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Increasing Dual Protection among Rickshaw Pullers in Bangladesh

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EXECUTIVE SUMMARY

Rickshaw pullers (RPs) are a special hard-to-reach group in Bangladesh. They constitute a large segment of the marginalized urban poor with limited access to family planning and reproductive health information and services. They are also frequently involved in risky behaviors and are considered a bridging population for sexually transmitted infections (STIs) and HIV. Beginning in 2004, the NGO Service Delivery Program (NSDP), a USAID-funded project, and the Population Council's FRONTIERS Program jointly conducted a 21-month study to provide reproductive health (RH) information and services to RPs. The main objective of the study was to increase contraceptive use among RPs, with special emphasis on condom use.

The study, conducted in six urban clinics of Dhaka Division, tested two strategies for delivery of information and services. Strategy I included provision of three RH education sessions by trained community educators (CEs), together with improved access to condoms. Strategy II provided only RH education by the CEs. Satellite clinics were set up at garages in the experimental areas to provide easy access to health services. RPs in the experimental areas received educational pamphlets and tin plates, containing family planning messages, to display at the back of their rickshaws. The RPs in control sites received none of the interventions. Pre- and post-intervention levels of knowledge, behavior, and use of contraceptives at the experimental sites were compared with those in control sites.

A total of 5,494 RPs attended at least one educational session, 71 percent of these attended at least two sessions, and 43 percent attended all the three sessions. The first session, on family planning methods including condoms, was the most highly attended (75%), with 68 percent of RPs attending the session on other FP methods, and 66 percent attending the session on STIs and HIV. Community distributors sold 7,262 condoms, an average 87 per month. At the 113 satellite clinics organized at the experimental sites, RPs received 691 services, including 183 family planning-related services and 79 services for STIs. RPs displayed 3,750 plates promoting reproductive health, and expressed willingness to discuss this topic with clients. In addition, use of the satellite clinics was very limited - an average of about six men per week. It is important to understand this limited use in subsequent scale-up.

Rickshaw pullers' knowledge on contraceptive methods increased significantly in both the experimental sites compared to the control site, with a greater overall improvement in the site of Strategy I, where RPs received the combination of educational sessions and improved access to condoms. Knowledge of the dual role of condoms increased across all sites, but the change was significantly higher for Strategy I. Knowledge of consistent and correct use of condoms increased significantly in the experimental sites, especially site I, while no change was observed in the control site. Knowledge of symptoms, consequences, and transmission mode of STIs increased significantly in both the experimental sites compared to the control site. Knowledge of prevention of STIs increased significantly in Strategy I, while knowledge of the transmission and prevention of HIV increased significantly in both the experimental sites while no change observed in the control site.

Use of any contraceptive method increased significantly in the experimental sites, and condom use increased significantly in Strategy I, while no improvement was observed in the control site.

However, translation of acquired knowledge about condoms into changes in risky behaviors does not seem to have happened, as evidenced by the increase in extramarital sex across all groups. While this may represent a measurement issue rather than lack of behavior change, the need to focus on behavior change and not only information communication requires special attention during scale-up of the interventions.

Based on the study findings, NSDP is expanding the activities in 35 clinic catchment areas starting from September 2006 and covering nearly 80,000 RPs. Therefore, the following recommendations were made for the scale-up:

- More attention should be given to the recruitment of male CEs with the emphasis on their willingness, self-motivation, and skills in facilitation and motivation.
- NGOs should receive training to enable them to conduct regular monitoring of the intervention activities, and should routinely monitor the content and quality of educational sessions.
- Garage owners should be involved in the interventions to ensure their support.
- The condom sale arrangements should allow some profit as an incentive for the CCDs.
- RH education sessions should be monitored regularly for the delivery of comprehensive, high-quality information.
- RPs should be given the opportunity to act as change agents, providing RH information and condom sales to their passengers.
- Program managers should address missed opportunities by marketing the condom as an effective method for preventing both pregnancy and transmission of STIs.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ACPR	Associates for Community and Population Research
BCC	Behavior Change Communication
BCCP	Bangladesh Center for Communication Programs
CSW	Commercial Sex Worker
CE	Community Educator
CCD	Community Contraceptive Distributor
FP	Family Planning
HIV	Human Immunodeficiency Virus
IUD	Intra-Uterine Device
NGO	Non Governmental Organization
NIPORT	National Institute of Population Research and Training
NSDP	NGO Service Delivery Program
PC	Population Council
QCO	Quality Control Officer
RH	Reproductive Health
RP	Rickshaw Puller
STIs	Sexually Transmitted Infections
STDs	Sexually Transmitted Diseases
SPO	Service Promotion Officer
SP	Service Promoter
USAID	United States Agency for International Development
UNAIDS	Joint United Nations program on HIV/AIDS

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BACKGROUND

The urgency of reaching men with reproductive health (RH) information and services received attention in both the 1994 International Conference on Population and Development in Cairo and the 1995 Fourth World Conference on Women in Beijing (Herndon 1998). Available data suggest that men need a wide range of educational and counseling services for equipping themselves to be responsive partners and protecting their own health and well-being. However, real barriers toward meeting men's RH needs remain, and lack of awareness is one of them (Alan Guttmacher Institute 2002).

Most of the discourse on reproductive health focuses almost entirely on women and tends to view men as either irrelevant or problematic actors (Greene and Biddlecom 2000). In most settings men receive inadequate attention and are less likely to seek health care than women, though their health is equally important. Knowledge about sexually transmitted infections (STIs) tends to be poor among men and they are generally un-informed about their vulnerability to STIs with casual partners (Messersmith et al. 2000; UNAIDS 2001). Additionally, men are often unaware of available services; this is the most commonly reported barrier to men's access to reproductive health care (Finer et al. 2003).

Exploring men's attitudes is important for the development and implementation of RH services such as family planning, and for STI and HIV prevention programs (Maharaj 2001). Around the world, cultural concepts of masculinity encourage men to engage in high-risk behaviors, including unprotected sex with both women and men (UNAIDS 2001). Men exert enormous power over sexual decision-making, and view decisions about condom use as their privilege (Maharaj 2001). Thus the role of men in STI and HIV transmission cannot be ignored; empowering men regarding reproductive health issues (including condom use) will enhance both men's and women's safety.

In most developing countries, condom use is typically below five percent and the prevalence of STIs is widespread. Therefore, programs need to promote and provide condoms for family planning as well as for disease protection (Robey and Drennan 1998). In South Asia, condom use for family planning is low overall, accounting for 4.2 percent of contraception in Bangladesh (NIPORT, Mitra Associates, and ORC Macro 2005), 3.7 percent in Pakistan (Ministry of Population Welfare and Population Council 1995) and 5.3 percent in India (IIPS 2006).

Most men in Bangladesh are reluctant to use family planning methods. They view family planning as women's responsibility. Research shows that about 20 percent of currently married women and 32 percent of currently married men have ever used condoms in Bangladesh, though over 90 percent of couples have heard about the method (NIPORT, Mitra Associates, and ORC Macro 2001).

Men in Bangladesh are generally poorly informed about their own reproductive health. Most have little knowledge about the symptoms, transmission and prevention of STIs. Several researchers reported that men have substantial family planning needs—including access to and use of male contraceptive methods—that have not been addressed through existing service delivery systems (Piet-Pelon, Rob and Khan 1999, Hossain et al 2004). Research findings

indicate that Behavior Change Communication (BCC) materials could play a major role in motivating men to become contraceptive users (Ashraf et al 1999). In recent years, extensive development of BCC materials on FP methods has taken place in Bangladesh; however, few focused on condom use for men.

Rickshaw pullers (RPs) are a special hard-to-reach group in urban areas of Bangladesh who constitute a large segment of the marginalized urban poor with limited access to FP and RH information and services (see Appendix I for a summary of the rickshaw sector in Bangladesh). Most RPs have migrated from nearby rural areas (Gallagher 1992; Ullah et al 1999). The work does not require prior experience, and is a major source of employment for young male migrants. In larger cities, RPs constitute a significant proportion of the poor: more than 3 million men, with approximately 10 million people depending on them. Most RPs work six days per week on one of two shifts, earning a monthly income of less than US\$60 (Anwar et al. 1995).

Their socioeconomic and living situations place both RPs and their families at very high risk. Approximately 70 percent of RPs live in rented houses in slum areas; another 20 percent reside in rickshaw hostels (bachelor dormitories varied in size from 15 to 100 occupants in a single house). The remaining 10 percent live in rent-free accommodation such as a rickshaw garage, railway station, or footpath (Gallagher 1992). Over 70 percent of RPs are illiterate and 80 percent are married and supporting a family of five. Infant mortality is high among the RPs and half of pullers aged 35 or above have lost more than two children (Gallagher 1992).

Contraceptive use among the RPs is assumed to be similar to that of urban slum dwellers and estimated as less than 40 percent (Islam et al. 1997). Polygamy and sexual abuse, the two major reasons for domestic violence against women, are also prevalent among RPs (Ullah et al 1999).

Low knowledge of reproductive health, combined with their livelihood itself, compound the risks that RPs and their families face. Government research has shown that 3 percent of RPs knew a mode of transmission of HIV, but only 1 percent mentioned unprotected sexual contact as one of the mechanisms of transmission. Moreover, 93 percent of RPs were not sure whether they were at risk of contracting STIs and HIV. In urban areas, some of the RPs work as the contact person for floating sex workers and maintain regular contact with customers and sex workers. In addition, both married and unmarried RPs visit sex workers and less than 4 percent reported consistent condom use during commercial sex. Given their low rate of contraceptive use, high-risk behavior, and lack of information about STIs and associated risks, rickshaw pullers are considered a special group for focused RH education (National AIDS/STD Program 2003, 2005).

Several studies in Bangladesh have demonstrated that men utilize the health services provided through both static and satellite clinics, if they are aware of the services (Hossain et al. 2004; Bhuiya and Rob 1998). If male services are included in the regular service delivery system and publicized, men use these services for the treatment of STI related problems (Hossain et al. 2004). However, the type of outreach is important. Research shows that men most commonly receive reproductive health information through group discussions by field workers and behavior change communication (BCC) materials such as posters, leaflets and signboards (Hossain et al 2004). Yet STI and HIV awareness efforts are often conducted through media campaigns, bypassing the interactive BCC and skill-building activities that usually reach men (Bhuiya et al 2002). This may be one reason for men's miscalculation of risks and low demand for condoms in Bangladesh. Also, providers often discuss condoms primarily as a temporary contraceptive

method (Bhuiya et al. 1997), and do not take the opportunity to market the condom as a dual-use method for preventing pregnancy and protecting men and their partners from infections.

The USAID-funded NGO Service Delivery Program (NSDP) provides RH services to approximately 20 million people in rural and urban areas of Bangladesh. NSDP supports 41 nongovernment organizations (NGOs) that provide services through 278 static clinics, 13,000 satellite sites and 7,000 depot holders (MEASURE et al. 2004). Among the 278 static clinics, 60 clinics provide services to high-risk individuals as well as the general population. A typical NSDP clinic has a fulltime physician, a paramedic, a counselor, a service promotion officer (SPO) and three satellite teams. The satellite team, consisting of a female paramedic and a female service promoter, provides services at the community level on a weekly basis. NSDP has been working with its NGO partners to provide services for men by organizing satellite clinics near transport depots such as truck stands and rickshaw garages. However, service statistics show that contraceptive use has remained very low among male clients.

To address the risks of the RP population, FRONTIERS and NSDP conducted an operations research study to test the effect of an educational campaign on the use of contraceptive methods, particularly condoms, among RPs.

Objectives

- Increase knowledge of RH including contraceptive methods, safe sex, and risk of STIs and HIV among RPs
- Increase knowledge of consistent and correct use of condoms, both for preventing pregnancy and protection from STIs among RPs
- Increase access to FP services, particularly condoms, for RPs
- Increase the use of modern FP methods, especially condoms, among RPs

Hypotheses

- Educational efforts and easy access to condoms will increase RPs' awareness of contraceptive methods, STIs and HIV, and will increase condom use in the experimental sites.
- Education on family planning, together with improved access to contraceptive methods, will increase RPs' contraceptive use more than education efforts alone.
- Education and counseling will increase RPs' use of clinic services in the experimental sites compared to the control site.

METHODOLOGY

Study design

The study used a quasi-experimental design with pre-post measurement. To test the hypotheses, six NGO clinics employing male service providers were selected from Dhaka Division: Madaripur, Mymensingh, Dayaganj, Gazipur, Lalbagh and Faridpur. Of these, Lalbagh and Dayaganj clinics

are located in Dhaka metropolitan area. From the six selected clinics, two each were randomly allocated to two experimental groups and one control group. Two alternative strategies were introduced with the aim of increasing contraceptive use among RPs, with special emphasis on condom use:

- **Experiment group I:** Rickshaw garages in the catchment area of two experimental clinics (Madaripur and Mymensingh) received an educational campaign conducted by trained community educators (CEs) as well as improved access to condoms through sales by community contraceptive distributors (CCDs), who were usually the garage owner or a rickshaw mechanic. Weekly satellite clinics were held at participating garages.
- **Experiment group II:** Rickshaw garages in the catchment area of two other experimental clinics, Dayaganj and Gazipur, received the educational campaign but not the condom sales intervention. Weekly satellite clinics were held at participating garages.
- **Control group:** Garages in the catchment area of the control clinics (Lalbagh and Faridpur) received no intervention.

Variables

Independent variables (interventions):

- Educational sessions organized by community educators (CEs)
- Enhanced access to contraceptives through community contraceptive distributors (CCDs)
- Extended services through satellite clinics.

The effect of the interventions is expected at two levels: the intermediate or process level and the outcome level.

Process variables:

- Number of RH sessions organized
- Number of RPs attending RH sessions
- Number of condoms sold to RPs
- Number of BCC materials distributed
- Number of RPs receiving BCC materials
- Number of satellite clinics organized at rickshaw garages
- Number of men receiving RH services from both satellite and static clinics.

Dependent variables:

- Increased knowledge of birth spacing, contraceptive methods, especially the dual benefits of condom use, and consistent and correct use of condoms
- Increased knowledge of STIs and HIV
- Increased use of contraceptive methods among the RPs, particularly the condom.

Sampling design

Sample size was calculated considering current condom use among RPs, which is estimated to be 2 percent. It was assumed that condom use among RPs would increase from 2 to 12 percentage points due to the interventions. Thus, the required sample size was approximately 126 per study site with a 5 percent level of significance, 80 percent power and controlling for a design effect of 1.25. To measure the impact of interventions, the study was designed to follow up the same individuals at the endline surveys. Therefore, an additional 25 percent sample was drawn to compensate for the potential loss to follow-up at the endline survey. In total, 160 RPs were selected per study site, giving a total sample size of 960 at the baseline survey. After allowing for loss to follow-up, the expected sample size for the endline survey was 756.

In each clinic, 360 RPs were selected through a systematic sampling procedure with a random start. It was expected that at least 160 respondents would be successfully interviewed. In total, 2,160 RPs were selected and 973 were successfully interviewed at baseline survey (Table 1). The overall response rate was 45 percent at the baseline survey. This was due to reluctance of rickshaw garage owners to provide the pullers' correct names and addresses during the selection of RPs, as some owners were using duplicate or fake rickshaw licenses. Approximately 2 percent of the respondents were older than age 60, and were excluded from the analysis.

The respondents who were interviewed at baseline were then followed up in the endline survey. Out of the 973 RPs interviewed in the baseline, 596 (61 percent) were successfully interviewed at endline. The main reasons for the loss to follow-up were changes in residence and jobs. The response rate was lower than 50 percent in both sites in Dhaka city (Dayaganj and Lalbagh) because of high mobility of the respondents in the capital city.

Table 1: Rickshaw Pullers interviewed by site and time of interview

Study site	Baseline survey			Endline survey		
	Number selected	Number interviewed	Response rate	Number selected	Number interviewed	Response rate
Experimental sites						
Madaripur	360	181	50	181	141	78
Mymensingh	360	157	44	157	104	66
Dayaganj	360	163	45	163	62	38
Gazipur	360	162	45	162	90	56
Total	1,440	663	46	663	397	60
Control sites						
Lalbagh	360	157	44	157	79	50
Faridpur	360	153	43	153	120	78
Total	720	310	43	310	199	64
Grand total	2,160	973	45	973	596	61

Data collection

At baseline, survey information on fertility, optimal birth spacing, contraceptive methods, high-risk behavior, STIs and HIV, and utilization of health care services was collected from RPs. At endline, the same survey instrument was used. Information about programmatic variables was also collected at the endline survey.

Through a competitive bidding process, a survey firm was selected for data collection. The firm utilized standard data collection procedures and data management techniques by checking consistency, validity and accuracy of the collected data both at the field and office. To ensure quality of data collection, the supervisors checked all filled-in interview schedules and the quality control officers (QCOs) randomly checked 10 percent of the interview schedules. Both supervisors and QCOs shared their findings with the data collectors and appropriate steps were taken to improve the quality of data collection process. In addition, 5 percent of the respondents were re-interviewed by QCOs to identify inconsistencies. Population Council staff regularly monitored the data collection activities and provided technical assistance to improve the data collection process. Special attention was given at the beginning of data collection and supervision was maintained during the data collection period.

Availability of selected respondents was a major problem both at the baseline and endline surveys. The interviewers had to visit the same garage several times to contact the selected respondents, and so data collection took longer than anticipated. Data collection was easier during the endline in experimental sites because of cooperation from community educators and garage owners.

Data analysis

The baseline and endline data were analyzed to examine the effectiveness of interventions, specifically the impact of interventions on knowledge, attitudes, and contraceptive behavior. Bivariate analysis of the outcome variables within and between sites and time of interview was performed. As the samples were correlated, the McNemar test was performed to identify whether the observed changes in outcome variables over time were statistically significant. The respondents who were married at the baseline survey were considered for the analysis related to contraceptive behavior. The mean and proportion tests were used to measure the changes between strategies at any particular point of time (either baseline or endline) and also to examine differences in outcome variables between the strategies over the time. The effects of the interventions on the following key RH outcomes were examined:

Knowledge

- Contraceptive methods
- Dual protection role of condoms
- Consistent and correct use of condoms
- Source of condoms
- Symptoms of male STIs
- Consequences of untreated STIs
- Modes of sexual transmission and prevention of STIs and HIV
- Knowledge of BCC messages

Attitude

- Optimal birth spacing and timing of first birth
- RH sessions conducted by CEs
- FP messages attached on the back of rickshaws
- BCC materials distribution

Behavior

- Use of any contraceptive methods
- Sex with non-marital, non-regular partner
- Sex with non-marital, non-regular partner in the last three months
- Condom use during the last sex

Limitations of the study

The study was conducted in NSDP-supported NGO clinic catchment areas and implemented by staff members of the NGOs. It was planned that monitoring of the education sessions would be done jointly by NGO and Population Council staff. However, NGO staff members could not regularly participate in the monitoring activities due to their workload. Moreover, the NGO field staff are mostly female, which limited the monitoring activities of the education sessions conducted by male CEs.

INTERVENTIONS

Preparatory activities

Selection of the study sites

For smooth implementation of the study, a set of criteria was developed for selecting the study sites which included:

- a) existence of male health care provider at static clinic;
- b) existence of rickshaw garages in the clinic catchment area with at least 1,000 RPs;
- c) clinical location in high-risk areas;
- d) location within Dhaka Division.

Six study sites satisfying these criteria were selected: Madaripur, Mymensingh, Gazipur, Dayaganj, Faridpur, and Lalbagh. Madaripur and Mymensingh received two interventions (Experiment group I) while Gazipur and Dayaganj received one intervention (Experiment group II). The Lalbagh and Faridpur received none of the interventions (Control).

Mapping of rickshaw garages and listing of RPs

Mapping of rickshaw garages located in catchment areas of the selected clinics was done to list the RPs, to construct a sampling frame, and to facilitate implementation of the interventions. Approximately 1,500 RPs per site were to be included in the interventions. During the mapping exercise, garage owners were informed about the study and invited to participate in the

intervention, and to provide for the education sessions. The number of garages listed in the six sites varied from 9 to 60. A sampling frame was prepared by listing names and addresses of all of the RPs attached to the rickshaw garages. A total of nearly 8,000 RPs were listed from six sites (Table 2).

Table 2: Number of rickshaw garages and RPs by study site

Study site	Number of garages	Listed RPs
Experimental site		
Dayaganj	41	1,662
Gazipur	47	1,232
Mymensingh	62	1,447
Madaripur	46	1,327
Total	196	5,668
Control site		
Lalbagh	32	1,168
Faridpur	9	1,132
Total	41	2,300
Grand total	237	7,968

Development of training manual

To educate the RPs, a teaching aid (flipchart) was developed depicting standardized RH information, including an overview of contraceptive methods, with special emphasis on condoms, STIs, HIV, and other RH issues. The issues discussed in the flipchart were covered in three sessions, with a summary at the end of each session and a recapitulation at the end of the third session. The teaching aid was field-tested and reviewed by experts before printing (for more details see Bhuiya et al. 2006). Sufficient numbers of training manuals were given to each clinic for community educators and their supervisors.

Development of BCC materials

Several BCC materials were developed, field-tested, reviewed, and printed. These included: 1) a poster on dual benefits of condom use, 2) a leaflet on correct condom use; 3) a booklet summarizing the key messages of the three-session RH course (for those who could not attend all sessions); and 4) tin plates containing one of four different FP messages for display on the back of rickshaws.

The four FP messages were fixed on the back of the rickshaws to raise awareness of the RPs and the general population (see photo). The letters were legible from a distance of 12-15 feet. The messages were:

- To keep mother and child healthy, delay birth till age 20 and space births by 3 to 5 years
- The IUD is a safe and long-term method which can prevent pregnancy for up to 10 years
- Male sterilization is a safe and easy method which makes sexual life enjoyable and worry-free
- Correct condom use during each sexual encounter protects from pregnancy and sexually transmitted infections.



Development of local partnership

A Project Implementation Committee was formed at each experimental site for smooth implementation of the activities. The members were selected from both the government and rickshaw owners' associations (for more details see Bhuiya et. al. 2006). The committees met every two months to monitor the project activities.

Involvement of the rickshaw owners as implementing partners

To ensure support from rickshaw owners and union leaders, project staff arranged bi-monthly meetings at participating NGO clinics in each experimental site to discuss implementation issues. The involvement of rickshaw owners and union was vital for organizing educational sessions, displaying FP messages on the back of rickshaws, and keeping condoms for sale at garages. Some of the rickshaw owners and union members were also members of the project implementation committees.

Selection and training of CEs

Four young men selected as community educators (CEs) received intensive training for six days at the Population Council office. A self-administered pre-post test was used to assess the extent to which training improved their RH knowledge and counseling skills. The results of tests following training revealed significant increases in the trainees' RH knowledge, ranging from a pre-training score of 4-40 percent to 49-85 percent after training (for more details see Bhuiya et. al. 2006). CEs were also given refresher training four months into the intervention.

Development of monitoring tools

A variety of monitoring tools was developed for systematic information-gathering. These included tools to measure the following:

- RH sessions conducted among listed and unlisted RPs
- Number of RPs attending the RH education sessions
- Quality of RH educational sessions, assessed by observing the sessions
- Distribution and display of BCC materials
- Sale of condoms by CCDs
- Performance of satellite and static clinics
- Progress of the implementation and RP perceptions of the intervention, obtained through interviews of 15 RPs from each site per month.

Intervention implementation

The main activities in the intervention phase were a) conducting RH education at the garages, b) ensuring condom availability through CCDs, c) enhancing RH services through satellite clinics, and d) documentation of the implementation process.

RH education session at the rickshaw garages

RH education sessions were organized mostly at midday and in the evening when the pullers came to the garages to return or rent rickshaws. The RH education sessions were divided into three one-hour sessions, conducted in each participating garage, with a gap of two or three days between sessions. The course was repeated several times at each garage to give all RPs a chance to attend all three sessions. RPs change jobs frequently according to the season and there are always new pullers at each garage. The number of RH courses at a given garage depended on the number of RPs in the garage. CEs used the flipchart containing pictures, figures and diagrams as a teaching aid. A penis model was used for training on the correct use of condoms, both for demonstration and practice by participants (for more details see Bhuiya et al. 2006).

Enhancing accessibility to contraceptive services through community condom distributors

In Experiment I sites (Mymensingh and Madaripur), rickshaw garage owners or rickshaw mechanics that were willing to sell condoms among the RPs were selected as community condom distributors (CCDs). A total of 19 CCDs were selected, 10 from Mymensingh and nine from Madaripur. Each CCD received a transparent plastic container to display condoms in a prominent place in the garage. The partner NGOs supplied condoms to CCDs at the government rate, and the CCDs then sold condoms to the RPs at the market price and kept the difference as a commission.

Enhancing FP and RH services through the satellite clinics

The NGO clinics began organizing satellite clinics in the rickshaw garages simultaneously with the educational sessions, except in Madaripur, where the male doctor had left the job before starting the intervention phase. In the remaining three experimental sites, the NGOs organized satellite clinics in the participating garages at least once a week. Satellite clinics were not held in Dayaganj for one month because of the absence of a male doctor.

BCC activities

Three types of BCC activities took place: distribution of educational materials to RPs; display of posters at rickshaw garages and tea stalls; and display of FP messages on the back of the rickshaws. Every RP who attended the educational session received the leaflet on correct condom use and the booklet summarizing the key messages of the RH course. The educational materials were also distributed among RPs who were present at the garages but did not attend sessions. Each site received around 500 booklets, 1,500 leaflets, and 500 posters. A total of 2,000 booklets, 6,000 leaflets and 2,000 posters were distributed in the intervention sites.

In addition, a total of 3,750 tin plates with FP messages were printed and fixed on the back of rickshaws. Distribution of tin plates with FP messages varied by location; Madaripur (750) and Mymensingh (800) received slightly fewer tin plates than Dayaganj (1,100) and Gazipur (1,100). In each site, 40 percent of the tin plates had condom messages, while the remaining three messages (on vasectomy, birth spacing, and IUD) had an equal share of 20 percent each.

EVALUATION

The impact of the interventions was measured at two levels: a process evaluation through systematic documentation of activities; and evaluation of the effect on beneficiaries through comparing baseline and endline surveys among the RPs.

Process evaluation

Number of RH sessions conducted: The CEs conducted a total of 1,737 sessions, and reached 5,494 RPs with RH information (Table 3). The attendance of RPs in the sessions varied considerably by site, for various reasons. For example, the proportion of RPs who attended all three sessions was lowest in Mymensingh, where most RPs commute from rural areas and had little free time. Attendance was also low in Dayaganj, because of high turnover of RPs in this site. Overall the largest proportion (75%) of RPs attended the first session, which discussed reproductive health and family planning methods, especially condoms.

Table 3 Percent distribution of available RPs who attended RH sessions according to topic and site

Category	Experiment I		Experiment II		Total
	Madaripur	Mymensingh	Dayaganj	Gazipur	
Session I: RH and FP (condom)	88	65	70	76	75
Session II: RH and FP	88	52	67	67	68
Session III: STI and HIV	78	47	73	72	66
All three sessions	74	25	32	41	43
Attended at least two sessions	95	43	78	72	71
Attended at least one session (n)	1,546	1,661	1,096	1,191	5,494
Number of sessions by CEs	369	534	363	471	1,737

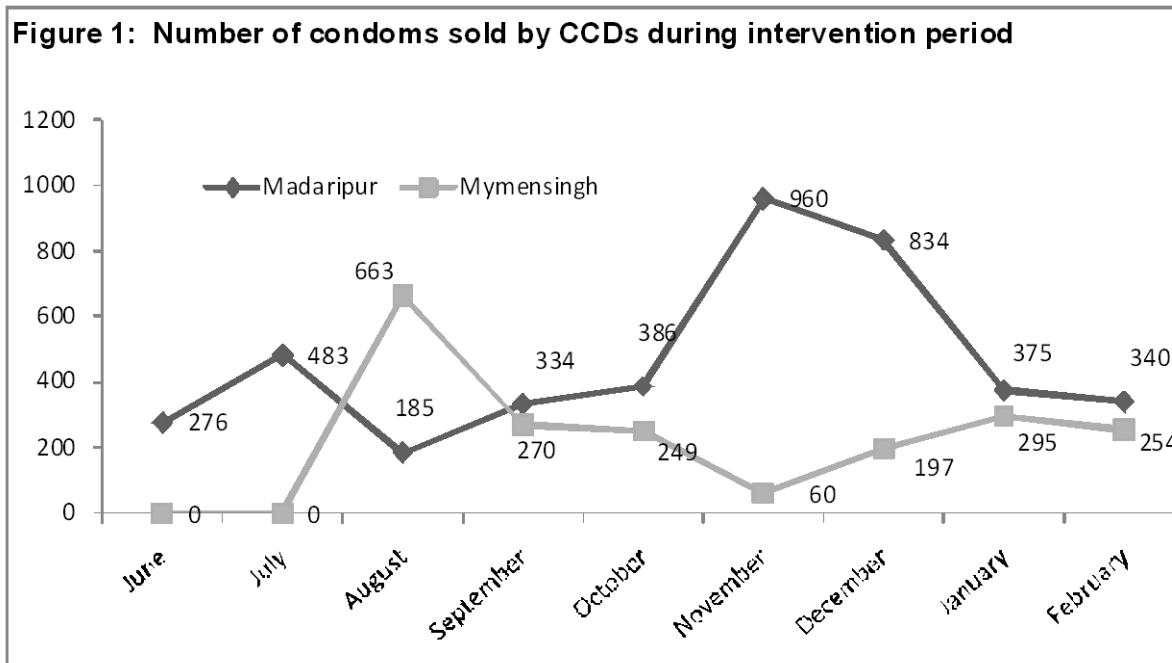
Quality of RH sessions: It was planned that 32 RH sessions per month would be monitored at each site, of which 8 sessions would be observed by Population Council staff while NGO staff would monitor the remainder. However, the workload of NGO staff made this impossible and the NGOs monitored only 53 sessions in total (7% of the planned total)—27 in Gazipur, 19 in Mymensingh, six in Dayaganj, and one in Madaripur. Council staff monitored a total of 187 RH sessions, or 73 percent of the planned visits: 69 in Madaripur, 40 in Mymensingh, 47 in Dayaganj, and 31 in Gazipur. These observations were evenly distributed over the three one-hour RH sessions conducted by CEs.

The issues that were observed are presented in Table 4. Monitors gave feedback to the CEs immediately after the sessions to help them improve their sessions. The majority of CEs provided RH education of high quality.

Table 4: Observed quality of the RH sessions conducted by CEs

Attention given to issues	Experiment I		Experiment II	
	Madaripur Percent	Mymensingh Percent	Dayaganj Percent	Gazipur Percent
Delivered correct message	100	97	98	91
Elaborated and given practical examples	100	85	94	93
Used local language and jokes	96	97	89	90
Flipchart used for explaining topic	93	93	94	90
Penile model used for condom demonstration	100	84	100	100
Collected feedback and asked question	93	80	83	91
Encouraged participants to ask questions	100	85	83	79
Summarized key messages	96	80	93	91
Informed sources of FP services and condom	84	92	80	78
Informed date and time of next session	100	66	91	79
Total number of sessions monitored	70	59	53	58

Condom sales: In the Experiment I sites, CCDs were expected to sell condoms to RPs at market prices; both RPs and CCDs were comfortable with this arrangement. The total number of condoms sold in the two Experiment I sites was 7,262: 6,174 in Madaripur and 2,088 in Mymensingh. Sales were higher in Madaripur because the CE there initiated the sales two months earlier, and because the participating NGO sold the condoms to the CCDs at a lower rate than in Mymensingh. Also, the supply of condoms was irregular in Mymensingh, and at one point they were unavailable for nearly two months. Sales in Madaripur declined in January and February 2006, primarily due to free distribution of condoms among RPs on World AIDS Day and the limited supply of condoms by district FP office (see Figure 1).



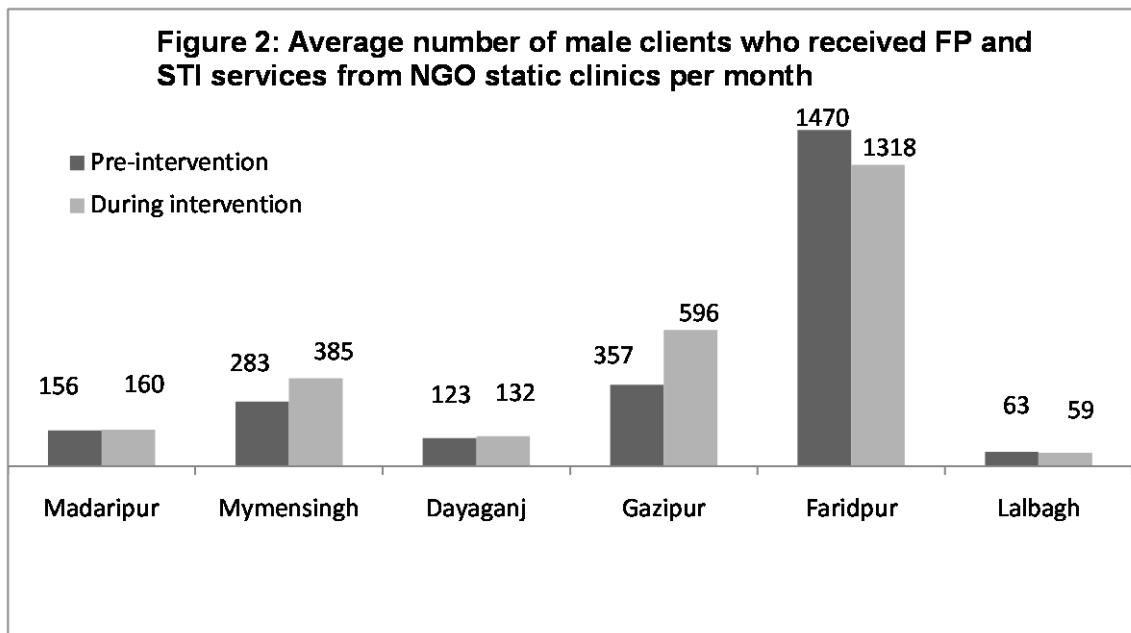
Satellite services at the garages: In most sites, satellite clinics were held at rickshaw garages once a week and a male doctor provided the services. During the intervention period, 113 satellite clinics were organized at the rickshaw garages, except in Madaripur, where no male doctor was available. A total of 691 RPs received services from the satellite clinics. About one-third of services were related to reproductive health; the rest were for other conditions. Table 5 shows that an average of seven RPs attended the satellite clinic each week. The low utilization of satellite clinic needs special attention during the expansion of the services to other NSDP clinics.

Table 5: Number of RPs who received FP and STI services from satellite clinics organized at the rickshaw garages by sites

Category	Experiment I		Experiment II		Total
	Madaripur	Mymensingh	Dayaganj	Gazipur	
Number of FP clients served	-	15	139	29	183
Number of STIs clients served	-	23	29	27	79
Total number of clients served	-	348	214	129	691
Number of satellites organized	-	34	56	23	113
Average weekly number of RPs per satellite clinic	-	10.2	3.8	5.6	6.11

Male FP and STI client flow at the clinics: Service statistics for male FP and STI clients were collected from satellite and static clinics for five months prior to the introduction of the interventions starting from January 2005 and continued throughout the intervention period. Because of a special program supported by CARE/Bangladesh, the number of male clients receiving services from NGO clinics in the control site of Faridpur before and during the

intervention remained at almost the same level (Figure 2). Figure 2 shows slight to moderate increases in the number of men receiving FP and STI services in the experimental sites.



Survey for tracking intervention activities: Four months after the intervention began, 136 RPs who had attended at least one session were interviewed to determine the RPs’ opinion about the RH education session, the BCC materials provided, and ways of improving the program performance. The RPs were asked whether the information they had received from the education session had any practical use in their daily life. Ninety-two percent of RPs reported that the RH sessions were very useful; 50 percent said that they had received booklets and leaflets and had used them for discussing RH issues with their friends. Some respondents suggested that booklets and leaflets should be distributed to all RPs, whether they attend education sessions or not.

The RPs offered a variety of suggestions for increasing attendance at the RH sessions. One-third suggested displaying the date and time of each session on a board or paper in each garage to remind the pullers about the next scheduled RH sessions. Another one-third thought that holding RH education sessions over three consecutive days, rather than spacing them out, might allow RPs to attend all three sessions. About 13 percent recommended that rickshaw owners and mechanics should know more about the program so that they could encourage RPs to attend the RH education sessions. Approximately 40 percent of the respondents suggest that CEs should inform the participants about the timing of the next session at the end of each session.

All the RPs felt that printing of FP messages on the back of rickshaw was an innovative approach. It encouraged the passengers to discuss the content of the message among them and sometimes with RPs. The suggestions were shared with the program staff and CEs, and appropriate steps were taken to address them.

Impact evaluation

After eight months of the implementation, 596 RPs who had been interviewed at baseline were re-interviewed to measure the impact of the activities; the impact evaluation was based findings on the matched responses from the 596 respondents.

Background characteristics of RPs: Table 6 describes the socio-demographic characteristics of RPs who were interviewed in the both surveys. Overall, the RPs in the experimental and control sites had similar socio-demographic characteristics. The mean age was a little over 30 years in both the experimental sites and approximately 35 years in the control site. Approximately two-thirds of the RPs had no schooling, and only one-fifth completed primary school. More than 85 percent of the respondents were married and on the average they had two children. Two-thirds of respondents said that the first pregnancy was unplanned.

Table 6: Background characteristics of RPs by site at baseline survey

Characteristics	Experiment I Percent	Experiment II Percent	Control Percent
Age group			
<20	9	12.5	2.5
20-29	34	39.5	28.1
30-39	27	27.0	35.2
40 and above	30	21.0	34.2
Mean age in years (SD)	33 (\pm 11)	31 (\pm 10)	35 (\pm 10)
N	245	152	199
Education			
No education	60	59	62
Primary incomplete	29	21	19
Primary and above	12	20	19
Mean years of schooling (SD)	1.5 (\pm 2.1)	1.9 (\pm 2.7)	1.7 (\pm 2.6)
N	245	152	199
Marital status			
Currently married	90	87	95
Not currently married	2	1	1
Never married	8	12	5
N	245	152	199
Number of living children			
0	6	15	8
1-2	45	48	48
3-4	36	30	37
5+	13	7	7
Mean number of children	2.3(\pm 1.8)	1.7(\pm 1.7)	2.2(\pm 1.6)
N	220	132	188
First pregnancy			
Planned	37	36	38
N	213	115	177
Media exposure			
Listen radio once a week	50	49	44
Watch movie in cinema hall once a week	57	56	49
Exposure to any media	96	93	88
N	245	152	199

Exposure to RH interventions: Table 7 presents the distribution of RPs according to their exposure to the two key interventions: RH education and materials, and availability of condoms. Approximately two-thirds of the RPs attended at least one RH session; the proportion of RPs attending all three sessions was substantially higher in experimental site I compared to experimental site II. While 21 percent of RPs were aware of RH sessions but did not attend, 15 percent said that they were unaware of the sessions.

Table 7: RPs exposed to RH education by experimental site

	Experiment I Percent	Experiment II Percent	Total Percent
Attended RH sessions			
One RH session	24	27	25
Two RH sessions	20	23	21
Three RH sessions	23	12	19
Aware of RH session but did not attend	20	21	21
Didn't know about RH session	13	17	15
N	245	152	397

Table 8 shows the distribution of RPs who knew of the educational materials—the poster, educational booklets and leaflets, and the tin plates with family planning messages. While 81 percent of RPs saw the poster on condoms either at the rickshaw garage or at the tea stall, only half were able to read the message. Approximately 41 percent of RPs reported that FP messages were fixed on the back of their rickshaws, though over 90 percent RPs had seen them on the back of other rickshaws. Approximately 40 percent of RPs from Site I mentioned that condoms could be obtained from CCD.

Table 8: RPs exposed to BCC materials by experimental site

BCC activities	Experiment I Percent	Experiment II Percent	Total Percent	Z values
Seen poster at the garage, rickshaw stand or tea stall	82	78	81	4.89
Seen as well as read message on the poster at the garage, rickshaw stand or tea stall	53***	41	48	6.69
Mentioned CCDs as source of condom	40	Na	17	14.18
Had FP message on the back of rickshaws	39	43***	41	4.04
Seen FP messages on the back of others' rickshaws	97***	90	94	10.62
N	245	152	397	
Received booklet	21	22	21	1.88
Received leaflet	27	31	28	3.42
Received both booklet and leaflet	20	19	20	1.94
N	163	94	257	

Significant at ***p<0.001

Na = not applicable

The community educators were asked to distribute booklets and leaflets to session attendees on the first day of the RH course. Due to administrative problems, the booklet and leaflet could not be distributed at the beginning of the intervention period. Those RPs who attended at least one session were asked at endline whether they had received material from the CEs. Only 20 percent in the experimental sites reported having received both the booklet and the leaflet – of these, over 90 percent said that they had read them or asked someone to read them (not shown in the table). This suggests that distribution of the BCC materials had a positive influence on the RH knowledge of RPs who received them.

Correct knowledge of BCC messages: Table 9 indicates that a significantly higher proportion of RPs were aware of the messages in the poster in experimental site I than experimental site II. Knowledge varied regarding the FP messages on the rickshaw tin plates. Knowledge of condom messages was higher in Site I, but knowledge of birth spacing was higher in Site II. However, the proportion of RPs with correct knowledge about messages on vasectomy and the IUD was very low (between 7% and 15% of respondents) in both sites.

Table 9: Knowledge of RPs about BCC messages by experimental site

Type of messages	Experiment I	Experiment II	Total	Z values
	Percent	Percent	Percent	
Dual protection service in the poster	50***	34	44	7.80
Condom on the back of rickshaws	50***	36	44	7.37
Birth spacing on the back of rickshaws	45	51***	47	5.06
Message on vasectomy on the back of rickshaws	11	15***	12	6.25
IUD on the back of rickshaws	8	7	8	
N	245	152	397	

Significant at ***p<0.001

Rickshaw passengers' reaction to FP messages on the rickshaws: The RPs who knew of the tin-plate FP messages were asked about their passengers' response to the messages. Forty percent of RPs reported that passengers liked the messages—significantly more in the Experiment I sites than in the Experiment II sites (Table 10). About one-quarter of RPs in both sites mentioned passengers discussed the messages among themselves, and some discussed the messages with the RPs.

Table 10: Comments by rickshaw passengers on FP messages by experimental site

Comments on FP messages	Experiment I	Experiment II	Total	Z values
	Percent	Percent	Percent	
Passengers like the message	46***	34	41	6.56
Passengers discuss among themselves	25	29***	26	4.02
Better than putting any random picture	16***	7	13	8.10
Passengers discussed messages with RPs	6	10***	8	6.34
N	237	137	374	

Significant at ***p<0.001

Opinion of RPs on timing of first birth and birth spacing: Across all sites, a higher proportion of RPs favored delaying the first pregnancy by the endline survey, but the change was higher in experimental sites than control (Table 11). Fatalistic attitudes on birth spacing also decreased significantly, but the change was greater in the experimental sites. Opinion favoring birth spacing of 3-5 years increased in the experimental sites, but only significantly in Site I.

Table 11: Opinion on timing of first birth and birth spacing by site and time of interview

Characteristics	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
First pregnancy						
Delay first pregnancy	78	92***	70	88***	82	89*
Immediately after marriage	10	6	8	11	9	7
Should be left to God	12	2**	22	1***	9	4*
N	245	245	152	152	199	199
Birth spacing						
Less than 3 years	41	36	45	38	32	25
3-5 years	35	45*	36	38	44	40
5 years and above	24	19	19	24	25	35*
N	245	245	152	152	199	199

Significant at *p<0.05; **p<0.01; ***p<0.001

Awareness of contraceptive methods: Table 12 presents the spontaneous responses of RPs on their knowledge of contraceptive methods. Awareness of contraceptive methods increased over the period across all the sites, but the increase was significantly higher in experimental sites than in the control sites. Knowledge of condoms, pills, and injectables increased significantly in the experimental sites while no major change was observed in the control sites. Awareness of other methods increased, but remained very limited.

Table 12: Awareness of contraceptive methods by site and time of interview

Knowledge	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Condom	60	93***	63	83***	66	66
Pill	74	87***	75	87***	70	71
Injection	39	60***	36	47*	48	48
Norplant	8	15**	2	6*	5	6
IUD	5	6	1	5	9	10
Female sterilization	9	12	8	10	13	16
Male sterilization	4	8*	4	5	6	6
Safe period	3	5	3	7	4	5
n	245	245	152	152	199	199

Significant at *p<0.05; **p<0.01; ***p<0.001

Knowledge of dual protection and correct and consistent use of condoms: Because one of the control sites (Faridpur) was contaminated with an intensive HIV/AIDS program being carried out by NGOs and the government, this site was excluded from analysis. All RPs were asked whether they were aware of the purpose of condom use (Table 13). At baseline, knowledge of condoms as a contraceptive method was high in all sites and increased significantly in the experimental sites, becoming nearly universal at the endline survey. In the control site this knowledge was almost at saturation level (95 percent) and declined slightly by endline.

In Bangladesh, condoms have been promoted primarily as a temporary contraceptive method by the national family planning program. As a result, in the baseline survey less than 20 percent of RPs across the sites knew of condom use as a means of protection from STIs and HIV. By the time of the endline survey, this proportion increased significantly in the experimental sites, as did knowledge of the condom's dual protection role; no significant change occurred in the control site. Knowledge increases were greater in experimental site I than site II.

Table 13: Knowledge of condom efficacy by site and time of interview ^E

Knowledge of condom	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Condom could be used for preventing ^M						
Pregnancy	88	99***	87	98***	95	92
STIs	19	79***	16	65***	22	32
HIV	17	61***	13	54***	6	13
Both pregnancy and infections	18	78***	14	63***	22	30
Correct critical steps of using condom ^M						
Squeeze end (tip of condom)	9	55***	5	47***	5	15*
Unroll on erect penis	26	401***	25	45***	32	32
Cover the whole erect penis with condom	14	74***	11	73***	13	23
After ejaculation, hold base of condom when penis is a bit erect and then withdraw	9	43***	8	35***	5	9
Mention all above steps	0.4	6***	4	7	1	1
Condom is effective when use						
Consistently	71	57***	63	70	53	39
Correctly	0.8	17***	3	7	5	5
Both consistently and correctly	0.0	23***	2	21***	0.0	3
Don't know	28	3***	32	1***	42	53*
N	245	245	152	152	79	79

Significant at *p<0.05; ***p<0.001; ^M multiple responses; ^E excluding one of the control sites

Knowledge of the steps in correct use of the condom increased significantly in the experimental sites, but at endline, less than 8 percent of RPs could mention all four steps for correct use. Knowledge of the need for consistent condom use declined significantly in Site I, but by endline 20 percent of RPs in the experimental sites knew that condom use must be both consistent and correct to be effective.

Knowledge of sources of condoms: Table 14 shows that RPs most often cited shopkeepers and pharmacies as sources of condoms at baseline, with knowledge of sources ranging from a low of 17 percent (control site) to a high of 59 percent (Experimental site I). Awareness of condom sources increased significantly at all sites, with a much greater increase in the experimental sites. In Site I, RPs also mentioned CCDs and CEs as sources of condoms at endline. Only 7 percent of RPs mentioned the NGO satellite clinics as a source of condoms. Special attention should be given to this at the time of expansion of the project activities.

Table 14: Nearest source of condom by site and time of interview ^E

Nearest sources of condom ^M	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Community contraceptive distributors	0.0	31	na	na	na	Na
Community educators	0.0	17	na	na	na	Na
Shopkeepers	59	73***	32	76***	17	30*
Pharmacy	52	81***	39	86***	38	77***
NSDP satellite	4	7	0.7	5*	0.0	1
Don't know	27	10	53	5	57	19
N	245	245	152	152	79	79

Significant at *p<0.05; **p<0.01; ***p<0.001; ^M multiple responses; ^E excluding one of the control sites; ^{na} not applicable

Knowledge of STIs: Table 15 shows that knowledge of STIs and their prevention increased substantially overall in the experimental sites relative to the control sites, with greater gains in sites I than in sites II. The proportion of RPs who could mention three symptoms of STIs ranged from 11 to 18 percent across sites at baseline; by the endline survey, this proportion increased to 66 percent in Site I and 33 percent in Site II with no significant increase in the control site. Knowledge of three consequences of STIs increased dramatically in Sites I and II (55% and 40%, respectively), with no change in the control site. While these changes are significant, it is important to note that there was still room for improvement.

Knowledge about the sexual transmission and prevention of STI remained very limited, even after the intervention. Despite significant knowledge gains, less than half of RPs in either experimental site mentioned sex, or unprotected sex, as a means of transmission of STIs; less than two-thirds (compared to 83 percent in the control site) mentioned intercourse with a sex worker as a risk of transmission. Despite gains in knowledge, less than half of RPs mentioned condoms as a means of protection from STIs, and a very low proportion (about 10%) identified marital or single-partner fidelity as a protective strategy. This gap in knowledge needs to be addressed during any expansion of the intervention.

Table 15: Knowledge of STIs by site and time of interview ^E

Knowledge	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Symptoms of STIs ^M						
Greenish or yellowish mucus from penis	35	75***	27	69***	24	43**
Pain passing urine	22	32*	23	41***	37	19*
Ulcer in genital region	31	62***	26	53***	31	35
Swelling in groin area	7	22***	7	18**	4	6
Itching and pain in penis	27	63***	22	33*	17	25
<i>Know at least 3 symptoms of STIs</i>	11	66***	18	33**	14	20
Consequences of untreated STIs ^M						
Infertility	23	77***	36	65***	60	44*
Risk of HIV transmission	20	57***	15	49***	8	8
Still birth	4	40***	10	31***	13	11
Spontaneous abortion	0.8	29***	5	24***	0.0	1
Premature birth	4	18***	7	16**	5	0.0*
Ectopic pregnancy	-	14***	-	4*	0.0	0.0
Blind newborn	2	24***	5	34***	5	0.0*
<i>Know at least 3 consequences of STIs</i>	0.4	55***	1	40***	0.0	0.0
Sexual transmission of STIs ^M						
Unprotected sex with STI infected person	9	27***	9	38***	0.0	3
Sex with STI infected person	26	44***	28	48***	11	13
Having sex with sex worker	54	63***	61	57	83	84
Sex with multiple partners	14	12*	11	9	4	3
<i>Know at least 2 modes of sexual transmission</i>	22	46***	28	47***	9	11
Sexual prevention of STIs ^M						
Use condom correctly and consistently during sex	1	50***	0.7	37***	1	4
Not having sex with CSWs	2	0.4	9	0.0***	8	1*
Sex with only one partner	3	11***	7	8	0.0	0.0
Limit sex within marriage	27	11***	23	14	24	33
<i>Know at least 2 ways of sexual prevention</i>	7	16***	9	11	10	14
N	245	245	152	152	79	79

Significant at *p<0.05; **p<0.01; ***p<0.001; ^M multiple responses; ^E excluding one of the control sites

Knowledge of HIV: Knowledge of HIV transmission and prevention increased significantly following the interventions in experimental sites (Table 16). Approximately half of the respondents knew of at least two modes of sexual transmission of HIV in experimental sites at endline, compared to 13 percent in the control site. The proportion of RPs knowing of consistent and correct condom use as a protective measure increased from under 3 percent to 44 percent in Site I and 36 percent in Site II, compared to 5 percent in the control site.

Table 16: Knowledge of HIV by site and time of interview ^E

Knowledge of HIV	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Modes of sexual transmission of HIV ^M						
Unprotected sex with HIV infected person	10	26***	9	38***	1	5
Sex with HIV infected person	20	51***	22	50***	10	3
Sex with CSWs	55	56	61	54	72	86*
Sex with multiple partners	14	12	13	11	13	8
<i>Know at least 2 modes of sexual transmission of HIV</i>	25	42***	28	47***	14	13
Ways of sexual prevention of HIV ^M						
Use condom correctly and consistently during sex	1	44***	3	36***	1	5
Not having sex with CSWs	2	26***	10	30***	9	51***
Limit sex within marriage	25	5***	21	11*	27	11**
<i>Know at least 2 ways of sexual prevention of HIV</i>	9	26***	9	26***	8	14
N	245	245	152	152	79	79

Significant at *p<0.05; **p<0.01; ***p<0.001; ^M multiple responses; ^E excluding one of the control sites

Use of contraceptives: Table 17 shows that contraceptive use among the RPs was surprisingly high even at the baseline survey, and increased significantly in the experimental sites—mainly because of reported condom use—but not in the control site. Condom use increased fourfold in Site I (from 5% to 19%), showing the beneficial effect of education combined with the easy availability of condoms.

Table 17: Current use of contraceptives by site and time of interview

Use of contraceptives	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Any method	68	81***	72	79	80	82
Any modern method	62	74**	65	76*	74	74
Condom	5	19***	4	10	13	11
Pill	36	36	34	34	34	30
Injection	12	11	21	24	17	19
Norplant	4	3	2	2	2	2
IUD	2	0.5	0.0	1	0.5	1
Female sterilization	2	3	3	7	8	10
Male sterilization	1	1	0.0	0.0	0.5	0.5
Any traditional method	6	7	7	3	6	8
No method	32	20***	28	21	20	18
N	210	210	122	122	182	182

Significant at *p<0.05; ***p<0.001

Reasons for discontinuation and never use of condoms: Despite gains in the proportion of RPs who said that they had ever used condoms, a significant proportion of men said that they had stopped using condoms. Table 18 shows the most common reasons for nonuse of condoms. The major reasons for discontinuing condom use were the wife’s use of another method and decreased sexual satisfaction. Dislike of condoms remained a significant factor in decisions not to use the method.

Table 18: Status of condom use among married RPs by site and time of interview

Practice	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Currently using	5	18***	4	10	13	11
Ever used	33	48***	26	47***	36	56***
Never used	62	33***	70	44***	52	33***
N	219	219	124	124	184	184
Reasons for discontinuation of condoms^M						
Wanted children	30	18	9	3	17	9
Do not get satisfactions	30	15	53	12	42	19
Wife started another method	14	59	6	76	12	70
Storing problems	11	3	9	2	5	7
Disposal problems	3	2	3	5	3	3
N	73	106	32	58	66	103

Significant at ***p<0.001; ^M multiple responses

Sexual behavior: Table 19 shows that the majority of RPs have ever had extramarital sex, although only 12 percent in the previous three months. Commercial sex workers were the most frequently mentioned extramarital partners, with whom condom use seems to have increased in the experimental sites. The significant increase in ever had extramarital sex for all groups is disappointing, but may be due to a number of reasons: additional incidents since the baseline would now be included in this prevalence measure; RPs in the experimental sites may be more comfortable reporting extramarital sex at the endline due to the interventions; and changes in knowledge may need more time to transform behaviors.

Table 19: Sexual behavior of RPs by site and time of interview

Practice	Experiment I		Experiment II		Control	
	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent	Baseline Percent	Endline Percent
Had extra marital sex	47	60***	56	71***	53	69***
N	245	245	152	152	199	199
Had extra marital sex in previous 3 months	15	12	7	12	7	4
N	115	148	85	108	105	138
Used condom in previous 3 months prior to survey	41	72	33	38	43	33
N	17	18	6	13	7	6
Used condom with CSWs at last sex	50	100	33	50	60	25
N	8	9	3	6	5	4

Significant at ***p<0.001

Feedback for strengthening program: In view of the planned expansion of the interventions to other NGO clinics, the research team examined the RPs' readiness to participate in the initiative. Table 20 shows that over 80 percent of RPs were ready to distribute BCC materials on STIs and HIV and the condom's dual protection among their passengers who visit CSWs, and nearly 50 percent agreed to participate in condom promotion activities. Those who did not agree mostly mentioned storage problems or perceived adverse reaction from peers, relatives, or passengers as barriers.

Table 20: Willingness of RPs to participate in condom promotion

Category	Percent
Willing to keep and distribute educational materials among the passengers visiting CSWs	84
N	374
Reasons not to keep and distribute educational materials	
Storage problem	64
Not interested	32
Fear of adverse reaction from passengers	4
N	60
Willing to sell condoms among the passengers visiting CSWs	49
N	397
Reasons not to keep condom	
Storage problem	51
Not interested	19
Fear of adverse reaction from friends	46
N	144

Table 21 show RPs' suggestions for strengthening the educational program. The most frequent suggestions included displaying more posters, scheduling sessions during convenient times, and training garage owners as educators. To ensure RPs' attendance in all the three sessions, the key suggestions were ensuring an educator's visit at garage every day at a fixed time and involving garage owners to motivate RPs.

Table 21: Suggestions given by RPs on improvement of program performance (%)

Suggestions	Percent
What steps need to be taken to strengthen the program	
Display more posters in the garages	54
Session during convenient time	47
Training of garage owners for educating RPs	47
Posters on the availability of RH sessions	25
Distribute booklet and leaflet to RPs	29
How to ensure full attendance of RPs in all three sessions	
Educators should come every day at a fixed time	54
Request RPs to attend all three sessions	37
Motivate RPs by garage owners	35
Take session in consecutive three days	16
N	397

CONCLUSIONS AND RECOMMENDATIONS

The study tested two strategies to increase access to family planning and reproductive health information and services by rickshaw pullers: a) an educational campaign together with improved availability of condoms; and b) an educational campaign alone. The key findings were as follows.

A total of 5,494 RPs attended at least one educational session, 71 percent of these attended at least two sessions, and 43 percent attended all the three sessions. The first session, on family planning methods including condoms, was the most highly attended (75%), with 68 percent of RPs attending the session on other FP methods, and 66 percent attending the session on STIs and HIV. Community distributors sold 7,262 condoms, an average 87 per month. At the 113 satellite clinics organized at the experimental sites, RPs received 691 services, including 183 family planning-related services and 79 services for STIs. RPs displayed 3,750 plates promoting reproductive health, and expressed willingness to discuss this topic with clients. In addition, use of the satellite clinics was very limited - an average of about six men per week. It is important to understand this limited use in subsequent scale-up.

Rickshaw pullers' knowledge on contraceptive methods increased significantly in both the experimental sites compared to the control site, with a greater overall improvement in the site of Experiment I, where RPs received the combination of educational sessions and improved access to condoms. Knowledge of the dual role of condoms increased across all sites, but the change was significantly higher in experimental site I. Knowledge of consistent and correct use of condom increased significantly in the experimental sites, especially site I, while no change was observed in the control site. Knowledge of symptoms, consequences, and transmission mode of STIs increased significantly in both the experimental sites compared to the control site. Knowledge of prevention of STIs increased significantly in site I, while knowledge of the transmission and prevention of HIV increased significantly in both the experimental sites while no change observed in the control site.

Use of any contraceptive method increased significantly in the experimental sites, and condom use increased significantly in site I, while no improvement was observed in the control site. However, translation of acquired knowledge about condoms into changes in risky behaviors does not seem to have happened, as evidenced by the increase in extramarital sex across all groups. While this may represent a measurement issue rather than lack of behavior change, the need to focus on behavior change and not only information communication requires special attention during scale-up of the interventions.

These findings provide some important guidance on reaching men with RH information and services, including the following:

- Scale-up of these services should prioritize the recruitment of CEs and place more emphasis on facilitation and motivational skills. The technical and counseling skills of the CEs are key to the success of the program. For instance, in Madaripur, RPs' attendance at all three sessions was the highest of the four experimental sites because of the CE, who was not only a good educator but also a good motivator. Suggestions by RPs, such as ensuring the presence of

educators in garage at a fixed time, conducting sessions on three consecutive days, and involving garage owners in motivating RPs should be taken into account.

- It is vital that NGOs receive training to enable them to monitor the RH education sessions for the quality and comprehensiveness of the information provided—and that they conduct regular, routine monitoring. Monitoring during this intervention showed that in their zeal for emphasizing condoms for dual protection, CEs neglected other critical elements, such as transmission and prevention of HIV and STIs. The training of CEs and their supervisors should focus on these points during the scale-up to ensure comprehensive education and enhance the sustainability of the program and its effects.
- Garage owners should be involved in the education activities and condom promotion. Condom use increased significantly in those sites where condoms were made easily available by garage owners who worked as community distributors or CCDs.
- Policies regarding condom sales should build in incentives for promoters. For CCDs, who received condoms at a bulk rate, profit was an incentive; condom sales were higher where the base price for the CCDs was lower. In the scale-up, all garage owners or CCDs will receive condoms at a government rate, and sell them to RPs at market price, keeping the difference as incentive.
- RPs themselves should be given a chance to encourage condom use. Nearly one-third of rickshaw pullers knew the content of the FP messages that had been attached on the back of their rickshaws; and about 40 percent reported that passengers liked the messages. Over 80 percent of RPs agreed to distribute BCC materials to passengers who visit commercial sex workers, and half agreed to sell condoms to these passengers. Rickshaw pullers could serve as change agents if they can effectively provide RH information and services to their passengers. In the scale-up phase, NSDP intends to add a component in which RPs sell condoms and provide BCC materials to their customers.
- In Bangladesh, the condom is promoted either as a means of preventing pregnancy (by the national family planning program) or as protection from STIs and HIV (by the national STD/HIV program)—but not both. Because the national HIV prevention program is intensive and most NGOs work with commercial sex workers and their clients, condom promotion is often associated with promiscuity. Thus, there is a potential untapped opportunity to transform the image of the condom, marketing it as an effective dual-protection method.

The study also pointed to the following caveats:

- Acquiring knowledge about the benefits of condoms may not lead to condom use during risky behavior. Only about half of the RPs who visited sex workers after attending the sessions actually used condoms. This disconnect between knowledge and action needs serious consideration while scaling up the interventions.
- While showing the positive effect of easy access to condoms, the study revealed very limited use of the satellite clinics. It is important to understand factors behind the low use of the satellite clinics and the limited impression they made as reproductive health resources; none of the RPs mentioned the satellite as a source of condoms. This aspect needs clarification during the scale-up phase.

DISSEMINATION AND UTILIZATION

The findings of the study were shared on a regular basis with the NSDP and its NGO partners, including through a Research Update, describing the implementation process and important lessons learned, which was widely disseminated. The findings were also shared with district health and FP staff and officials of the Municipality, members of the Rickshaw Union, rickshaws owners and the National HIV Surveillance Advisory Committee.

Based on the findings from this study, the USAID-funded NSDP is now expanding the activities to a further 35 urban clinics. This scale-up will identify important managerial and programmatic issues that need to be addressed for nationwide replication. Progress in the scale-up so far includes identification of NSDP-supported NGOs and intervention sites, budget allocations for the salaries of 35 male community educators, reproduction of BCC materials, and transportation costs. Recruitment and training of community educators and service promotion officers has begun, and mapping of rickshaw garages and meetings with garage owners is underway.

Initiatives are also underway increase the sustainability of the interventions through dialogue with the Mayor of Dhaka City Corporation and the chairpersons of the municipalities of Mymensingh, Madaripur and Gazipur. These discussions are exploring the possibility of linking renewal of a rickshaw license with a requirement that the FP messages are displayed on the back of the rickshaws. All chairpersons and license inspectors support this idea; the next step will be finding a mechanism to implement it.

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APPENDIX 1: RICKSHAW OPERATION SYSTEM IN BANGLADESH

There are four categories of rickshaw ownership (Gallagher 1992). The most prominent group is the "malik" for whom rickshaw ownership is a full-time occupation. They own a rickshaw garage and employ mechanics as well. The second category, "mysterics", is the roadside mechanics that repair rickshaws; some of them own rickshaws as well. The third category,

“investor-owners” are not fully engaged in the rickshaw business; for them it is simply a profitable investment. This category of owner includes housewives, shopkeepers and service holders. The fourth group comprises RPs who own their own rickshaws. Approximately 83 percent of RPs rent rickshaws from the owners (Anwar et al. 1995). Ownership of rickshaw by the pullers is lowest in the big cities and highest in the rural areas. In big cities, as there are more RPs than rickshaws, the rickshaws are rented in morning and evening shifts. The rental cost of a rickshaw varies by place, type and condition of rickshaw and owner. The usual rent per day is nearly Taka 35-50 (US\$ 0.60-0.86).

The relationship between the RPs and the owners varies. Generally, a RP does not give the owner a deposit, but pays the rent at the end of the shift. If the rickshaw is damaged in a traffic accident, the owner is responsible for the repair. But if the rickshaw is stolen, the RP has to pay some compensation, depending on the relationship with the owner. Although the rental system creates an underlying conflict of interest between the RPs and the owners, there are also factors that bring them together. Particularly, many owners were once RPs themselves and understand the problems (Gallagher 1992).

RPs have trade unions in every town. Membership is open to all RPs, and requires payment of a monthly fee. In each locality, one person who is respected by other RPs is nominated as the convener. These conveners elect the Central Committee and the President. The union leaders are drawn from ex-pullers, mechanics, and rickshaw owners. Most unions have an executive committee of eight to 12 officials. The primary objective of the union is to protect the interests of RPs.

APPENDIX 2: NSDP Letter



NSDP

NGO Service Delivery Program



USAID
FROM THE AMERICAN PEOPLE

September 19, 2006

To: NSDP Project Directors PSTC, CWFD, SSKS, Image and Fair Foundation

Subject: Implementation of Rickshaw Pullers' Dual Protection Intervention (Scale-up)

As you already know that NSDP with collaboration with Population council is going to implement the Rickshaw Pullers' Dual Protection Intervention in your following clinics:

The NGO-wise number of clinics of intervention:

1. PSTC – 14 out of 16 clinics
2. CWFD – 6 out of 19 clinics
3. SSKS – 5 out of 13 clinics
4. Image – 5 out of 5 clinics
5. Fair Foundation – 5 out of 10 clinics

(Please see Attachment-B for details list of Clinics under each NGO)

Consider this letter as NSDP's approval for charging the necessary expenses from your FY 2007 Grants (Operating Budget) as clarified details below:

A. Honoraria payment to community educators:

One person will be contracted on a full time basis through June 2007 to serve as the Community Educator (CE) at fixed monthly honoraria of Tk. 4,500.00 per month. The new staff will be entitled to no other benefit. Please ensure written fixed term service employment contract with them. In addition, before they start their activities in the field NGO must ensure receipt of signed Compliance (MCP, Tiaht & Helms) acknowledgement forms of each of the new recruits. Their Salary will be charged under Salary and Wages budget category of the respective clinics.

The selection process should follow the given criteria (**See Attachment –A for details**) and it is advised that after the primary selection the incumbent should be sent to the basic six days training. Based on the observation and quick performance evaluation during practice sessions of the training and a short period of subsequent practical work (at least one month) the final service confirmation should be given. It is reiterated that the selection of appropriate candidates is very critical for overall program quality and success, especially as learnt from the pilot phase.

B. Local Travel Cost:

For local travel cost the ceiling is Tk.1, 200 per month for each CE but the actual travel cost should be reimbursed based on submission of travel bill in NSDP prescribed forms and considering the budget ceiling and reasonableness of the cost, locality and mode of travel. This travel cost should be charged under Travel and associated budget category of the respective clinics.

C. Honoraria for the Community-based Condom Distributors (CCD):

The Community-based Condom Distributors (CCD's) 10 to 12 in number per clinic would receive an honorarium @ of Tk.100 per month and there will be no question/provision of sales or distribution commission. The honoraria will be charged under Fees or Purchased Services budget category of the respective clinic.

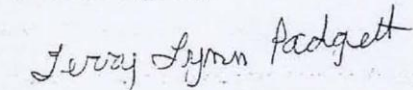
Other associated cost like printing stationeries etc. may be charged under Supplies or general administration budget categories of respective clinic budget.

NSDP BCC unit will arrange necessary Rickshaw tin plate and other BCC materials.

If you need any further information clarification please contact with Mr. Md. Imtiazul Islam or Mr. Mashiur Rahman NSDP Grants unit.

We are looking forward for timely implementation of this interesting initiative by you.

With best regards,



Terry Lynn Padgett
Deputy Chief of Party (F&A)
NSDP

Cc:

Ubaidur Rob Ph.D & Ismat Bhuiya, Population Council, Dr. Robert J. Timmons, Dr. Mizanur Rahman, Team Leaders (All), Desk Officers (All), NST Members (All), Regional Program/Technical Coordinators (All), BCC Technical Officers (All) -NSDP

Enclosed:

Attachment-A: Selection Guideline.

Attachment-B: List of Clinics