearer understanding of the gravity of the consequences of PPH and whether the side effects will cause them less suffering. It is also advisable to mention some remedies for the side effects and the duration of each.

3. Offering **field worker refresher training** three months after the initial training would be helpful. The refresher training will help the relevant program staff to refresh their knowledge of misoprostol, as well as share their field experiences. Any confusion that emerged during their initial field work could be discussed and resolved at this time. Considering the cost of formal training, on-site coaching could also be done as an alternative to refresher training.

4. As a result of the strong role that *dais*/TBAs still play in conducting deliveries and advising women on issues concerning delivery, it is important to **always include the birth attendant in the interpersonal communication session with the pregnant woman about the use of misoprostol.**

5. The results of the courtyard meetings (*Utthan Baithak*) were mixed. Although field workers confirmed that *Utthan Baithak* were conducted in every area, women did not always know about these meetings, the meetings were small and informal, and their quality was not uniform. Going forward, emphasis should continue to be placed on **interpersonal communication,** which has shown to be effective when used in combination with the BCC materials and the introduction of use of mass media through TV.

6. Innovative approaches need to be thought out to ensure that pregnant women do not forget to take misoprostol during delivery. One option could be a **pictorial list with delivery preparation arrangements** to hang in the room where the woman will deliver. This list would include using the tablets.

7. To reduce the field workers' workload and ensure 100% coverage of pregnant women under the misoprostol program, **alternative cadres** of manpower or community networking could be explored to cover all pregnant women in the future expansion.

8. **Supervision and monitoring need urgent attention**, because during scale-up, no additional project monitoring and technical assistance will occur. In a number of cases, workers' activities were not properly supervised or monitored through regular channels. To ensure the success of any program, a functioning, supportive supervision and monitoring system must be in place. Strategies should be developed to ensure supervision and monitoring for the field workers. One strategy could be to hold monthly meetings with the supervisors in the presence of the upazila-level managers.

The pilot intervention conducted in Tangail District demonstrates good potential for scale-up throughout Bangladesh and in other low-resource settings where home-based deliveries are the norm. This innovative approach and the documentation of it also provide scientific support for consideration in international policy dialogue, particularly with the WHO and other prominent policy making bodies involved in setting standards of care and medical guidelines for health care provision worldwide.

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Appendix 1:

Estimated Number of Pregnancies in Tangail District

Estimated number of pregnancies in eight selected upazilas of Tangail District

Upazila	Total population*	Adjusted population in 2008	No. of women ever married (20% of total pop)	No. of women currently married aged 15 to 49	No. of women pregnant at any point**	Estimated no. of pregnancies ending in menstrual regulation or spontaneous abortion***	Total no. of pregnant women	Total number of home deliveries (85%of delivery****)
Basail	155,990	174,234	34,847	34,847	1,707	171	1,537	1,306
Sadar	437,880	489,375	97,875	97,875	4,796	480	4,316	3,669
Bhuapur	187,460	209,505	41,901	41,901	2,053	205	1,848	1,571
Ghatail	371,240	414,898	82,980	82,980	4,066	407	3,659	3,110
Gopalpur	269,080	300,724	60,145	60,145	2,947	295	2,659	2,255
Kalihati	376,360	420,620	84,124	84,124	4,122	412	3,710	3,153
Madhupur*****	417,100	466,151	93,230	93,230	4,568	457	4,111	3,495
Total	2,215,020	2,475,506	495,101	495,101	24,260	2,426	21,834	18,559

* Based on the 2001 population census.
** At any given point of time, the pregnancy rate is 4.9% in Dhaka division
*** It is estimated that 10% of pregnancies end prematurely, due to menstrual regulation or spontaneous abortion.
**** Based on the 2007 Bangladesh DHS (NIPORT, Mitra and Associates, and Macro International. 2009).
***** Madhupur includes Dhanbari.

Appendix 2:

Approval Letter of DGHS Technical Committee

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
স্বাস্থ্য অধিদপ্তর
ইন-সার্ভিস ট্রেনিং, টেকনিক্যাল ট্রেনিং ইউনিট
মহাখালী, ঢাকা-১২১২।

স্মারক নং-স্বাঃ অঃ/ টিটিইউ/ আইএসটি/ ফাইল-১৫৮/২০০৮/ ২০৭০২ তারিখঃ ৩১/৮/০৮

বিষয়ঃ ২৯-০৭-২০০৮ তারিখে অনুষ্ঠিত কারিকুলাম রিভিউ টেকনিক্যাল কমিটির সভার কার্যবিবরনী প্রেরন প্রসংগে।

২৯-০৭-২০০৮ ইং তারিখে অনুষ্ঠিত কারিকুলাম রিভিউ টেকনিক্যাল কমিটির সভায় প্রফেসর ডাঃ হোসনে আরা তাহমিন, অতিরিক্ত মহা-পরিচালক (প্রশাসন) এবং লাইন ডাইরেক্টর, আইএসটি এর সভাপতিত্বে তাঁহার অফিস কক্ষে মিসোপ্রোস্টল ব্যবহার নীতিমালা এবং প্রাথমিক বাস্তবায়ন পরিকল্পনা রিভিউ এবং অনুমোদন বিষয়ে সভা অনুষ্ঠিত হয়। উক্ত সভার কার্যবিবরনী সদয় অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহনের জন্য অতদসংগে প্রেরন করা হইল।

ডাঃ মোঃ মোকছেদ আলী
সহকারী পরিচালক ও ডেপুটি প্রোগ্রাম ম্যানেজার
ইন-সার্ভিস ট্রেনিং,স্বাস্থ্য অধিদপ্তর
মহাখালী, ঢাকা-১২১২।

বিতরন ঃ-

১। মহা-পরিচালক, স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা। (দৃঃ আঃ সহকারী পরিচালক সমন্বয়)।
২। পরিচালক ----------এবং সদস্য কারিকুলাম রিভিউ টেকনিক্যাল কমিটি।
৩। ডাঃ আবু জামিল ফয়সাল, Country Representative & Engender Health/BCO, Dhanmondi, Dhaka.
৪। ডাঃ/ জনাব ----------
৫। অফিস নথি ;

গনপ্রজাতন্ত্রী বাংলাদেশ সরকার
টিটিইউ, আইএসটি, ডিজিএইচএস
মহাখালী,ঢাকা

স্মারক নং-সাঃঅঃ/টিটিইউ/আইএসটি/ফাইল- তারিখ:

স্বাস্থ্য অধিদপ্তরের কারিকুলাম রিভিউ টেকনিক্যাল কমিটির সভার কার্যবিবরনী :

সভার স্থানঃএ.ডি.জি.(প্রশাসন) এর অফিস কক্ষ।

তারিখঃ ২৯-০৭-০৮

সময়ঃদুপুর ১২.৩০ ঘটিকায়

সভাপতিঃ অধ্যাপক ডাঃ হোসনে আরা তাহমিন, অতিরিক্ত মহা পরিচালক (প্রশাসন),স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা।

বিষয়ঃ মিসোপ্রোস্টল ব্যবহার নীতিমালা এবং প্রাথমিক বাস্তবায়ন পরিকল্পনা রিভিউ এবং অনুমোদন (Review & final approval of Misoprostol Use Policy and Roll Out/Phase I Implementation Plan)

মাননীয় অতিরিক্ত মহা-পরিচালক (প্রশাসন) ও লাইন ডাইরেক্টর, ইন-সার্ভিস ট্রেনিং এর পক্ষে ডাঃ মোঃ সাইজউদ্দিন, উপ-পরিচালক, ইন-সার্ভিস ট্রেনিং, উপস্থিত সকল সন্মানিত সদস্যদের কে স্বাগত জানিয়ে সভার কার্যক্রম শুরু করার জন্য ডাঃ মোঃ মোকছেদ আলী (ডিপিএম, ইএসপি ট্রেনিং) কে অনুরোধ করেন। ডা. মোঃ মোকছেদ আলী সভাকে অবহিত করেন যে, গত ০৫-০৫-০৮ তারিখে অনুষ্ঠিত স্বাস্থ্য অধিদপ্তরের কারিকুলাম রিভিউ টেকনিক্যাল কমিটির সভায় প্রসব পরবর্তী রক্তক্ষরণ প্রতিরোধ টাস্ক ফোর্স কর্তৃক প্রনীত এবং এনজেন্ডারহেলথ কর্তৃক পেশকৃত Misoprostol Use Policy and Roll Out/Phase-I Implementation Plan পর্যালোচনা এবং অনুমোদনের জন্য উপস্থাপন করা হয়। সেই সভায় বিস্তারিত আলোচনার পর মিসোপ্রোস্টল ব্যবহারের নীতিগত সিদ্ধান্ত গৃহীত হয়। উক্ত সভার উপস্থিত সদস্যদের Feedback অনুযায়ী Misoprostol Roll Out/Phase-I Implementation Plan টি পরিবর্তন ও পরিবর্ধন করে অনুমোদনের জন্য এটিকে পুনরায় আজকের সভায় উপস্থাপন করা হচ্ছে। ডাঃ আবু জামিল ফয়সাল, কান্ট্রি রিপ্রেজেন্টেটিভ, এনজেন্ডারহেলথ Misoprostol Use Policy and Roll Out/Phase-I Implementation Plan প্রনয়নের প্রেক্ষাপট, প্রনয়ন প্রক্রিয়া এবং এর সারসংক্ষেপ ব্যাখ্যা করেন। এ পর্যায়ে এ প্রসঙ্গে কমিটির সদস্যদের মতামত আহ্বান করা হয়। সভায় উপস্থিত সদস্যবৃন্দ নিম্নলিখিত মতামত প্রদান করেনঃ

১. Misoprostol Roll Out/Phase I Implementation Plan এর নিবিড় সুপারভিশন এবং মনিটরিং এর জন্য প্রতিটি উপজেলায় UHFPO এবং UFPO কর্তৃক সিনিয়র একজন মাঠ পরিদর্শককে ফোকাল পার্সন হিসেবে মনোনীত করবেন, যাহার সহিত এনজেন্ডারহেলথ কর্তৃক নিযুক্ত উপজেলা সমন্বয়ক কার্যক্রম পরিচালনা করবেন।

২. সভায় প্রসব পরবর্তী জটিলতার রেফারেল পদ্ধতি সম্পর্কে মা, পরিবার ও প্রসব সেবাদানকারীর ওরিয়েন্টেশন দেয়ার উপরেও গুরত্বারোপ করা হয় ।

৩. প্রফেসর সায়েবা আক্তার (প্রেসিডেন্ট ওজিএসবি) প্রসব পরবর্তী রক্তক্ষরন এবং মাতৃমৃত্যু প্রতিরোধে কমিউনিটি পর্যায়ে মিসোপ্রোস্টল ব্যবহারের প্রয়োজনীয়তা উল্লেখ করে মিসোপ্রোস্টলের পার্শ্বপ্রতিক্রিয়া এবং গর্ভবতী অবস্থায় মিসোপ্রোস্টল গ্রহনের ঝুঁকি সম্পর্কে সচেতনতা গড়ে তোলার বিষয়েও গুরুত্ব আরোপ করেন। এ প্রসঙ্গে ঔষধের ক্যাচকভারের উপরে পার্শ্বপ্রতিক্রিয়ার উল্লেখ করা এবং এটিকে প্রিটেস্ট করা প্রয়োজন বলে মত প্রকাশ করেন।

৪. বেসরকারী হাসপাতাল ও ক্লিনিকগুলোকে এই কার্যক্রমের আওতায় আনার প্রস্তাবনা করা হয়।

৫. মনিটরিং ও সুপারভিশন প্রক্রিয়া সুসংগঠিত করার জন্য সরকারী কার্যক্রমে এর অন্তর্ভূক্তি এবং কর্মকর্তাদের অংশগ্রহণের উপর জোর দেয়া হয়।

সিদ্ধান্তঃ আলোচনা শেষে কমিউনিটি পর্যায়ে প্রসব পরবর্তী রক্তক্ষরনজনিত মাতৃমৃত্যু হ্রাসে প্রসবের তৃতীয় ধাপে মিসোপ্রোস্টল ব্যবহার সংক্রান্ত কার্যক্রমের প্রাথমিক পর্যায় (Roll Out/Phase I Implementation Plan) বাস্তবায়নের অনুমোদন প্রদান করা হয় ।

অধ্যাপক ডাঃ হোসনে আরা তাহমিন
অতিরিক্ত মহা-পরিচালক (প্রশাসন)
এবং লাইন ডাইরেক্টর, ইন-সার্ভিস ট্রেনিং
স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা।

Appendix 3:

Client Information Materials on Misoprostol

Sticker on use of Misoprostol

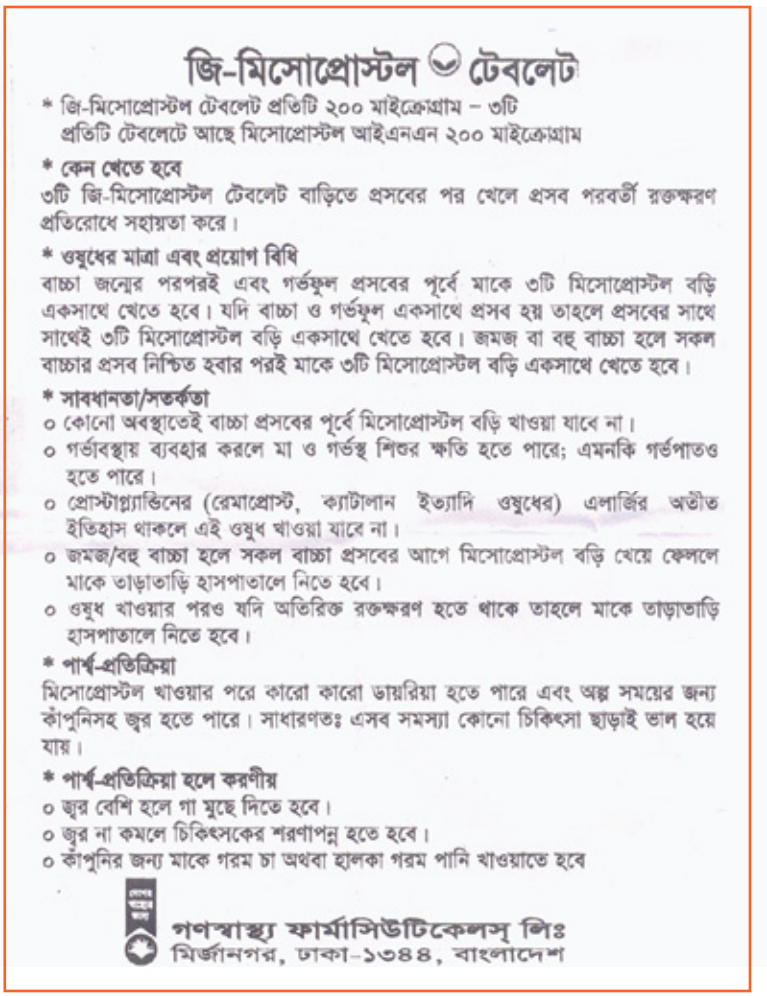
Flipchart on use of Misoprostol

Leaflet on use of Misoprostol

Appendix 4:

Misoprostol Packaging

Misoprostol catch cover and three tablets



জি-মিসোপ্রোস্টল টেবলেট

* জি-মিসোপ্রোস্টল টেবলেট প্রতিটি ২০০ মাইক্রোগ্রাম – ৩টি
প্রতিটি টেবলেটে আছে মিসোপ্রোস্টল আইএনএন ২০০ মাইক্রোগ্রাম

*** কেন খেতে হবে**

৩টি জি-মিসোপ্রোস্টল টেবলেট বাড়িতে প্রসবের পর খেলে প্রসব পরবর্তী রক্তক্ষরণ প্রতিরোধে সহায়তা করে।

*** ওষুধের মাত্রা এবং প্রয়োগ বিধি**

বাচ্চা জন্মের পরপরই এবং গর্ভফুল প্রসবের পূর্বে মাকে ৩টি মিসোপ্রোস্টল বড়ি একসাথে খেতে হবে। যদি বাচ্চা ও গর্ভফুল একসাথে প্রসব হয় তাহলে প্রসবের সাথে সাথেই ৩টি মিসোপ্রোস্টল বড়ি একসাথে খেতে হবে। জমজ বা বহু বাচ্চা হলে সকল বাচ্চার প্রসব নিশ্চিত হবার পরই মাকে ৩টি মিসোপ্রোস্টল বড়ি একসাথে খেতে হবে।

*** সাবধানতা/সতর্কতা**

- কোনো অবস্থাতেই বাচ্চা প্রসবের পূর্বে মিসোপ্রোস্টল বড়ি খাওয়া যাবে না।
- গর্ভাবস্থায় ব্যবহার করলে মা ও গর্ভস্থ শিশুর ক্ষতি হতে পারে; এমনকি গর্ভপাতও হতে পারে।
- প্রোস্টাগ্ল্যান্ডিনের (রেমাপ্রোস্ট, ক্যাটালান ইত্যাদি ওষুধের) এলার্জির অতীত ইতিহাস থাকলে এই ওষুধ খাওয়া যাবে না।
- জমজ/বহু বাচ্চা হলে সকল বাচ্চা প্রসবের আগে মিসোপ্রোস্টল বড়ি খেয়ে ফেললে মাকে তাড়াতাড়ি হাসপাতালে নিতে হবে।
- ওষুধ খাওয়ার পরও যদি অতিরিক্ত রক্তক্ষরণ হতে থাকে তাহলে মাকে তাড়াতাড়ি হাসপাতালে নিতে হবে।

*** পার্শ্ব-প্রতিক্রিয়া**

মিসোপ্রোস্টল খাওয়ার পরে কারো কারো ডায়রিয়া হতে পারে এবং অল্প সময়ের জন্য কাঁপুনিসহ জ্বর হতে পারে। সাধারণতঃ এসব সমস্যা কোনো চিকিৎসা ছাড়াই ভাল হয়ে যায়।

*** পার্শ্ব-প্রতিক্রিয়া হলে করণীয়**

- জ্বর বেশি হলে গা মুছে দিতে হবে।
- জ্বর না কমলে চিকিৎসকের শরণাপন্ন হতে হবে।
- কাঁপুনির জন্য মাকে গরম চা অথবা হালকা গরম পানি খাওয়াতে হবে

গণস্বাস্থ্য ফার্মাসিউটিকেলস্ লিঃ
মির্জানগর, ঢাকা-১৩৪৪, বাংলাদেশ

Insert on Misoprostol

Appendix 5:

Detailed Respondent Information, by Data Collection Method

Distribution of Number of Interviews/Group Discussions by Interview Method

Study population groups	Number and type of interviews	Method of data collection
Women who received and used misoprostol	16 (4 interviews from NGO sites and 12 from GOB sites)	In-depth interview
Women who received but did not use misoprostol	15 (4 interviews from NGO sites and 11 from GOB sites)	In-depth interview
Upazila-level managers	8 3 from DGFP (MO-MCH, UFPO), 3 from DGHS (UH&FPO, RMO), 2 from NGO facilities (CM, MO)	Key informant interview
District- and higher-level program managers/policy personnel	4 (CS, DD-FP, LD MCRH, LD-ESD)	Key informant interview
Field workers in three upazilas	8 (4 FGDs with FWAs and 4 FGDs with HAs)	Focus group discussion
Field-level supervisors in two upazilas	4 (2 FPI and 2 AHI)	Focus group discussion

MO-MCH = Medical Officer-Maternal and Child Health
UFPO = Upazila Family Planning Officer
UH&FPO = Upazila Health and Family Planning Officer
RMO = Resident Medical Officer
CM = Clinic Manager
MO = Medical Officer
PM = Program Manager
DPM = Deputy Program Manager
CS = Civil Surgeon
DD-FP = Deputy Director, Family Planning
LD = Line Director
ESD = Essentail Service Delivery

Appendix 6:

Selected Data on Pregnant Women and Misoprostol Distribution and Use

Registration of Pregnant Women, Distribution of Misoprostol, and Its Use at Phase 1 Implementation Sites in Eight Upazilas of Tangail District

Project Duration: November 2008 through June 2009

Sl No	Name of sub-districts	No. of field workers	No. of registered pregnant women	No. of packets* distributed among field workers	No. of packets distributed among pregnant women on or after 32 weeks of pregnancy	Total no. of deliveries	No. of deliveries at home	No. of deliveries at facilities	No. of women who took misoprostol tablets during home delivery (properly used)	Percentage of women who took misoprostol tablets during home delivery	No. of women who did not take misoprostol tablets during home delivery
1	Kalihati	93	3,718	3,718	2,491	2,383	1,970	413	1,799	91	171
2	Bhuapur	45	1,653	1,653	1,114	940	809	131	747	92	62
3	Madhupur	66	2,632	2,632	1,917	1,680	1,522	158	1,436	94	86
4	Basail	51	1,116	1,116	697	670	475	195	430	91	45
5	Gopalpur	64	2,126	2,126	1,422	1,465	1,280	185	1,091	85	189
6	Sadar	118	2,890	2,890	1,893	1,604	1,329	275	1,277	96	52
7	Ghatail	101	3,592	3,592	2,315	2,015	1,732	283	1,579	91	154
8	Dhanbari	54	1,770	1,661	1,112	1,007	923	84	870	94	53
		592	19,497	19,388	12,961	11,764	10,040	1,724	9,228	92	812

*Each packet contains three misoprostol tablets.

Appendix 7:

In-Depth Interview Questionnaire for Women Who Received and Used Misoprostol

Formative Evaluation of Misoprostol Distribution and Use by the Pregnant Women in Selected Upazilas of Bangladesh

In-Depth Interview with Women Who Have Received and Used Misoprostol Tablets

INFORMANTS: Misoprostol Users

Status of Interview Visits		
Date	**Visit 1**	**Visit 2**
Result*		
Interviewer name		
Plan of second visit		
Date **Time**		
***Result Code:** Completed=1, Respondent absent=2, Household not found=3, Refused to give interview=4, Deferred=5, Postponed=6, Others (specify)=9_____		
Supervisor	**Field Editor**	**Office Editor**
Name		
Date		

Starting time: _____

Ending time: _____

OCTOBER 2009

Mayer Hashi project
EngenderHealth

INFORMED CONSENT (VERBAL)

(INSTRUCTIONS FOR THE INTERVIEWERS: Please read the following statement to informant before asking any questions for the interview.)

(Greet the person—Hello/Salam/Aasalaamu Aleikum). My name is ……. I am working with the Mayer Hashi project of EngenderHealth, an international NGO. I hope you know that a pilot project on misoprostol use during home delivery to prevent post delivery excessive vaginal bleeding has been implemented at eight upazilas of Tangail District during the period of November 2008 through June 2009, by EngenderHealth in collaboration with the Directorate General of Health Services and Directorate General of Family Planning. We are conducting a study to understand why some women have taken the misoprostol drug immediately after delivery of their baby and why some women did not take it. Also, we would like to know individuals' opinions and suggestions about the distribution and follow-up system of misoprostol tablets use at the community levels. Findings of this study will help the government make policy decisions to reduce maternal deaths and to achieve MDG 5 in Bangladesh.

We have collected information from the field worker's register that indicates you have received the misoprostol tablets and have taken three tablets immediately after delivery of your baby to prevent excessive postdelivery vaginal bleeding. I hope you can remember it. I would like to ask you a few questions about this issue. The interview will take around 30 to 45 minutes of your time. The risk of your participation in this study is minimal. Your participation in this interview is completely voluntary and there is no penalty if you decide not to participate or refuse to respond to any question; you can stop the interview at any time. You will not receive any direct benefit or money for your participation in the interview.

The interview will be conducted in a private setting that provides auditory privacy. Your responses will be kept confidential. We will not share your information with anyone in your community, nor will we identify you in any way when the study findings are published. If you permit, the discussion between you and me will be tape recorded with voices only, to help us recall what has been discussed when preparing the report. Only the researchers will have access to your responses, which they will utilize to prepare the report.

You may ask any questions or clarifications before giving your consent for the interview. You may also contact Dr. Halim (01712094176) or Mr. Mahboob (8112334/36) with any questions before or after the interview.

Do you have any questions? Yes _____ No_____

If you do not have any questions, do I have your permission to continue? Yes _____ No_____

Investigator's Statement

I, the undersigned, have explained the consent form to the woman in a language she understands. She has given her consent to conduct the interview.

_____ _____

Signature of Investigator Date

GUIDELINES FOR IN-DEPTH INTERVIEW

Getting Started:

1. Village: _____
2. Upazila: _____
3. Age of respondent: _____
4. Years of schooling: _____
   a. Illiterate. b. Literate, no formals. c. Up to primary. d. 5 to 8 classes. e. 9 to 10 classes. f. 11 to 12 classes. g. Graduate. h. M.A. or more.
5. Number of living children: _____ Son(s):_____ Daughter(s): _____
6. Recent pregnancy number: _____

Specific Information:

7. You know that government field workers/depot-holders usually come to you and list your name while you are pregnant. Do you remember how many times you were visited by a government field worker/depot-holder during your last pregnancy?
8. Did you hear about excessive vaginal bleeding after delivery?
   a. Could you explain what you heard? (INS: RECORD VERBATIM.)
   b. Do you know about the consequences of such excessive vaginal bleeding?
   c. Can you tell us what should be done to save pregnant women from such excessive vaginal bleeding after delivery?
9. During the last year (November 2008-June 2009), field workers/depot-holders distributed three misoprostol tablets each among the pregnant women in your area to be used to prevent excessive bleeding just after delivery. Did you receive the misoprostol tablets? [Note: If client answers no, end the interview.]
   a. If yes, when did you receive the misoprostol drug? (PROBE: in what month of her pregnancy)
   b. Could you explain why these drugs were given to you?
10. Can you describe your postdelivery vaginal bleeding (If possible, compare to previous delivery, if applicable)?
11. Can you remember what kind of arrangement you or your family members made to make sure that you took the tablets immediately after the delivery of baby?
12. You just explained that you received the misoprostol tablets; I now have some questions about the use of these tablets. Did you take these tablets? [Note: If she did not take the tablets, stop the interview.]
    a. Could you please explain to me when you took the tablets?
    b. Did you take all three tablets?
    c. Can you describe what happened after you took the tablets?
    d. Did you have any problems/complications after taking the tablets? What were the complications? (INS: PROBE for detailed description of any problems such as hyperpyrexia, retained placenta, retention of twin baby, uterine rupture)
    e. If you suffered any problems/complications, could you explain what actions you have taken to manage the complications? (INS: PROBE for facility visit, contacting EH staff, etc).
13. If the bleeding was not controlled by the misoprostol drugs, and you went to a health facility, please describe:
    a. How were you treated there?
    b. Were you satisfied/not satisfied with the treatment there?
14. Did the field workers/depot-holders come back to you to collect feedback about the tablets that you have taken?
    a. If yes, when did they come back for follow-up and what did they do?
    b. Did the field worker take back the strip cover from you?

15. Before your last delivery, did the field worker counsel you about possible complications of misuse of misoprostol tablets?
    a. If yes, could you explain what you were told?
16. Are you satisfied with the use of misoprostol drug?
    a. If so, can you explain why?
    b. Would you recommend your friends use misoprostol after their delivery?
    c. If you are not satisfied, could you explain why you are not satisfied?
17. Did you hear/know of any other use of the misoprostol tablets other than using them after delivery of the baby to prevent excessive post delivery vaginal bleeding?
    a. If yes, can you describe what you have heard? (INS: List all other uses of misoprostol she mentions.)
18. Field workers conducted Utthan Baithaks (courtyard sessions) in your area to create awareness among women, family, and community members about pregnancy-related complications and how to save women from such complications.
    a. Did you or anybody from your family attend these meeting? (INS: If not, go to question 20.)
    b. If yes, could you describe what was discussed at the Utthan Baithak? (INS: PROBE for details.)
    c. What materials did field workers use to disseminate information?
    d. If you/your family members did not attend, could you please explain why you/ your family members did not attend?
    e. If you did not attend but your family members attended the Utthan Baihak, did they inform you about the importance of using the misoprostol tablets after delivery to prevent postpartum haemorrhage?
    f. If yes, what did they mention to you?
19. A leaflet (INS: SHOW the leaflet.) was developed and distributed to the community members to create awareness among pregnant women/family members/community members about the importance of using misoprostol tablets immediately after the delivery of the baby.
    a. Did you or your family members receive any leaflets? (INS: If not, go to question 20.)
    b. Who has given you this leaflet?
    c. What information did you receive from this leaflet?
    d. Do you have any suggestion regarding this leaflet
20. A sticker (INS: Show the sticker.) was developed and given to field workers to paste at the home: one inside and another outside the home.
    a. Did field worker paste any stickers in your home? (INS: If not, go to question 21.)
    b. Please describe what kind of benefit you received from this sticker.
    c. Please let us know if you faced any objections or problems due to this sticker being pasted on your home.
21. Are there other ways to provide women and family members with the information we were just discussing?
    a. What about radio or television?
    b. In your opinion, what is the best way to reach women and family members in your community with this type of health information?
22. Do you have any other thoughts and suggestions that you would like to share with us about the misoprostol tablets that we talked about?

Thank you for your time and cooperation.

Appendix 8:

In-Depth Interview Questionnaire for Women Who Received and Did Not Use Misoprostol

Formative Evaluation of Misoprostol Distribution and Use by the Pregnant Women in Selected Upazilas of Bangladesh

In-Depth Interview with Women Who Have Received but Did Not Use Misoprostol Tablets

INFORMANTS: Misoprostol Nonusers

Status of Interview Visits		
Date	**Visit 1**	**Visit 2**
Result*		
Interviewer name		
Plan of second visit		
Date **Time**		
***Result Code:** Completed=1, Respondent absent=2, Household not found=3, Refused to give interview=4, Deferred=5, Postponed=6, Others (specify)=9_____		
Supervisor	**Field Editor**	**Office Editor**
Name		
Date		

Starting time: _____

Ending time: _____

OCTOBER 2009

Mayer Hashi Project
EngenderHealth

INFORMED CONSENT (VERBAL)

(INSTRUCTIONS FOR THE INTERVIEWERS: Please read the following statement to informant before asking any question for the interview)

(Greet the person—Hello/Salam/Aasalaamu Aleikum). My name is ..... I am working with the Mayer Hashi project of EngenderHealth, an international NGO. I hope you know that a pilot project on misoprostol use during home delivery to prevent postdelivery excessive vaginal bleeding has been implemented at eight upazilas of Tangail District during the period of November 2008-June 2009, by EngenderHealth in collaboration with the Directorate General of Health Services and Directorate General of Family Planning. We are conducting a study to understand why some women have taken the misoprostol drug immediately after delivery of their baby and why some women did not take it. Also, we would like to know individual opinions and suggestions about the distribution and follow-up system of misoprostol tablets use at the community levels. Findings of this study will help the government make policy decisions to reduce maternal deaths and to achieve MDG 5 in Bangladesh.

We have collected information from the field worker's register that indicates you have received the misoprostol tablets but did not take three tablets immediately after delivery of your baby to prevent excessive postdelivery vaginal bleeding. I hope you can remember it. I would like to ask you a few questions about this issue. The interview will take around 30 to 45 minutes of your time. The risk of your participation in this study is minimal. Your participation in this interview is completely voluntary and there is no penalty if you decide not to participate or refuse to respond to any question; you can stop the interview at any time. You will not receive any direct benefit or money for your participation in the interview.

The interview will be conducted in a private setting that provides auditory privacy. Your responses will be kept confidential. We will not share your information with anyone in your community, nor will we identify you in any way when the study findings are published. If you permit, the discussion between you and me will be tape recorded with voices only, to help us recall what has been discussed when preparing the report. Only the researchers will have access to your responses, which they will utilize to prepare the report.

You may ask any questions or clarifications before giving your consent for the interview. You may also contact Dr. Halim (01712094176) or Mr. Mahboob (8112334/36) with any questions before or after the interview.

Do you have any questions? Yes _____ No_____

If you do not have any questions, do I have your permission to continue? Yes _____ No_____

Investigator's Statement
I, the undersigned, have explained the consent form to the woman in a language she understands. She has given her consent to conduct the interview.

_____ _____
Signature of Investigator Date

GUIDELINES FOR IN-DEPTH INTERVIEW

Getting Started:

1. Village: _____
2. Upazila: _____
3. Age of respondent: _____
4. Years of education: _____
   a. Illiterate. b. Literate, no formals. c. Up to primary. d. 5 to 8 classes. e. 9 to 10 classes. f. 11 to 12 classes. g. Graduate. h. M.A. or more.
5. Number of living children: _____ Son(s):_____ Daughter(s): _____
6. Recent pregnancy number: _____

Specific Information:

7. You know that government field workers/depot-holders usually come to you and list your name while you are pregnant. Do you remember how many times you were visited by a government field worker/depot-holder during your last pregnancy?
8. Did you hear about excessive vaginal bleeding after delivery?
   a. Could you explain what you heard? (INS: RECORD VERBATIM.)
   b. Do you know about the consequences of such excessive vaginal bleeding?
   c. Can you tell us what should be done to save pregnant women from such excessive vaginal bleeding after delivery?
9. Field workers/depot-holders distributed three misoprostol tablets among pregnant women in your area to be used to prevent excessive bleeding just after delivery during the last year (November 2008 to June 2009). Did you hear about and receive the misoprostol tablets? [Note: If client answers no, end the interview.]
   a. If yes, when did you receive the misoprostol drug? (PROBE: in what month of her pregnancy)
   b. Could you explain why these drugs were given to you?
   c. Could you explain when and how to take these drugs?
10. We have understood that you have received the tablets; did you or your family members make any arrangement to ensure that the tablets would be taken immediately after the delivery of baby?
    a. If not, why?
    b. Could you please describe why did you not take the tablets?
    c. If anybody discouraged you to take the tablets, could you explain why they discouraged you?
11. How was your postdelivery vaginal bleeding compared to previous delivery (if there was a previous delivery)?
12. Did you suffer from any problems/complications during delivery where you think misoprostol might have helped?
    a. If yes, what were those problems/complications and what did you do? (INS: PROBE for more problems and actions taken.)
    b. If you suffered from any problems/complications, could you explain what action you took?
    c. If you were treated in a health facility, could you explain where you went and if you were satisfied/not satisfied with the treatment there?
13. Did the field workers/depot-holders come back to you to collect feedback about the tablets that you did not take?
    a. If yes, when did they come back for follow up and what did they do?
14. Before your last delivery, did the field worker counsel you about possible complication of misuse of misoprostol tablets?
    a. If yes, could you explain what you were told?
15. Did you hear/know of any other use of the misoprostol tablets other than using them after delivery of the baby to prevent excessive postdelivery vaginal bleeding?
    a. If yes, can you describe what you have heard? (INS: List all other uses of misoprostol she mentions.)

16. Field workers conducted Utthan Baithaks (courtyard sessions) in your area to create awareness among women, family, and community members about pregnancy-related complications and how to save women from such complications.
    a. Did you or anybody from your family attend these meeting? (INS: If not, go to question 17.)
    b. If yes, could you describe what was discussed at the Utthan Baithak? (INS: PROBE for details.)
    c. What materials did field workers use to disseminate information?
    d. If you/your family members did not attend, could you please explain why you/your family members did not attend?
    e. If you did not attend but your family members attended the Utthan Baihak, did they inform you about the importance of using the misoprostol tablets after delivery to prevent postpartum haemorrhage?
    f. If yes, what did they mention to you?
17. A leaflet (INS: SHOW the leaflet.) was developed and distributed to the community members to create awareness among pregnant women/family members/community members about the importance of using misoprostol tablets immediately after the delivery of the baby.
    a. Did you or your family members receive any leaflets (INS: If not, go to question 18.)
    b. Who gave you this leaflet?
    c. What information did you receive from this leaflet?
    d. Do you have any suggestion regarding this leaflet?
18. A sticker (INS: Show the sticker.) was developed and given to field workers to paste at the home: one inside and another outside the home.
    a. Did the field worker paste any sticker in your home? (INS: If not, go to question 19.)
    b. Please let us know if you faced any objections or problems due to this sticker being pasted on your home.
19. Are there other ways to provide women and family members with the information we were just discussing?
    a. What about radio or television?
    b. In your opinion, what is the best way to reach women and family members in your community with this type of health information?
20. Some of the other pregnant women in your area also did not use the misoprostol tablets.
    a. In your opinion, what do you think is the best way to motivate other pregnant women to take these tablets after delivery to prevent excessive bleeding?
21. Do you have any other thoughts and suggestions that you would like to share with us about the misoprostol tablets that we talked about?

Thank you for your time and cooperation.

Appendix 9:

Discussion Outline for Focus Group with Misoprostol Distributors

Formative Evaluation of Misoprostol Distribution and Use by the Pregnant Women in Selected Upazilas of Bangladesh

Focus Group Discussion
with Misoprostol Distributors

PARTICIPANTS: Family Welfare Assistants, Health Assistants, and Deport-Holders`

STATUS OF FOCUS GROUP DISCUSSION		
Date		
Result*		
Moderator name		
Rapporteur's name		
***Result Code:** Completed= 1, Deferred= 2, Postponed= 3, Others (specify)= 9		
Supervisor	**Field Editor**	**Office Editor**
Name		
Date		

Participant list and characteristics:

Place of FGD conduction: _____ Date: _____

Union: _____ Time: _____

Upazila: _____

	Designation	Place of posting	Age	Sex
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

OCTOBER 2009
Mayer Hashi project
EngenderHealth

INFORMED CONSENT (VERBAL)

(INSTRUCTIONS FOR THE MODERATOR: All of the field workers who will be contacted about participating in the FGD will be asked to give their informed consent, using the following standardized statement. Please read the following statement before starting FGD.)

(Greet the person—Hello/Salam/Aasalaamu Aleikum). My name is ..... I am with the Mayer Hashi project of EngenderHealth, an international NGO. I hope you know that a pilot project on misoprostol use during home delivery to prevent postdelivery excessive vaginal bleeding has been implemented at eight upazilas of Tangail District during the period of November 2008-June 2009, by EngenderHealth in collaboration with the Directorate General of Health Services and Directorate General of Family Planning. We are conducting a study to understand why some women have taken the misoprostol drug immediately after delivery of their baby and why some women did not take it. Also, we would like to know individuals' opinions and suggestions about the distribution and follow-up system of misoprostol tablets at the community levels. Findings of this study will help the government make policy decisions to reduce maternal deaths and to achieve MDG 5 in Bangladesh.

As a part of this study, we would like to conduct a small group discussion with all of you to know your opinions, experience, and suggestions. This small group will consist of 7-10 persons. The discussion will continue for one and one-half hours. The risk of your participation in this study is minimal. Your participation in this interview is completely voluntary and you will not be penalized if you decide not to participate or refuse to respond to any question; you can even keep silent. You will not receive any direct benefit or money for your participation in the discussion. Your responses will be kept confidential. We will not share your information with anyone, nor will we identify you in any way when the study findings are published. If you permit, the discussion between you and me will be tape recorded with voices only, to help us recall what has been discussed when preparing the report. Only the researchers will have access to your responses, which they will utilize to prepare the report.

You may ask any questions or clarifications before giving your consent for FGD. You may also contact Dr. Halim (01712094176) or Mr. Mahboob (8112334/36) with any questions before or after the FGD.

Do you have any questions? Yes _____ No_____

If you do not have any questions, do I have your permission to continue? Yes _____ No_____

Moderator's Statement

I, the undersigned, have explained the consent form to the FGD participants in a language s/he understands. S/he has given her/his consent to conduct the FGD and has fully agreed to participate in the FGD.

_____ _____

Signature of Moderator Date

GUIDELINES FOR FOCUS GROUP DISCUSSION

A. Gather providers' perceptions and opinions about delivery-related complications, its consequences, and their experiences.

I am sure that you are aware of the problems/complications that pregnant women may suffer after delivery of a baby.

1. Could you please describe those problems/complications that women may suffer after delivery of baby? (INS: List all).
2. What are the possible consequences of such problems/complications? (INS: List all).
3. Do you know about any maternal deaths in your working areas?
4. Why and how did those women die?
5. Do you think those deaths could have been prevented?
6. If yes, how could those deaths have been prevented?

B. Related with project activities:

1. You have mentioned that postdelivery excessive vaginal bleeding is one of the serious complications women may have. To prevent this bleeding, program activities related to use of misoprostol tablets have been introduced in your working area on a pilot basis and you have received a one-day training.
   a. What are your opinions about the quality of that training? Did it provide you with enough guidance to implement the program activities?
   b. Do you have any suggestions to improve the quality of this training?
2. At the beginning of the project, the working area was redistributed among the field workers of health and family planning and depot-holders.
   a. Did you find any benefits of the redistribution of the working area?
   b. Did you face any difficulties or problems while doing the redistribution of the working area? Please describe.
3. Did you experience any difficulties or problems while doing the registration of the pregnant women and how did you overcome these problems?
   a. Were you able to register all pregnant women? If not, who else could help you and what else could be done?
4. Did you face any difficulties or problems during the distribution of the drug and how did you overcome these difficulties?
5. Did you face any difficulties or problems while doing follow-up of the pregnant women after delivery of their babies and how did you overcome these difficulties?
6. How did you obtain the misoprostol drug?
   a. How often did you get a resupply of these drugs?
   b. Do you have any suggestions about the supply of misoprostol?
7. To create awareness among women, family members, and community people about postdelivery excessive vaginal bleeding and use of misoprostol to save women's lives, a number of "Utthan Baithak" have been organized in field workers' working areas. Also, leaflets (INS: Show the leaflet.) and stickers (INS: Show the sticker.) were developed on the use of misoprostol tablets.
   a. What is your opinion about the usefulness of these kinds of BCC activities and materials to create awareness?
   b. Did you distribute the leaflets and stickers? To whom did you distribute them?
   c. What is the community's reaction/opinion of these BCC materials?
   d. What are the barriers/problems/limitations you faced and how did you overcome them?
   e. Have you observed any changes or improvements in the awareness and practices within the community as a result of these efforts?
   f. If not, why do you think so?

g. Do you have any suggestions about what else can be done to create public awareness?

8. You know that most women who received the misoprostol tablets also used them.
   a. In your opinion, why were these women motivated to use the tables?
   b. Within the family, who do you think took the decision to take the tablets?
   c. Did you hear/observe any women that suffered from any problems/complications after taking the tablets?
   d. If yes, what were those problems/complications? (INS: List all of them)
   e. What is your experience with managing those problems/complications?
   f. Do you think nearby referral hospitals are ready to deal with these complications?
9. You also have observed that some of the pregnant women in your area did not take the tablets.
   a. In your opinion, what were the main reasons for these women not to take the tablets?
10. What do you think can be done to motivate these women to take the misoprostol tablets? At present, the misoprostol tablets are supplied by you (field workers/HAs/depot-holders) only. Nobody can collect them from the health facilities (FWCs or NGO clinics). Do you think misoprostol tablets should also be available through the FWCs? Please explain why or why not.
11. If the government wants to scale up use of misoprostol nationwide, what challenges do you foresee and what needs to be strengthened with regards to the following:
   a. Logistics management (e.g., storage, distribution, inventory taking, etc.)
   b. Reporting/MIS
   c. Supervision/monitoring
   d. Training/refresher training
   e. Referrals/strengthening referral hospitals
12. Do you have any other thoughts and suggestions you would like to share with us about the community-based misoprostol distribution program?

Thank you for your time and cooperation.

Appendix 10:

Discussion Outline for Focus Group with Supervisors of Misoprostol Distributors

Formative Evaluation of Misoprostol Distribution and Use by the Pregnant Women in Selected Upazilas of Bangladesh

Focus Group Discussion
with Supervisors of Misoprostol Distributors

PARTICIPANTS: Family Planning Inspector and Assistant Health Inspector

STATUS OF FOCUS GROUP DISCUSSION		
Date		
Result*		
Moderator name		
Rapporteur's name		
***Result Code:** Completed= 1, Deferred= 2, Postponed= 3, Others (specify)= 9		
Supervisor	**Field Editor**	**Office Editor**
Name		
Date		

Participant list and characteristics:

Place of FGD conduction: _____ Date: _____

Union: _____ Time: _____

Upazila: _____

	Designation	Place of posting	Age	Sex
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

OCTOBER 2009
Mayer Hashi project
EngenderHealth

INFORMED CONSENT (VERBAL)

(INSTRUCTIONS FOR THE MODERATOR: All of the field workers who will be contacted about participating in the FGD will be asked to give their informed consent, using the following standardized statement. Please read the following statement before starting FGD.)

(Greet the person—Hello/Salam/Aasalaamu Aleikum). My name is ..... I am with the Mayer Hashi project of EngenderHealth, an international NGO. I hope you know that a pilot project on misoprostol use during home delivery to prevent postdelivery excessive vaginal bleeding has been implemented at eight upazilas of Tangail District during the period of November 2008-June 2009, by EngenderHealth in collaboration with the Directorate General of Health Services and Directorate General of Family Planning. We are conducting a study to understand why some women have taken the misoprostol drug immediately after delivery of their baby and why some women did not take it. Also, we would like to know individuals' opinions and suggestions about the distribution and follow-up system of misoprostol tablets at the community levels. Findings of this study will help the government make policy decisions to reduce maternal deaths and to achieve MDG 5 in Bangladesh.

As a part of this study, we would like to conduct a small group discussion with all of you to know your opinions, experience, and suggestions. This small group will consist of 7-10 persons. The discussion will continue for one and one-half hours. The risk of your participation in this study is minimal. Your participation in this interview is completely voluntary and you will not be penalized if you decide not to participate or refuse to respond to any question; you can even keep silent. You will not receive any direct benefit or money for your participation in the discussion. Your responses will be kept confidential. We will not share your information with anyone, nor will we identify you in any way when the study findings are published. If you permit, the discussion between you and me will be tape recorded with voices only, to help us recall what has been discussed when preparing the report. Only the researchers will have access to your responses, which they will utilize to prepare the report.

You may ask any questions or clarifications before giving your consent for FGD. You may also contact Dr. Halim (01712094176) or Mr. Mahboob (8112334/36) with any questions before or after the FGD.

Do you have any questions? Yes _____ No_____

If you do not have any questions, do I have your permission to continue? Yes _____ No_____

Moderator's Statement

I, the undersigned, have explained the consent form to the FGD participants in a language s/he understands. S/he has given her/his consent to conduct the FGD and has fully agreed to participate in the FGD.

_____ _____

Signature of Moderator Date

GUIDELINES FOR FOCUS GROUP DISCUSSION

A. Gather supervisors' perceptions and opinions about delivery-related complications, its consequences, and their experiences:

I am sure that you are aware about the problems/complications that pregnant women may suffer after delivery of a baby.

a. Could you please describe those problems/complications that women may suffer after delivery of a baby? (INS: List all).
b. What are the possible consequences of such problems/complications? (INS: List all).
c. Do you know about any maternal deaths in your working areas?
d. Why and how did those women die?
e. Do you think those deaths could have been prevented?
f. If yes, how could those deaths have been prevented?

B. Related with project activities:

1. You have mentioned that postdelivery excessive vaginal bleeding is one of the serious complications women may have. To prevent this bleeding, program activities related to use of misoprostol tablets have been introduced in your working areas as a pilot basis and you have received a one-day training.
   a. What are your opinions about the quality of the training? Did it provide you with enough guidance to implement the program activities?
   b. Do you have any suggestions to improve the quality of this training?
2. At the beginning of the project, the working area was redistributed among the field workers of health and family planning and depot-holders
   a. Do you find any the benefits of the redistribution of the working area to distribute tablets?
   b. Did you or your field workers face any difficulties or problems while doing the redistribution of the working area? Please describe.
3. Did your field workers face any difficulties or problems while doing the registration of the pregnant women, and how did they overcome those difficulties?
4. Were your field workers able to do registration of all pregnant women? If not, what else could be done to enable them to complete the registration?
5. Did your field workers face any difficulties or problems during distribution of the misoprostol tablets, and how did they overcome those problems?
6. Did your field workers face any difficulties or problems while doing follow-up of the pregnant women after delivery of their babies, and how did they overcome those difficulties?
7. Where did the field workers obtain the misoprostol drug?
   a. How often did they get a resupply of these drugs? Do you have any suggestions about the supply of misoprostol?
8. How often did you monitor or supervise the misoprostol program activities; if not, why not?
9. To create awareness among women, family members, and community people about postdelivery excessive vaginal bleeding and use of misoprostol to save a woman's life, a number of "Utthan Baithak" have been organized in the field worker's working area. In addition, leaflets (INS: Show the leaflet.) and stickers (INS: Show the sticker.) were developed on the use of misoprostol tablets.
   a. What is your opinion about the usefulness of these kinds of BCC activities and materials to create awareness?
   b. Did the field workers distribute the leaflets and stickers? To whom did they distribute these materials?
   c. What is the community's reaction/opinion of these BCC materials?
   d. Which media do you think would have better impact (e.g., radio, television, etc.)?
   e. What barriers/problems/limitations did the field workers face and how did they overcome them?
   f. Have you observed any changes or improvements in the awareness and practices within the community as a result of these efforts?

g. If not, why do you think so?
h. Do you have any suggestions about what else can be done to create public awareness?

10. You know that many women who received the misoprostol tablets also used them.
    a. In your opinion, why were these women motivated to use the tablets?
    b. Within the family, who do you think took the decision to take the tablets?
    c. Did you hear/observe any of the women suffering from any problems /complications after taking the tablets?
    d. If yes, what were those problems/complications? (INS: List all of them.)
    e. What is your observation about managing those problems/complications?
    f. Do you think nearby referral hospitals are ready to deal with such complications?
11. You also have observed that some of the pregnant women did not take the tablets.
    a. In your opinion, what were the main reasons for these women not to take the tablets?
12. What do you think can be done to motivate these women to take the misoprostol tablets? At present, misoprostol tablets are supplied by you (field workers/HAs/depot-holders) only. Nobody can collect them from the health facilities (FWCs or NGO clinics). Do you think misoprostol tablets should also be available through the FWCs? Please explain why or why not.
13. You know that there is a potential threat of abortion if women wrongly take misoprostol during pregnancy or before the delivery.
    a. How do you feel about the safety and efficacy of the misoprostol tablet intervention at the community level and their distribution/correct use through field workers?
    b. What mechanisms need to be put into place to ensure that misoprostol is not wrongly taken by the women or to ensure distribution/correct use by the field workers?
    c. Do you see enough opportunity/option for management of complications of referred clients once misoprostol fails to prevent PPH?
    d. If not, what else needs to be done to ensure that?
14. If the government wants to scale up use of misoprostol nationwide, what challenges do you foresee and what needs to be strengthened with regard to the following:
    a. Logistics management (e.g., storage, distribution, inventory taking, etc.)
    b. Reporting/MIS
    c. Supervision/monitoring
    d. Training/refresher training
    e. Referrals/strengthening referral hospitals

Do you have any other thoughts and suggestions that you would like to share with us about the community-based misoprostol distribution program we talked about?

Thank you for your time and cooperation.