

# Financial Support among Poor Pregnant Women in Bangladesh: An Operations Research Finding

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## ABSTRACT

The maternal mortality ratio (322) is comparatively high in Bangladesh. The utilization of maternity care provided by trained professionals during and after delivery is alarmingly low in Bangladesh. The overall objective of this operations research project was to test the feasibility and effectiveness of introducing financial support (voucher scheme) for poor rural women to improve utilization of ANC, delivery and PNC from trained service providers. A quasi-experimental pretest – posttest design was utilized. A total 436 women were interviewed before and 414 after the intervention to evaluate the impact of interventions. In-depth interviews were conducted with users and non-users of voucher. Findings suggest that institutional deliveries have increased from 2.3 percent to 18 percent. Utilization of antenatal care from trained providers has increased from 54 percent to 100 percent. Similarly, number of women attending postnatal care services from trained providers also has increased from 22 percent to 60 percent.

**Key words:** Maternal health care; Bangladesh; ANC; PNC; Delivery; Voucher; MMR

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## Background

The maternal mortality ratio (MMR) is not merely an indicator of maternal health, but is also considered to be an important indicator of the health status and well being of a nation. Though the maternal mortality ratio in Bangladesh has declined from more than 600 in 1980 to 322 in 2004, it is still one of the highest in the world (NIPORT, Mitra Associates, and ORC Macro 2007). Pregnancy and delivery related deaths account for 20 percent of the death in women of reproductive age (NIPORT et al. 2003). The unavailability of trained service providers, low utilization of services by pregnant women, along with the infrastructure difficulties, together contribute to the high rate of maternal deaths in Bangladesh.

The utilization of maternity care provided by trained professionals during and after delivery is alarmingly low in Bangladesh. While there have been some improvements in the recent years, about half of the pregnant women still do not seek any antenatal care (NIPORT, Mitra Associates, and ORC Macro 2007). To reduce the health risks for mothers and children, it is important to increase deliveries by skilled providers with adequate medical supervision (Graham, Bell and Bullough 2001). Yet, delivery at home remains almost universal (85 percent of babies are born at home) in the country. About 85 percent of babies are born at home. Seven percent of deliveries occur in public health facilities; and eight percent occur in private hospitals and clinics. Trained providers (doctors, trained nurses or midwives, or paramedics) attend only 15 percent of deliveries (NIPORT, Mitra Associates, and ORC Macro 2007). Women's awareness of potentially life-threatening conditions during pregnancy, delivery and after delivery is comparatively lower in Bangladesh than many countries. Approximately 40 percent of the women with complications during delivery have received treatment from trained providers and another 40 percent consulted unqualified providers. The remaining one-fifth did not seek any care for maternal complications at all (NIPORT et al. 2003; NIPORT, Mitra Associates, and ORC Macro 2005). Several social, religious and economic barriers prevent pregnant women from seeking services from health facilities. The frequently cited reasons for not delivering at a facility are the perceived absence of need (68 percent) followed by the cost of treatment (18 percent), poor quality of services (10 percent) and transportation problems, as reported by another six percent. Other cited reasons include poor quality of services and access or transportation problems. Findings also show that less educated and poorer women are more likely to report cost as a reason for choosing not to deliver at health facilities.

Study findings suggest that approximately half of all women receive ANC from trained or untrained providers (NIPORT et al. 2003). The major providers of ANC are doctors (24 percent) and trained paramedics (15 percent). Important reasons for not seeking ANC is the perception that the service is not necessary (62 percent) followed by monetary constraints (21 percent) (NIPORT et al. 2003). Other reasons are familial or religious constraints, non-availability of transport and service-related issues. Only 21 percent of the mothers received any checkups from trained providers within 42 days of delivery. The primary reasons for not receiving postnatal care (PNC) are the perceived absence of need (56 percent) and the cost of treatment, as reported by one-fifth (NIPORT et al. 2003). Rob et al. (2006) also found that cost was one of the most important barriers for not seeking ANC and PNC services. Several reasons for the low utilization of maternal health care have been documented (Rahman et al. 2006). The two main reasons are lack of knowledge about maternal care services including antenatal, delivery and postnatal care; and economic barriers while seeking treatment from qualified service providers. A training need assessment survey conducted by Research Training and Management International (RTM International) revealed that service providers require training to

improve the knowledge and skills for providing quality maternal health care services (RTM International 2006).

It is now acknowledged that the supply-side has failed to serve the poor and vulnerable groups in rural areas. Supply-side barriers include the non-availability of doctors and drugs; discriminatory behavior of providers; and a lack of effective exemption mechanism. There are also demand-side barriers that inhibit women from seeking ANC, delivery and PNC services. These include lack of information about when or from where to obtain treatment. Other obstacles to seeking treatment include high indirect costs, transportation costs, intra-household preferences, and socio-cultural norms (Ensor 2002; Rob et al. 2006). Due to these many reasons, most deliveries are conducted by untrained person that results high maternal mortality.

The Bangladesh Health and Population Sector Program aims to reduce maternal mortality and morbidity by focusing on emergency obstetric care (EmOC). The aim is to provide essential obstetric care by detecting women who have complications and referring them to facilities that provide quality services (Ministry of Health and Family Welfare 2001). Although the government has made a pledge to provide safe motherhood services, it has yet to introduce risk-sharing mechanisms to support the poor. On the other hand, several non-government organizations (NGOs) have introduced special programs to provide subsidized health care services to the poor in Bangladesh. NGOs are implementing several innovative initiatives for reducing the financial burden on the poor, including health insurance and health cards. Limited curative care services, ANC, PNC, annual health checkups, medicines and laboratory services are being provided. Though these schemes have been in operation for many years, they have attracted only a small section of the population. A major weakness of these schemes has been that beneficiaries do not have a preference about the provider. Most of the schemes are covering risks that are high in terms of frequency but low in terms of costs. On the other hand, catastrophic illnesses are low in frequency and high in terms of cost. Most of these schemes do not have adequate coverage to offset these vulnerability factors (Islam 2003). Moreover, service providers are reluctant to make subsidized/free services available due to the pressure to increase cost recovery (Islam 2003).

Financial assistance through voucher system could enable the poor to receive maternal health care services. This system has already been tested in several countries. In Nicaragua, the voucher scheme was used for the prevention of STIs. Positive effects on the behavior of the target group regarding utilization of key preventive health services (Borghetti et al. 2005). Bhatia et al. (2006) showed that this scheme could be an option for increasing the utilization of reproductive and child health services in India. In the Yunnan Province of China, a voucher scheme was introduced for low-income, pregnant women to enhance the utilization of maternal and child health services. This scheme covered the cost of ANC, delivery and PNC as well as care of sick children. Preliminary findings show that voucher distribution has increased the utilization of treatment for childhood diarrhea among the poor (Kelin, Zhang and Tang 2001). In Mexico, the program, PROGRESA, combines a traditional cash transfer with financial incentives for families to invest in health, education and nutrition of children. Families are encouraged to obtain preventive health care, participate in growth monitoring and nutrition supplements programs and attend health education programs to be eligible for cash transfer. The study findings showed a significant improvement in the health of both children and adults (Gertler and Boyce 2001). Experience with a discount voucher for insecticide treated bed-nets in Tanzania showed higher utilization of bed-net by poor, pregnant women and young children (Marchant et al. 2002; Mushi et al. 2003).

The government health facilities located in rural areas provide free antenatal care (ANC), delivery and postnatal care (PNC) services, but the cost related to medicines, transportation and surgical operations in the case of complications discourages poor women to seek services from these facilities. To achieve the Millennium Development Goal (MDG) of reducing maternal mortality to 143 by the year 2015, it is necessary to make a significant change in health care seeking behavior of pregnant women. With this rationale, instituting a financial assistance scheme for poor women for pregnancy and delivery care, including enhancing awareness to avail services could be an effective option for increasing the utilization of maternity services.

## **Objectives**

The overall objective of this operations research (OR) study was to test the feasibility and effectiveness of introducing voucher scheme for poor women to improve utilization of ANC, delivery and PNC from trained service providers. The specific objectives were to:

- Develop a system to provide maternal health care services among poor pregnant women in exchange of vouchers
- Increase the capacity of providers to offer ANC, delivery and PNC services
- Improve the level of utilization of ANC, delivery and PNC services from trained service providers.

## **Methodology**

The OR study used a quasi-experimental pre- and post-test design with no control group to test the feasibility and effectiveness of three interventions, which include: capacity building of service providers; strengthening health facilities in terms of providing maternal health care services; and creating awareness through behavior change communication (BCC) activities. Two unions (covering approximately 25000 – 35000 populations each) from Nabiganj upazila of Habiganj district were selected purposively as the intervention sites for this OR study considering a set of criteria, which include: existence of female paramedics at health and family welfare centers (HFWCs); availability of field workers; and union HFWCs are near to upazila health complex (UHC). The study was conducted in three phases: preparatory, intervention, and evaluation. The duration of interventions was nine months. Difference between pre- and post-intervention assessments can be attributed to the effect of the interventions.

## **Data Collection Methods**

During the study, data were collected both using quantitative and qualitative approaches, including:

**Service provider and worker survey:** To assess the impact of training and knowledge gained by the service providers and workers, two different sets of data were collected. First, a detailed baseline survey of all the 26 service providers and workers in the study area was conducted using a structure questionnaire. This survey was completed well before the training was given. Second, a detailed survey of all the service providers and workers using the same instruments, ten months after the training, was also conducted to assess retention of maternal health care knowledge taught in the training.

**Women survey:** A baseline survey was conducted to collect necessary information to measure the effects of the interventions. The mothers who had a child less than one year were classified into two groups, poor and non-poor through principal component analysis using household enumeration information collected by ICDDR,B. Finally a total of 436 out of 889 randomly selected poor

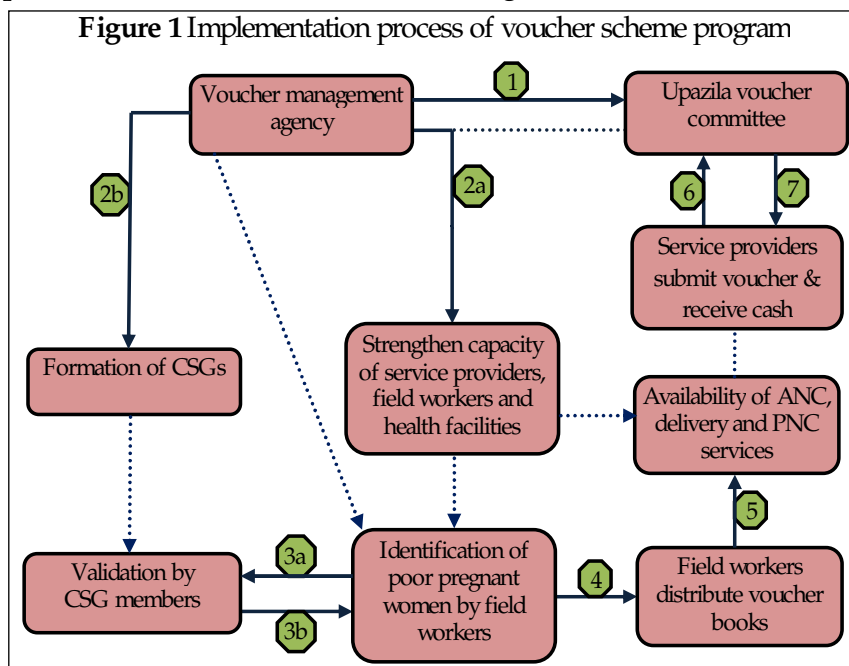
mothers were interviewed on their health care practices during the last pregnancy. To assess the impact of interventions, a detailed survey using same instruments except programmatic variables, was conducted among 414 randomly selected poor women out of 580 who received voucher book and given birth during the intervention period.

**In-depth interviews:** To collect detailed information about the mechanism and reasons of voucher utilization, in-depth interviews were conducted with 15 women who utilized maximum number of vouchers for receiving ANC, delivery or PNC services. In addition, 15 in-depth interviews were conducted with women who did not use any vouchers.

### Preparatory Activities and Implementation Process of Voucher Scheme

A voucher management agency (VMA) was formed, where RTM International (one of the project implementing partners) was responsible for managing financial aspects and Population Council for managing technical issues of voucher scheme. VMA in consultation with district and upazila level government officials constituted district and upazila voucher committees and transferred sufficient amount of money to the voucher committees (Step 1). VMA organized training programs to improve the skills of service providers and field workers and strengthened health facilities for providing ANC, delivery and PNC services (Step 2a).

Simultaneously, VMA communicated with local stakeholders to form community support group (CSG) which consisted of seven to eleven members (Step 2b). To distribute vouchers, field workers identified the poor pregnant women and prepared a list by using pre-defined selection criteria, and submitted the list to CSG members for validation (Step 3a). CSG members returned the list to the field workers after validation (Step 3b). Field workers received voucher books from the VMA and distributed among the listed poor pregnant women during household visits and satellite sessions (Step 4). In addition, field workers and CSG members increased awareness in the community on maternal health care services by using flipchart and pamphlets. Voucher recipients sought services in exchange of voucher from the designated service providers (Step 5). The service providers submitted used vouchers with necessary documents to the upazila voucher committee for reimbursement (Step 6). Then upazila voucher committee paid due amount of money to the service providers for each used voucher (Step 7). It is to be noted that emergency obstetric care services are not provided at upazila level health facilities. So, there was a provision of receiving services for pregnancy and delivery related complications from the district level health facilities under the voucher scheme. At the district level, district voucher committee acted same as upazila voucher committee for managing financial aspects of voucher scheme.



## Findings

### *Service providers and field workers survey*

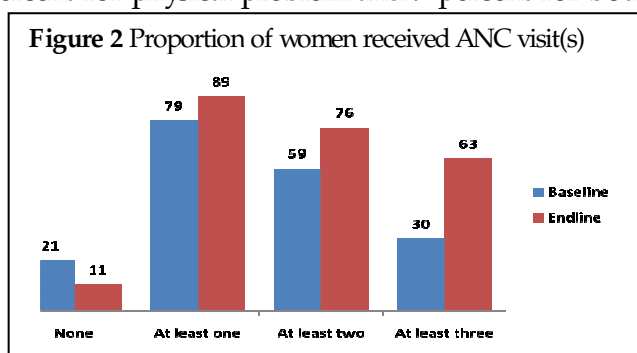
The mean age of service providers and field workers was 42 and 43 years respectively during baseline and endline survey. Sixty percent service providers and field workers were female. On average, they have been providing services around 20 years. Field workers knowledge on the required number of ANC visits and the timing of those visits was fairly high both in baseline and endline survey (79 percent vs. 93 percent). Baseline findings revealed that most commonly reported danger signs by the field workers were bleeding, convulsion and headache/blurred vision and about 44 percent of them knew all the five danger signs of pregnancy. It has been increased to about 68 percent during endline. Among the three delays that lead to maternal death, most of the field workers mentioned about the delay to reach health center during baseline. Approximately half of them were aware of the other two delays: delay in decision making and delay in receiving services. However, this proportion has significantly increased during the endline survey where 77 percent of the field workers reported all three delays. Knowledge on TT schedule and requirement for immunization was universal among the field workers. Correct knowledge on the duration of effectiveness of TT injection slightly increased during endline survey as compared to baseline, yet this proportion is quite poor (endline 59% vs. baseline 33%). Field workers had correct knowledge regarding timing of PNC visit and intake of Vitamin A capsule. Findings revealed that about 84 percent of field workers had correct knowledge on the duration of exclusive breastfeeding and this proportion has increased to 100 percent due to receiving training on maternity care.

### *Women survey*

The study findings suggest that there was no significant difference on the women's background characteristics in the baseline and endline survey in terms of age and occupation of women and their husbands. The mean ages of women in both baseline and endline survey were 26 years and 27 years respectively. Similarly age of women's husbands was almost identical (37 years vs. 36 years). The average number of children was 3. Educational level of women and their husbands was slightly higher during endline as compared to baseline. Findings revealed that majority women were housewives. Regarding husbands' occupation, farmer/agriculture and daily labor was dominant followed by, fisherman, transport worker and small business/vendor.

### **Antenatal care seeking behavior**

It is evident that regular antenatal care checkups can improve the maternal conditions of pregnant women. Present findings indicate that 80 percent of women received ANC during baseline and the figure has increased to 89 percent during endline. Among women who received any ANC at all, 83 percent received services only for checkup, 8 percent for physical problem and 9 percent for both physical and checkup during endline. However this proportion showed 49, 29 and 22 percent respectively during baseline. So women started to perceive ANC as a regular checkup. About 85 percent of women received voucher books at later stage of their pregnancy (6 to 9 months of pregnancy) due to shortage of interventions period and ethical consideration. Since most of the women received voucher books at later stage of pregnancy, so all visits were not due



to all pregnant women. Figure 2 shows the proportion of women received ANC visit(s) only for those whose visit was due during the intervention period. Findings indicate that among those who had the opportunity and time to visit health facilities in exchange of vouchers, majority of them visited health facilities or consulted providers for ANC checkups. Findings revealed that the frequency of ANC for all three visits has increased during intervention as compared to baseline information. However, several study findings indicate that about half of the women visit untrained providers for consultation during their pregnancy. Baseline findings also revealed that the most common source was unqualified providers (FWA 32 percent and others 35 percent) followed by MBBS doctors (27 percent) and FWV (22 percent). On the other hand, there were designated health facilities and providers to seek ANC services in exchange of vouchers. Findings revealed that primarily women visited nearest health facility "HFWC" where FWV provide (trained paramedic) the required services. Findings revealed that all women received ANC services from trained service providers; mostly from FWV (97 percent) followed by SACMO (7 percent) due to intervention. It is clear that voucher scheme has created a general platform to seek services from the trained service providers.

**Table 1** Providers consulted for ANC checkups (in percent)

Providers*	Baseline	Endline
Qualified doctor (MBBS)	27.3	0.0
Nurse/paramedic	3.8	0.6
FWV	21.7	96.7
SACMO	2.7	6.5
FWA	32.2	0.0
Others	34.5	0.0
<b>At least one qualified provider</b>	<b>53.6</b>	<b>100.0</b>
<b>N</b>	<b>345</b>	<b>369</b>

\*Multiple responses

There was an option for the pregnant women to receive physical and laboratory tests in exchange of vouchers. One of the intentions of the interventions was to assess the physical and laboratory tests provided to women during ANC visit(s). The specific procedures that women reported receiving during ANC checkups of their last pregnancy are shown in the following Table. In any of the ANC visits that had taken place, about half of the women's blood pressure was measured, abdomen examined and eye examined for anemia during baseline. On the other hand, weight, height, blood test, and urine test were quite low (Table 2). However, findings show that the proportion of all examinations significantly increased ( $p < .05$ ) during endline due to intervention and all examinations were performed by the trained providers.

**Table 2** Services/examinations provided during ANC checkup (in percent)

Services/ examinations	Baseline	Endline
Weight measure	25.2	98.4
Height measure	8.1	82.4
BP measure	49.3	93.0
Blood test	9.3	76.4
Urine test	13.3	91.6
Abdomen examination	51.6	95.7
Eye examination	47.5	74.0
<b>N</b>	<b>345</b>	<b>369</b>

### Treatment seeking behavior for maternal complications

Table 3 shows the types of individual life-threatening maternal complications women experienced during their last pregnancy. It is observed that complications were most commonly reported during pregnancy (73 percent), followed by during delivery (59 percent) and then after delivery (56 percent) before introducing the interventions. Findings revealed that the proportion of reporting individual maternal complications during pregnancy (25 percent), delivery (25 percent) and postpartum period (30 percent) decreased due to effective BCC interventions of disseminating proper information on maternal health care issues. Besides, among the women who received voucher books, 90 percent

consulted trained providers during pregnancy period. Thus it confirms that when women visit trained providers for checkups it provides an opportunity to improve their level of understanding regarding maternal health care issues as well as reduces their chances of experiencing complications.

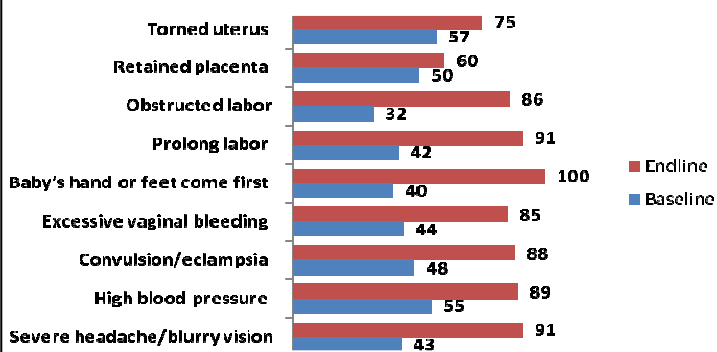
**Table 3** Women experienced life-threatening complications during pregnancy, delivery and postpartum

Complications*	During pregnancy (%)		Delivery (%)		Postpartum (%)	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
No complications	26.8	75.4	40.8	75.4	43.8	69.8
<b>One or more complications</b>	<b>73.2</b>	<b>24.6</b>	<b>59.2</b>	<b>24.6</b>	<b>56.2</b>	<b>30.2</b>
Severe headache/blurry vision	31.1	6.1	25.0	1.7	15.1	9.2
High blood pressure	16.7	1.4	12.8	2.9	6.7	2.2
Convulsion/eclampsia	20.0	2.9	5.0	2.2	3.0	1.9
Excessive vaginal bleeding	4.4	0.5	14.4	0.2	7.6	4.6
Abdominal pain	7.6	9.4	na	na	8.0	8.7
Baby's hand or feet come first	na	na	2.3	1.7	na	na
Prolong labor	na	na	28.9	11.4	na	na
Obstructed labor	na	na	6.7	1.7	na	na
Retained placenta	na	na	7.6	1.2	na	na
Torned uterus	na	na	2.5	1.0	na	na
Others	9.3	7.3	3.1	3.2	7.7	8.5
<b>N</b>	<b>220</b>	<b>243</b>	<b>216</b>	<b>171</b>	<b>436</b>	<b>414</b>

\*Multiple responses; na= not applicable

Apart from ANC checkups, there was a provision of receiving treatment for managing pregnancy and delivery related complications in exchange of vouchers. The respondents who experienced complications during pregnancy, delivery or postpartum period, were asked whether they consulted any qualified providers for managing the complications. Findings revealed that, irrespective of type of complications, about two-third of women visited any qualified providers for managing complications. The following figure depicts the proportion of women who sought treatment from the trained providers for managing complications.

**Figure 3** Consulted trained providers for maternal complications



It is clear from the figure that the proportion of receiving treatment from trained providers has significantly increased due to introducing financial support, regardless of the type of complications.

### Delivery care seeking behavior

Adequate medical supervision by trained service providers is essential to reduce health risks for mothers and babies. Yet, the proportion of delivery assisted by trained providers is alarmingly low in Bangladesh, especially in rural areas. Present findings also revealed that only 5.5 percent of deliveries were assisted by trained providers. It is to be noted that one or more than one person assisted at delivery. Among the type of attendant, only the most qualified persons have been considered in the discussion. However, findings revealed that 22 percent of deliveries were assisted by trained providers includes MBBS doctor, nurse, paramedics, FWV and SBA due to financial support



provided among the poor pregnant women through vouchers during the intervention period. Similarly, baseline findings revealed that delivery at home remained almost universal among women (98 percent) and this proportion has decreased over the intervention period (82 percent) where institutional deliveries had significantly increased to 18 percent during endline from 2.3 percent during baseline survey period.

**Table 4** Persons assisted during delivery (in percent)

Persons	Baseline	Endline
Trained providers	5.5	21.6
TBA	83.0	73.4
Untrained providers	11.5	5.0
<b>N</b>	<b>436</b>	<b>414</b>

Findings revealed that at least 25 percent of women experienced any five life-threatening maternal complications during their last pregnancy. Those women experienced any five life-threatening danger complications during their last pregnancy; they were supposed to visit health facility for delivery care. Study also explored the association between experience of life threatening complications (any five danger signs) and their delivery care seeking behavior. It is observed from that among women who did not experience any form of life-threatening complications, only 15 percent received delivery care from trained providers (Doctors 8 percent and paramedics 7 percent). On the contrary, among women who experienced any life-threatening complications, six out of ten women delivered their baby with assistance from a trained provider (Doctors 34 percent and paramedics 24 percent). Yet, four out of ten deliveries were assisted by untrained providers. However this indicates a positive finding that the women who experienced any form of life threatening complications are at least 4 times more likely to consult trained providers for delivery. This is a positive indication of introducing voucher scheme to reduce maternal deaths.

### Postnatal care seeking behavior

Mothers and children experience several problems during postpartum period. Postnatal checkups and care are the essential component for comprehensive maternity care. The proportion of PNC checkups is alarmingly low in Bangladesh (NIPORT, Mitra Associates, and ORC Macro 2007). Findings revealed that only 45 percent of women reported having a postnatal checkup for themselves during baseline and it increased to 60 percent over the intervention period ( $p < .05$ ). Table 5 suggests that only 22 percent of respondents received PNC checkup from the trained providers before the interventions and it increased to 100 percent due to the intervention. Findings also revealed that most mothers received postnatal checkup within next two weeks following delivery.

**Table 5** Utilization of PNC checkup (in percent)

Issues	Baseline	Endline
Proportion of women received PNC	45.2	60.1
<b>N</b>	<b>436</b>	<b>414</b>
<b>Person consulted for PNC</b>		
Doctors	18.8	0.0
FWV/nurse/paramedics	1.5	98.4
SACMO	2.0	1.6
Untrained providers	77.8	0.0
<b>N</b>	<b>197</b>	<b>249</b>
<b>Visiting place for PNC</b>		
Home	44.2	0.0
Hospital/UHC	13.2	19.2
HFWC	2.0	80.8
Traditional providers/pharmacy	40.6	0.0
<b>N</b>	<b>197</b>	<b>249</b>

Baseline findings show that 44 percent of respondents received PNC at home, 41 percent visited untrained providers/ pharmacy and only 15 percent visited health facility for PNC consultation. On the other hand, findings clearly indicate that respondents who visited for PNC services all of them consulted trained providers at the health facility during interventions (Table 5). Regarding intake of

vitamin A capsule within 14 days of delivery, the proportion is quite low in both the surveys (baseline 31% vs. endline 34%). Similarly, both survey findings show that majority of the women exclusively breastfed their baby and started feeding immediately after delivery (Not shown in the Table).

**Reasons for not seeking maternal health care services**

Findings revealed that only 11 percent of voucher recipients did not receive any ANC. Among them about half of the women reported that they had less opportunity to receive services as they received voucher book at nine months of their pregnancy. Finally, among the 6 percent of women who did not receive any ANC during endline reported their reasons as unavailability of service providers at health facility/ health center was closed during visiting time, long waiting time, husband/family members did not allow, perceived absence of need and unpleasant behavior of providers. Usually FWVs organize eight satellite sessions in a month as a part of their routine activities. For that reason, two days a week were allocated for pregnant women to receive services in exchange of vouchers. The women who claimed unavailability of service providers or health facility was closed as a reason for not receiving ANC services may have visited health facility on the satellite day since they did not know the schedule.

Table 6 summarizes the reasons women cited for not delivering in a health facility despite having voucher book. Findings revealed that 82 percent of the women did not attend health facility for delivery care even after receiving the voucher book. The most frequent cited reasons were didn't face any problem (60 percent), followed by labor pain started suddenly (25 percent), no one to accompany at health facility (14 percent) and because of fear (12 percent). Seventeen percent of the women also raised some service related issues including poor quality of service, unpleasant behavior of providers, long waiting time and unsuitable service hours (Table 6).

**Table 6** Reasons for not receiving delivery care from health facility (in percent)

Reasons*	Endline
Not necessary/didn't face any problem	59.6
Intended but suddenly labor pain started and gave birth	24.5
No one to accompany to health center	13.6
Because of fear	11.5
Health facility is at long distance	7.1
Service related issues (poor quality of service/unpleasant behavior of providers/long waiting time/service hour was not suitable)	16.8
Husband/family members don't allow/religious barrier	6.5
Better care at home	2.7
Ignorance about voucher use	5.2
<b>N</b>	<b>339</b>

Study further explored the reasons for not seeking postnatal checkup by the women either for themselves or for their baby. Findings revealed that women were not

informed that voucher can be used for PNC (24 percent) and providers did not provide services although the women had visited the facility (23 percent). Other prime responses include: not experienced any problem (17 percent), still birth (7 percent), fear about services (15 percent) and 17 percent were service related problems (poor quality of service/transportation problem/reluctance to seen male providers).

**Findings from in-depth interviews**

In-depth findings with voucher users reveal that women did not face any problems in receiving services in exchange of vouchers. Fifteen in-depth interviews were conducted with women to identify reasons for not using the vouchers. Most of them reported that they received vouchers at a later stage of pregnancy and were not informed properly about the process of using vouchers. Other

reasons for not using vouchers for ANC were: health facility was closed; service providers were not available at the facility; and women visited health facility but did not seek service due to long queue.

*One voucher user said, "I got the voucher book during 6 months of pregnancy. I didn't face any problems in receiving the book. I went to the health facility for check up. Doctor (FWV) advised me to visit hospital if I face any complication. I visited health facility and received the services. First I went to Dorgapara health facility (HFWC), then Nabiganj UHC and finally Habiganj Sadar Hospital. Each time service providers provided me transport allowances."*

*One pregnant woman said, "I went twice for ANC. One day Apa (FWV) was not present and other day HFWC was closed. Later on I went to my parent's home for delivery."*

Even after receiving the voucher book, many women did not visit health facility for receiving delivery care from the trained providers. Most reported reasons for not receiving delivery care from the health facility were: labor pain started suddenly mostly at mid-night and got no opportunity to visit the facility; perceived absence of need; family members were not available to accompany the women to health facility or husband was outside home; traditional birth attendant (dai) assured to perform delivery at home; and stayed at parental house during delivery.

*One voucher user said, "I got the voucher book during 6 months of pregnancy. I didn't face any problems in receiving the book. I went to the health facility for check up. Doctor (FWV) advised me to visit hospital if I face any complication. I visited health facility and received the services. First I went to Dorgapara health facility (HFWC), then Nabiganj UHC and finally Habiganj Sadar Hospital. Each time service providers provided me transport allowances."*

*Another voucher recipient said, "The FWA of our locality did not inform me how to use voucher book. I did not know that she (FWA) had listed my name as a poor. She just called me on her home and gave me the book and did not provide any information regarding it. So, I did not use it."*

*One pregnant woman said, "My labor pain started at mid-night and there was no one to accompany. So, I did not get the opportunity to visit health facility. We called dai (TBA) and she assured to perform delivery at home."*

## **Conclusions**

The study was conducted to test the feasibility and effectiveness of introducing voucher scheme for poor, rural women to improve utilization of ANC, delivery and PNC from trained service providers.

Formation of district and upazila level coordination committees in assistance with district and upazila level service providers and program managers was effective for the implementation of project activities, especially for i) selecting qualified private and NGO health facilities as referral clinics to perform cesarean delivery, ii) establishing financial reimbursement mechanism, and iii) monitoring readiness of health facilities to provide quality maternal health care services, voucher distribution process and financial disbursement procedure.

Involvement of local people through CSGs was one of the important factors for strengthening implementation of project activities. CSGs were involved for validating poor pregnant women, strengthening physical infrastructure of health facilities, and building accountability of service providers and field workers for providing improved maternal health care services in the community.

In addition, they explored several service related issues in their regular monthly meetings and informed to the respective field workers for the remedy.

Health facility strengthening in terms of physical renovation and necessary equipments to provide normal delivery was essential. It increased the confidence of service providers as well as encouraged clients to receive services from the facility. BCC activities including group sessions, drama shows and raffle draw encouraged pregnant women to receive maternal health care services.

A twenty-one day hands on training for the FWV to perform normal delivery at HFWCs was found appropriate. Three days training for the service providers and field workers was reasonably effective to disseminate information on the importance of maternal health care issues and utilization process of vouchers. An evaluation of their knowledge before training and ten months after training revealed the effectiveness of the training. More than 90 percent of the service providers and field workers were able to answer all key questions related to maternal health care issues. This is an encouraging finding as it would provide an opportunity for disseminating proper information on maternal health care issues and utilization process of vouchers to the clients by the respective field workers during their regular household visits and voucher distribution.

Findings from the endline survey revealed that utilization of ANC increased to 89 percent due to interventions. Findings revealed that the women who received any ANC, about half of them received ANC for only checkup before the interventions; while this proportion has increased to 83 percent during intervention period. It indicates that women started to perceive ANC as regular checkup for their well being and their babies. The women who received ANC services, about half of them received the services from trained providers at the baseline survey; while this proportion increased to 100 percent during endline survey. It is important to note that the intervention period lasted only for nine months and poor pregnant women who were expected to deliver baby within this period were not ethically excluded from the study. So findings revealed that about 85 percent of pregnant women received voucher book at a later stage (6 to 9 months of their pregnancy) of their pregnancy. Since most of the women received voucher books at later stage of their pregnancy, all three visits were not due to all pregnant women. Findings revealed that the proportion of first, second and third time ANC visit(s) has increased significantly during intervention as compared to baseline information. Voucher book was designed to record detailed physical and medical examinations record of pregnant women, which helps to identify the pregnancies that are at risk. Findings revealed that the proportion of these examinations attended by the trained providers has significantly increased due to interventions.

Delivery assisted by trained providers is required to achieve the Millennium Development Goal (MDG) of reducing MMR to 143 by the year 2015. Findings revealed that only 5.5 percent of births were attended by trained providers and this proportion increased to 22 percent at the end of intervention. Similarly, the proportion of institutional deliveries increased to 18 percent from 2.3 percent. On the other hand, it was found that the proportion of reported complications during pregnancy, delivery and after delivery was quite low during the intervention period. The proportion of receiving treatment for complications from trained providers has significantly increased during intervention period. It was also found that the proportion of receiving delivery care using vouchers from trained providers was four times higher among the women who experienced any life-threatening complications than the women who did not experience any life-threatening complications. This is a positive indication of introducing voucher scheme to reduce maternal deaths.

It is evident that in most of the cases, rural women do not care about the PNC visit after delivery. Present study findings revealed that the proportion of PNC visit has significantly increased to 60 percent from 45 percent. It is also found that among the baseline women who received PNC, only one-fourth received the respective service from trained providers, whereas this proportion significantly increased to 100 percent due to interventions. Findings revealed that the proportion of intake of Vitamin A capsule remains considerably low and majority of surveyed women exclusively breastfed their baby immediately after delivery.

All poor pregnant women received voucher book for receiving maternity care. Though the proportion of ANC, PNC, institutional deliveries, and deliveries assisted by trained providers have increased, yet there is scope for improvement. Study explored that majority of the women received vouchers at a later stage of their pregnancy and got less opportunity to avail ANC services. This proportion can be increased through early identification of poor pregnant women and early distribution of vouchers among them. The most frequent cited reasons for not delivering at health facility were didn't face any problem (60 percent), followed by labor pain started suddenly (25 percent), no one to accompany health facility (14 percent) and because of fear (12 percent). Similarly, the most frequent cited reasons for not receiving PNC service were didn't face any problem (17 percent), not sure about the system of voucher utilization (24 percent), providers reluctant to provide services (23 percent), for fear (15 percent) and service related issues (17 percent). This indicates that strong motivation and commitment of service providers and field workers are essential for increasing the level of maternal health care services through vouchers. In addition, service providers and field workers should be sincere in disseminating proper information about the importance of maternal health care issues and utilization process of vouchers.

Findings of in-depth interviews revealed that women did not experience any problems in obtaining voucher book from the field workers. Overall, they opined positive impression about the service quality and behavior of providers. Both qualitative and quantitative findings revealed that women did not face any problems to receive services in exchange of vouchers and they received the fixed transport and medicine allowances during receiving specified services.

These findings provide some important insights to develop a financial system through voucher book for improving the utilization of maternal health care services by the poor, rural pregnant women, considering the following issues:

- Coordination committees at district and upazila level can establish institutionalization process of voucher scheme, especially in identifying eligible private and NGO facilities and establishing reimbursement mechanism of vouchers and monitoring project activities.
- Community support group can play crucial roles for validating poor pregnant women, along with identifying problems and finding possible solutions to strengthen physical infrastructure and performance of union level facilities.
- Strengthening health facility in terms of instruments/equipment, furniture and medicines are an encouraging factor leading to provide quality services and to increase number of clients at the facility. Involvement of appropriate government authority can improve the situation of health facilities to promote better quality services at HFWCs. In addition, CSG and union FP committee members can be involved for strengthening physical renovation of health facilities.
- Despite having practical knowledge and skills in performing normal deliveries, FWVs are not used to attend deliveries due to lack of available facilities at HFWCs. Twenty one day hands on

training was found effective to increase the confidence of FWVs in performing normal delivery at HFWCs. It has been found that both the FWVs performed deliveries at HFWCs.

- Vouchers were distributed among the pregnant women irrespective of their months of pregnancy due to short duration of project and in some cases field workers delayed to identify and distribute vouchers. In fact, most of the women received voucher book at a later stage of their pregnancy, which deprived them to receive all specified services under voucher scheme. So, the process of identifying poor pregnant women and voucher distribution needs to start at the early stage of pregnancy.
- Training for service providers and field workers are essential to update their knowledge and skills on maternal health care services and utilization process of voucher scheme.
- Involvement of fieldworkers (especially FWAs) is essential to sustain community involvement. In addition, service providers need to be motivated to change their attitude toward clients. Without strong commitment from the service providers and field workers it will be difficult to reach the target of reducing maternal mortality.

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