

# **Evaluation of Behavior Change Communication and Social Mobilization Program Plan Supporting National Program for Reducing Maternal Mortality**



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## *Preface*

With the high ratio of maternal mortality prevailing in Bangladesh there was a dire need of a comprehensive and appropriate intervention to reduce it in a shorter time. Realizing the gravity of the problem, Ministry of Health and Family Welfare, Government of Bangladesh took up a National Program for Reducing Maternal Mortality (RMM). Bangladesh Center for Communication Programs (BCCP) in collaboration with UNICEF and USAID supported the national program and undertook the communication and social mobilization activities to create awareness on maternal health, especially on Emergency Obstetric Care (EOC) for the people of Bangladesh.

BCCP carried out a comprehensive multi-channel program combined with national mass media campaign and local level training/orientation including Future Search Conferences (FSC). Earlier BCCP conducted an extensive review of resource documents and case studies and concluded that identifying knowledge about life threatening conditions of pregnancy is a precursor to treatment seeking behavior and efforts for reductions in maternal mortality. Failure by any pregnant women and her family to identify the danger signs or complications in pregnancy entail in three delays at tandem often resulting in the most tragic consequences. This plight of maternal health situation led BCCP to think about developing and producing a common Pictorial Card on pregnancy complications and antenatal care information with pictorial view on EOC logo and putting together in a package of intervention- a multiple channel campaign activities.

The intervention together with all the activities carried out were just right. It also launched a baseline study and compared the findings with the findings of end evaluation of the project. This end evaluation study assessed the levels of knowledge on the cause of maternal mortality, attitudes, intentions, and practices and the overall impact of the EOC/RMM campaign and community mobilization activities. However, the study further generated new indicators for policy makers and provided valuable information in order to develop strategic plans for future campaigns. We believe the findings of the study will be interesting to the readers.

We thank USAID and Johns Hopkins University/Bloomberg School of Public Health, Center for Communication Programs (JHU/BSPH/CCP) for providing funds and support to BCCP for this survey. It is also gratifying to note that this important survey was successfully accomplished due to continuing effort of the concerned staff of BCCP and ACNielsen, Bangladesh. Our heartfelt appreciation goes out to interviewees and many other colleagues who provided their valuable time and input.

**Mohammad Shahjahan**  
Director & CEO  
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I also acknowledge the commitment and hard work of the research team for which I have been able to complete the study in time and produce this report. I am deeply indebted to the field staff for their sincere and hard work and to our support team members for their input at every stages of the study.

Finally, I remain grateful to the respondents who bestow their valuable time to interview them.

**Khalid Hasan PhD**  
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## ABBREVIATIONS

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ANC</b>	Antenatal Care
<b>ARI</b>	Acute Respiratory Infection
<b>BCC</b>	Behavior Change Communication
<b>BCCP</b>	Bangladesh Center For Communication Programs
<b>BDHS</b>	Bangladesh Demographic and Health Survey
<b>BTV</b>	Bangladesh Television
<b>DHS</b>	Demographic and Health Survey
<b>EMER</b>	Eyi Megh Eyi Roudro (Now Cloud Now Sunshine)
<b>EOC</b>	Emergency Obstetric Care
<b>EPI</b>	Expanded Program on Immunization
<b>ESP</b>	Essential Services Package
<b>FC</b>	Field Controller
<b>FI</b>	Field Investigator
<b>FP</b>	Family Planning
<b>FSC</b>	Future Search Conference
<b>FWA</b>	Family Welfare Assistant
<b>FWC</b>	Family Welfare Center
<b>GOB</b>	Government of Bangladesh
<b>GU</b>	Green Umbrella
<b>HA</b>	Health Assistant
<b>HIV</b>	Human Immuno-Deficiency Virus
<b>JHU</b>	Johns Hopkins University
<b>KAP</b>	Knowledge Attitude and Practice
<b>MBBS</b>	Bachelor of Medicine and Bachelor of Surgery
<b>MCWC</b>	Mother and Child Welfare Center
<b>MMR</b>	Maternal Mortality Ratio
<b>MOHFW</b>	Ministry of Health and Family Welfare
<b>NIPORT</b>	National Institute of Population Research and Training
<b>PNC</b>	Postnatal Care
<b>RMM</b>	Reduction of Maternal Mortality
<b>STD</b>	Sexually Transmitted Diseases
<b>TBA</b>	Traditional Birth Attendant
<b>UHC</b>	Upazila Health Complex
<b>UNFPA</b>	United Nations Population Fund
<b>UNICEF</b>	United Nations Children's Fund
<b>USAID</b>	United States Agency for International Development

# EXECUTIVE SUMMARY

## Background

Maternal mortality is an issue of global concern and particular problem for many developing countries. The Maternal Mortality Survey conducted by the National Institute of Population Research and Training (NIPORT) and the Ministry of Health and Family Welfare (MOHFW) with the financial support of USAID, Dhaka suggested that maternal mortality ratio in Bangladesh during the period 1998-2001 ranged 320-400 per 100,000 live births. A number of factors are contributing to high maternal mortality in Bangladesh. Among the factors adolescent marriage, pregnancy before age 18 years, low proportion of mothers visiting health facility during pregnancy for medical check-up, lack of knowledge about complications during the pregnancy, home delivery with unskilled attendants, low supportive environment in the family and community, lack of knowledge of the pregnant mother and the families where to get EOC services are notable. In view of this situation both UNICEF and UNFPA considered a number of strategies for reducing maternal mortality in Bangladesh. EOC facilities in MCWCs were improved with the financial and technical support of UNFPA. Besides, in other health facilities such as selected UHCs and all the district hospitals and medical college hospitals EOC services improved and strengthened.

BCCP supported by USAID collaborated in specific activities of the Communications and Social Mobilization Program to create awareness on maternal health and EOC. The sub-components included mass media campaign and local level orientation and community activities. For the campaign was developed a symbol - an EOC logo there, to create awareness among the people and help associate it with health facilities where EOC services are available. An EOC Pictorial Card was developed as a prime BCC material. The EOC Card carried pictorial views of complications in pregnancy, information on antenatal care and where to find help in case of emergency. The pregnant women are counseled with the help of this card when they visit health facility. The other interventions of BCCP included placement of billboards in EOC Upazilas and districts to raise awareness among target audience on danger signs, emergency preparedness and EOC facilities. Alongside, BCCP produced and aired three mass media ads on agenda setting, pictorial card and preparedness for safe delivery. Establishing program logo, introducing pictorial card and model behavior of the husband and other family members of a pregnant woman were demonstrated in these ads. Upazila level field workers of Ministry of Health and Family Welfare (MOHFW) were given orientation to provide knowledge and exposures to various groups of the community. Communities were oriented to identify danger signs and develop plan to curb maternal deaths.

## Methodology

Representing five categories, 2000 sample respondents were selected from 8 upazilas out of 30 intervention upazilas. Totally 32 villages were sampled from 16 unions amongst 8 upazilas. More specifically 2 villages per union, 2 unions per upazilas and 1 upazila per district were selected by using systematic random sampling. Approximately 62-63 respondents were targeted to interview from one village considering 12-13 respondents per respondent groups per villages.

## **Objectives of the Study**

The broad objective of the study is to ascertain the effectiveness of the raising knowledge (awareness), attitude, practice (KAP) of the target audience within the specified areas, as a result of the program interventions as compared to the baseline study.

## **Study Findings**

### **Birth Planning**

- The awareness among different categories of respondents about appropriate age at marriage is significant. In the baseline survey more respondents mentioned appropriate age at marriage between 20-25 years while in the post-evaluation survey more respondents mentioned appropriate age at marriage between 17-19 years, which is almost similar to government rule. The information further demonstrates that about 82.0% of the respondents stated that preferred age at marriage should be between 17 to 25 years in the baseline survey. The comparable figure in the post-evaluation survey was 87.0%.
- Majority of the respondents are aware of the age at first birth and the consequences of having birth at early age suggesting that interventions activities focusing on behavior change communication have greater impact on the target groups than that of the baseline survey.
- The respondents are aware of the benefit of longer birth intervals (gap between births). The mean inter birth interval was 3.6 years to 4 years in baseline and post-evaluation survey respectively.
- Although the respondents are at varying stages of their life cycle, the respondents mentioned that if they could start their married life again most of them would desire two children.

### **Antenatal Care**

- Remarkable number of antenatal care visit increased among the new mothers during the program intervention period (79.2%) compared to BDHS-1999-2000 (37.0%). This demonstrates that among the young married women the tendency to visit health facility while pregnant has increased. This is attributed to program interventions and community exposure to both local level and mass media interventions.
- Comparison of exposed and non-exposed respondents regarding interventions of antenatal care visits showed a significant change. Local level interventions (EOC card/ Poster/Billboard) are much more exposed to new and pregnant mothers rather than TV/Radio/Newspaper who already visited to service centers for ANC.
- Proportion of pregnant women who did visit health center for ANC are much higher among the exposed new mothers and pregnant mothers. Mothers visited for ANC who are exposed to local level interventions and mass media interventions are 74.2% and 79.8% respectively.

## **Complications during Pregnancy**

- Respondents across the categories are aware of various complications during pregnancy with varying degree. Majority of the respondents is aware of 1 or 2 complications.

## **Delivery**

- Correct knowledge of delivery complications among exposed and non-exposed respondents regarding exposure to campaign (local level and mass media interventions) also suggests a change between the two surveys.
- Exposure to campaign interventions suggests that every aspect of delivery preparation have increased. Among the new and pregnant mothers, 63.5% and 69.9% respectively have the delivery preparation that exposed to local level and mass media interventions.
- The post-evaluation survey data demonstrates that there has been an increase in the institutional delivery. Over 9% new mothers delivered their births in the institutions compared to about 3% in the baseline survey.

## **Logo Identification and Source of EOC Messages**

- The data on logo identification indicate that about 65% of the respondents have seen or viewed the EOC logo.
- The EOC messages also have significantly increased the level of knowledge between the two surveys through local interventions such as signboard/billboard, poster/EOC-card, different meetings, rallies etc. The interventions have demonstration effect in the community on EOC services.

## **Conclusion**

The major conclusion of the study is that BCCP's strategy to reduce maternal mortality through behavior change communication and social mobilization program is an important campaign and it should be replicated in other areas of Bangladesh. In context of rural Bangladesh, the strategy is appropriate and sound because male members and mothers in law take most of the household decisions and reaching them with the messages for reducing maternal mortality would ensure safe motherhood. Maternal mortality would be reduced with the promotion of positive role of women, men and mother-in-law through highlighting their responsibilities. Interventions supporting positive action - education, skill development, delaying age of marriage and age at first birth and birth planning, and quality of services and care would facilitate this and ensure reduction of maternal mortality in future.

# Chapter 1

## INTRODUCTION

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In June 1999, Bangladesh Center for Communication Programs (BCCP) launched the country's most comprehensive mass media campaign and community mobilization initiative ever to increase utilization of Emergency Obstetric Care (EOC) centers and Ante Natal Care (ANC) services in 30 upazilas to save mothers' lives. The program formally known as Behavior Change Communication and Social Mobilization Program Plan Supporting the National Program for Reduction of Maternal Mortality (RMM) in collaboration with GOB-UNICEF was funded by USAID in keeping with the USAID strategic objective for its population and health program — *Fertility Reduced and Family Health Improved*. The Johns Hopkins University Center for Communication Programs (JHU/CCP) provided technical assistance for the program. BCCP implemented the communication and social mobilization program through orientations and future search conferences in 30 upazilas and also through mass and local media campaign.

### **Program Overview**

The BCC program for RMM promoted a national communication campaign including television, radio, outdoor and print media to educate the public on the importance of recognizing the danger signs of pregnancy complications and quickly deciding to transport the pregnant woman to an EOC facility. The importance of regular ANC visits was also promoted to invoke the facility driven health care seeking behavior. The campaign portrayed positive family role models, such as caring husbands and mothers-in-law. Campaign messages were reinforced using an EOC logo to symbolize emergency and danger. The EOC logo was visible on all mass media products and at EOC provider sites.

The BCC program also used community level activities to engage men, women, families and communities in the RMM program to recognize danger signs and three delays. Communities participated in public program launches at the upazila level involving local leaders, providers and influential. Billboards, posters and other local media promoted the importance of EOC and antenatal services. Local organizations, clubs and journalists received training and orientation to help communities develop strategies for providing emergency support to go to EOC sites. Trained traditional birth attendants and untrained village practitioners received program orientation and support materials, including an EOC Pictorial Card and Leaflet on Safe motherhood to help them identify complications and refer cases immediately. All these community level activities were designed to complement and reinforce the national campaign on EOC logo and messages on the five danger signs and safe motherhood.

The program was designed so that all levels and all components of the program, from national level mass media to the upazila social mobilization programs, were consistent and mutually reinforcing to the integrated behavior change communication approach. The pregnant women and their families were made more aware of the potential complications at birth and the need to act immediately to get to a facility or to a trained provider from watching TV or listening to the radio. They saw the pictorial card being used by the provider on TV and heard it on the radio. Behaviors of mothers in law and husbands were modeled in television ads and reinforced in informational programs and articles. All parts of the system worked individually and together to support the program and reinforce the positive behavior change of the beneficiaries.

### **3. Program Objectives**

- Increased awareness of the warning signs of pregnancy complications
- Increased proportion of complicated pregnancies seeking EOC
- Increased proportion of households where preparations were carried out to respond to pregnancy complications
- Increased number of communities where local resources were mobilized to respond to pregnancy complications
- Increased support from husbands and mothers-in-law as decision makers in seeking EOC treatment
- Increased use of ante-natal care

### **4. Key Audiences**

#### **4.1. Primary Audiences**

- Pregnant Women and their Families
- Husbands of pregnant women
- Mothers in law of pregnant women

#### **4.2 Secondary Audiences**

- EOC providers
- Health and Family Planning Service Providers
- Outreach workers
- Community leaders
- Community networks

### **5. Channel Strategies**

- National mass media (radio, TV)
- Local media (radio, outdoor, selected print)
- Community based media (meetings, social networks, rallies, local events)
- Interpersonal communication

## **6. Interventions**

- Base line survey
- Campaign
- Orientation and Future Search Conference (FSC)

## **Objectives of the Study**

The broad objective of the study is to ascertain the effectiveness of the raising knowledge, attitude and practice (KAP) of the target audience within the specified areas, as a result of the program interventions as compared to the baseline study.

The specific objectives of the study are:

- To assess the knowledge and awareness about maternal and child health of the family members of the selected households including mothers in law;
- To assess whether the number of pregnant women increased antenatal visits due to motivational activities;
- To ascertain the number of institutional deliveries due to interventions and motivational campaign
- To ascertain the number of caesarian sections performed at EOC facility
- To investigate sources of receiving BCC information on various messages related to EOC services
- To assess knowledge and awareness of the service providers about BCC materials
- To assess the skilled of EOC service providers
- To assess the knowledge and awareness of the clients about availability EOC service and sites
- To assess the number of cases referred to from lower facility to specialized facility

## **Sample Design and Sample Size**

A total of 32 villages were sampled from 16 unions amongst 8 upazilas out of 30 intervention upazilas. A total of eight districts were covered under the study. The districts were Manikgonj, Faridpur, Jamalpur, Chittagong, Sylhet, Pabna, Jessore and Bhola i.e. each administrative division was covered. Five categories of sample taking 50 from each category were selected for detail interview. Thus a total of 2000 target sample respondents were interviewed by using a pre-designed and pre-tested questionnaire. More specifically 2 villages per union, 2 unions per upazilas and 1 upazila per district were selected by using systematic random sampling. Approximately 62-63 respondents were targeted to interview from one village considering 12-13 respondents per respondent groups.

First sample households were selected randomly. From each selected household the following categories of sample respondents were listed for the study. The various categories of sample respondents were male (aged 15-59), female customer (within the reproductive age), new mothers (aged 15-49 with 1 to 2 years old child), pregnant mother and mother-in-law. From each category 400 respondents were selected for the study.

The household list consisted of listing of all household members to identify sample respondents. For each listed person, the survey collected basic information such as age, sex, marital status, education and relationship with the head of the household. The service providers were categorized by designation that received training by BCCP and the community persons were selected directly from the field who also received orientation about EOC related issues from BCCP.

<b>Technique Used</b>	<b>Category of respondents</b>							<b>Total</b>
	<b>Male</b>	<b>Female customer within reproductive age</b>	<b>New Mother with 1 to 2 year old child</b>	<b>Pregnant Mother</b>	<b>Mother-in-law</b>	<b>Service Provider</b>	<b>Opinion Leader</b>	
<b>Quantitative:</b>								
<b>Structured interview</b>	400	400	400	400	400	-	-	2000
<b>Qualitative:</b>								
<b>FGD</b>	4	4			4	4	-	16
<b>In-depth Interview</b>				30	30	30	30	120

## **Training and Field Work**

The field team for the survey was recruited and the recruitment criteria included educational attainment, maturity, and experience, with other surveys. Initially training consisted of classroom lectures on how to complete the questionnaires, with mock interviews between participants to gain practice in asking questions. Towards the end of the training course, the participants spent several days in practice interviewing in various places out side Dhaka. Trainees whose performance was considered superior were selected as supervisors and field editors. Each team consisted of a male supervisor, a female field editor, and three female investigators and one male field investigator. During the fieldwork, emphasis was placed on the quality of data. ACNielsen fielded quality control teams to check on the fieldwork, feedback was given to teams after each phase to improve on the quality of data collection. Staff from BCCP monitored the filed work by visiting teams in the field. Fieldwork started on October 2002 and was completed by January 2003.

## Data Processing

All the questionnaires for RMM survey were brought to Dhaka for processing at ACNielsen. Data entry personnel were trained. The processing operations consisted of office editing, coding of open-ended questions, data entry, and resolving inconsistencies found by the computer edit programs. Data entry was done in Visual FoxPro and analyzed in SPSS/PC+.

## Coverage of the Sample

Table 1.2 shows the response rates for the survey. A total of 2481 households were selected for the study, of which 2000 households were occupied. The overall response rate was 81%. The principal reason for non-response among the target respondents particularly male respondents was the failure to find them at home despite repeated visits to the households.

<b>Results</b>	<b>Total</b>	<b>Female</b>	<b>Male</b>
Total Household contact	2481	1973	508
Successfully interviewed	2000	1600	400
Selected household respondents were not available	334	252	82
Respondents refused to talk	42	31	11
Household screened because of mismatch in respondent's criteria	105	90	15
Response rate %	81%	81%	79%

## Survey Period

October 2002 to January 2003

## Limitation of the Study

Some of the information collected in the baseline survey is not strictly comparable. Some information in the baseline was collected through pre-coded system while in the post-evaluation survey the information was collected through using opened ended questionnaire and vis-à-vis. Perception and understanding of pregnancy related problems might vary significantly one type of respondent to another type of respondent. Thus the information may be affected by response errors. Further intervention period was for too short and it was not enough time to bring major change in attitude and practice among the communities, who are traditional. Despite such limitations the findings suggest that given the appropriate interventions, which are acceptable and understandable to the community, would have significant impact in changing attitudes and behavior of the community.

## **Chapter 2**

# ***BACKGROUND INFORMATION OF RESPONDENTS***

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Household interviews were administered among the target audience to collect information on different health and population issues relating to maternal and child health as well as maternal mortality. Structured and open-ended questionnaires were used to gather the required quantitative information from the primary target respondents – males (husbands), females (pregnant mothers, new mothers and females with 1 to 2 years old child) and mothers-in law. A total of 2000 target sample respondents were interviewed. Only one respondent was interviewed from the household that has either husband or wife or mother in law. The respondents were asked different aspects relating reducing maternal mortality to assess the effectiveness of the program interventions.

### **2.1 Background Characteristics of Respondents**

Selected background characteristics of sample respondents were studied and this included age distribution by five-year age groups, educational achievement and occupational composition of the respondents. The RMM survey was used to collect data on some selected demographic and social characteristics of the respondents. The distribution of sample respondents from different categories interviewed in the survey is presented in Table 2.1.

A comparison of the different categories of sample respondents between the two surveys indicates that respondents on an average older by 2 to 7 years in the post-evaluation survey than that of the baseline survey. Level of education of the sample respondents belongs to different categories. On an average about 45.0% of the total respondents of this survey have formal education. Mothers-in-laws are large in numbers (84.8%) who have no education. 38.0% of the male respondents in the baseline survey reported that they had no education compared to 50.7% in the post-evaluation survey. 47.0% new mothers in the baseline survey indicated that they had no education compared to 44.8% in the post-evaluation survey. About 20.0% of the male respondents in the baseline survey had primary education compared to 23.3% in the post-evaluation survey. One in four new mothers in the baseline survey reported that they had primary education. The comparable figure in the post-evaluation survey was about 30.5%. The female customers in both the surveys had similar proportion of primary education, 24.9% in the baseline survey and 26.3% in the post-evaluation survey. (Appendix Table 1)

<b>Table 2.1: Background characteristics of the respondents</b>					
<b>Characteristics</b>	<b>Post-evaluation data</b> (Survey year 2002)				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
<b>Age</b>					
<18 yrs	-	2.8	1.8	4.8	-
18-25 yrs	12.5	55.5	51.5	61.0	-
26-30 yrs	22.8	23.0	25.3	21.5	0.5
31-35 yrs	27.8	13.0	13.3	10.0	2.8
36-40 yrs	18.0	5.0	5.8	2.5	10.0
41-45 yrs	9.8	0.8	2.3	0.3	18.0
46-50 yrs	6.3	-	0.3	-	21.0
51-55 yrs	2.0	-	-	-	13.3
55+ yrs	1.0	-	-	-	34.5
Average age (in yrs.)	35	26	27	25	56
<b>Level of education</b>					
No education	50.7	44.8	50.5	45.8	84.8
Class I – V	23.3	30.5	26.3	26.0	13.5
Class VI – IX	15.0	19.8	19.0	20.8	1.3
SSC	4.3	4.3	1.8	4.3	0.5
SSC+	6.8	0.8	2.5	3.3	-
<b>N</b>	400	400	400	400	400

## 2.2 Occupation of the Respondents

The occupational composition of the respondents both in the baseline and post-evaluation survey was collected and the information is presented in Table 2.2. The major occupation of the different respondents are summarized in below:

- Most of the female respondents (new mother, female customer, pregnant mother and mother in law) were housewives at the time of both the surveys
- The most dominant of the occupations of male respondents in the baseline survey were farmers followed by small business, services, day laborer rickshaw-puller/van-driver, and large business. The comparable situation in the post-evaluation survey was marginal farmer followed by small business, rich farmer, rickshaw/ van driver, day laborer, Go-NGO services, large business and skilled laborer.

<b>Table 2.2: Major occupation of the respondent</b>				
<b>Description</b>	<b>Baseline data</b> (Survey year 2000)		<b>Post-evaluation data</b> (Survey year 2002)	
	Male	Female	Male	Female
Housewife	-	97.5	-	96.3
Unemployed	1.5	-	0.5	0.3
NGO	.	-	4.5	0.3
Service	7.7	-	5.3	1.6
Day labor	8.0	-	11.8	-
Small Business	19.2	-	17.8	-
Large business	4.7	-	5.3	-
Farmer	44.0	-	37.3	-
Rickshaw/Van puller	6.7	-	9.5	-
Others	8.2	2.5	8.0	1.5
<b>N</b>	<b>402</b>	<b>1608</b>	<b>400</b>	<b>1600</b>

### 2.3 Exposure to Mass Media

Information on media exposure is shown in Table 5.6 for different target sample respondents. In the baseline survey about one in four had TV exposure and this has increased to 33.0% in the follow up survey; radio increased from about 27.9% to over 31.3% and newspaper increased from about 7.9% to 10.4%.

<b>Table 2.3: Exposure to different mass media</b>		
Percentage distribution of respondents who have exposure to different mass media		
<b>Exposure to Media</b>	<b>Baseline</b> (Survey Year 2000)	<b>Post-evaluation</b> (Survey Year 2002)
TV	25.3	33.0
Radio	27.9	31.3
Newspaper	7.9	10.4
<b>N</b>	<b>2010</b>	<b>2000</b>

## **Chapter 3**

### **MARRIAGE AND BIRTH- KNOWLEDGE AND PRACTICE**

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In Bangladesh about 50% marriages are adolescent marriages and result of that child bearing also begins early with implications in reproductive health. The risks of child bearing are particularly high in adolescent ages and maternal malnutrition and inappropriate caring practices aggravate it. The disadvantaged situation of women and their adverse social and economic status contributes to many health and nutritional problems they face. Maternal mortality being considered an indicator of the overall situation of women in a country, the approach hence, needs to be a more comprehensive nature, one of the social development. The section deals with several issues related to birth planning and marriage.

Early childbearing significantly ramifies at personal, societal, and global levels. For the individual women, early age at childbearing can shape and alter her entire future life (Singh. 1998). Childbirth at an early age is unsafe for adolescent mothers and their infants than older women, in terms of risks of morbidity and mortality. Infants of adolescents are more likely to be premature and low birth –weight and to experience higher incidence of mortality as compared to older mothers. From social context, the most important consequence of early pregnancy is the restrictions of future opportunities for improved socio-economic status. Although the social and economic consequences for an adolescents of having a baby will depend on her particular cultural, familial and community settings, the physical or health consequences for the mother and her child are universally recognized as problem. Though the biological state of an adolescent girl does not permit her childbearing, the medical risk of early pregnancy for young mothers and their children is more than for mothers who are beyond 20.

#### **3.1 Age at First Birth**

The age at which a woman begins her child bearing is very important in both the demographic and health context. The demographic consequence of the age at first birth is the increase in family size. Further, younger ages at childbirth imply higher fertility and child bearing at an early age is also associated with an increased risk of pregnancy complications, birth defects and maternal and child mortality.

In the baseline 3.6% respondents suggested age at first birth should be within 17 years as opposed to little over 3.1% in the post-evaluation indicating respondent's awareness about appropriate age at first birth due to program interventions. Similarly, in the baseline survey about 88% of the respondents suggested appropriate age at first birth should be within 18-25 years. The comparable percentage is little over 91 % in the post-evaluation. Gender Differential regarding appropriate age at first birth shows that little over half of the male respondents opined that 21-25 years was appropriate age at first birth while the figure for female respondents was about 60.6% suggesting that females are more aware of the risk factors associated with age at first birth. (Table 3.1)

<b>Table 3.1: Appropriate age of first child birth</b>						
Percentage distribution of responses about the appropriate age of a woman of giving first child birth						
<b>Mentioned age</b>	<b>Baseline data</b> (Survey Year 2000)			<b>Post-evaluation data</b> (Survey Year 2002)		
	Male	Female	Total	Male	Female	Total
<18 yrs	5.0	3.2	3.6	3.5	3.0	3.1
18-20 yrs	26.1	29.8	29.1	40.5	30.7	33.1
21-25 yrs	59.7	58.4	58.7	50.3	60.6	58.0
26-30 yrs	8.5	7.0	7.3	2.8	2.4	2.5
31-35 yrs +	0.7	0.4	0.5	0.3	0.0	0.1
Don't Know/ Can't Say	-	1.2	0.9	2.8	3.4	3.3
<b>N</b>	<b>402</b>	<b>1608</b>	<b>2010</b>	<b>400</b>	<b>1200</b>	<b>1600</b>

### 3.2 Birth Interval

Over the years research has consistently demonstrated that, when mothers space births at least 2 years apart, their children are more likely to survive and to be healthy. DHS data from several countries demonstrate that compared with children born less than 2 years spacing a previous birth; children born 3 to 4 years spacing a previous birth rate are (Population Reports, 2002):

- 2.3 times more likely to survive the first year of life;
- 2.4 times more likely to survive to age five

While the biological and behavioral mechanisms that make shorter birth intervals riskier for infants and mothers are little understood, researches suggest such factors as maternal depletion syndrome, premature delivery and milk diminution. Studies also suggest that shorter birth intervals may not allow mothers enough time to restore nutritional reserves that provide for adequate fetal nutrition and growth. UNICEF and BCCP developed communication materials on the benefit of spacing between births. This section investigates the effects such communication in the community on the average birth interval. The modal value suggests that respondents in both the surveys preferred gap between two births was 5 years and above. *Appendix Table-7.*

Gender differentials are also investigated about appropriate years of interval between two pregnancies. As evident from the information male prefers lower interval between two births while females prefer higher birth interval between two births. For instance, in the follow up survey 47% of the males reported that gap between two pregnancies was 5 years and above compared to 52.2% by the female respondents indicating that females are more aware about the benefits of longer birth intervals than their counterparts. The overall mean birth interval as reported by the respondents in the post-evaluation was 4.3 years compared to 4.2 years in the baseline survey suggesting that behavioral change communication and social mobilization has brought some changes in the attitudes of communities about birth spacing (Table 3.2). However, change is not much as expected.

**Table 3.2: Gap between two child**

Percentage distribution of responses about the appropriate years of gap between two child of a woman by male and female respondents

Responses	Baseline data (Survey Year 2000)			Post-evaluation data (Survey Year 2002)		
	Male	Female	Total	Male	Female	Total
1 yr	-	0.2	0.1	1.3	1.0	1.1
2 yrs	11.2	7.3	8.1	10.1	7.4	7.9
3 yrs	28.1	16.0	18.4	16.2	15.2	15.4
4 yrs	15.7	9.3	10.6	25.3	23.2	23.6
5 years or above	45.0	67.2	62.8	46.5	52.2	51.1
Don't know/Can't say	-	-	-	0.5	1.0	0.9
Mean interval	3.9	4.3	4.2	4.0	4.4	4.3
<b>N</b>	<b>402</b>	<b>1608</b>	<b>2010</b>	<b>400</b>	<b>1600</b>	<b>2000</b>

### 3.3 Ideal Number of Children a Family Should Have

Asking a question derived information on what women and men consider ideal number of children a family should have if they start their family again now. The information obtained in this regard is presented in Table 3.3 and *Appendix Table-8*. Across the respondents about three fourths of the respondents desired two children. The average number of children was little over two children per family. There was no difference between the baseline and post-evaluation.

In order to see whether there exists any difference in the ideal number of children between the male and female respondents. The data show that the modal value is 2 children since about three fourths of the respondents in the baseline survey and two thirds of the respondents in the post-evaluation reported that two children as the ideal number of children.

<b>Table 3.3: Ideal number of children a mother should have</b>						
Percentage distribution of respondents about the ideal number of children of a woman should have by male and female respondents						
<b>Responses</b>	<b>Baseline data</b> (Survey Year 2000)			<b>Post-evaluation data</b> (Survey Year 2002)		
	Male	Female	Total	Male	Female	Total
1	2.2	1.5	1.6	5.8	2.5	3.1
2	73.5	70.8	71.3	75.8	72.7	73.3
3 or more	23.3	25.8	25.3	13.3	20.8	19.3
Not Fixed	0.5	1.3	1.1	4.5	3.5	3.7
Don't know/Can't say	0.2	0.5	0.4	0.8	0.7	0.7
Mean	2.5	2.3	2.3	2.2	2.2	2.2
<b>N</b>	<b>402</b>	<b>1608</b>	<b>2010</b>	<b>400</b>	<b>1600</b>	<b>2000</b>

### 3.4 Appropriate Age at Marriage of a Women

Within this background all the respondents were asked the appropriate age at marriage of women. Comparing the information by sex it has been revealed from the information that there was no difference on the opinion of appropriate age at marriage. However, there is a tendency that male respondents reported lower appropriate age at marriage than the female counterparts. For instance, in the follow up survey 59.5% of the male respondents reported appropriate age at marriage was between 14 year to 19 years as opposed to about 52.1% by the female respondents (Table 3.4).

<b>Table 3.4: Appropriate age of marriage of women</b>						
Percentage distribution of responses with regards to appropriate age of marriage of woman						
<b>Response</b>	<b>Baseline data</b> (Survey Year 2000)			<b>Post-evaluation data</b> (Survey Year 2002)		
	Male	Female	Total	Male	Female	Total
<14 yrs	4.0	4.8	4.6	1.5	2.7	2.4
14-16 yrs	13.7	12.4	12.6	11.5	8.1	8.9
17-19 yrs	40.0	33.9	35.1	48.0	44.0	45.0
20-25 yrs	41.0	48.1	46.7	37.0	43.0	41.5
26-30 yrs	1.2	0.5	0.6	-	0.0	0.0
Don't Know/Cant Say	-	0.4	0.3	2.0	2.3	2.2
<b>N</b>	<b>402</b>	<b>1608</b>	<b>2010</b>	<b>400</b>	<b>1200</b>	<b>1600</b>

In the baseline survey one in 10 mothers in law mentioned that appropriate age at marriage for females was less than 14 years but in the post-evaluation only about 6% percent mothers in law mentioned that appropriate age at marriage for females was less than 14 years. According to baseline survey most of the respondents reported appropriate age at marriage between 20-25 years. In the post-evaluation relatively higher proportion of the respondents mentioned that appropriate age at marriage for females should be between 17-19 years, which is almost similar to government rule. (*Appendix Table-3*)

### **3.5 Benefits of Marriage and Child Birth at Appropriate Age**

Respondents think that marriage and child birth at appropriate age has the following benefits:

- Mother does not suffer from malnutrition
- Both mother and child stay in good condition
- To avoid death of mother
- To avoid anemia of mother
- To avoid the risk of giving early birth to a child

## Chapter 4

### MATERNAL HEALTH - KNOWLEDGE AND PRACTICE

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One of the highest priorities is improving safe motherhood. Bangladesh is traditionally exhibiting low rates of antenatal care and extremely low rates of institutional delivery with skilled attendants. During the last decade there have been efforts to expand emergency obstetric care (EOC) facilities with the aim of increasing access to safe delivery services. This section gives an opportunity to assess the safe motherhood situation where BCC through field workers are provided to increase knowledge and access to services.

#### 4.1 Antenatal Check-up

Complications during pregnancy are an important cause of maternal and child morbidity and mortality. Detecting and monitoring these complications is a crucial component of safe motherhood. The RMM survey indicates that 45.5% women who were pregnant and 79.2% women who just delivered their baby during the intervention period did receive antenatal care (Table 4.1). There is a truncation bias in the information since some pregnant women will visit health facility for ANC till the delivery. The high percent of pregnant mothers who reported did not visit health facility may be due to the fact they are in the various stages of their pregnancy and some of them may not yet passed the first trimester. This was higher than that found in the BDHS 1999-2000. The 1999-2000 BDHS data showed that 63% mothers did not visit health facility for antenatal check-up.

<b>Table 4.1: Women received ANC during pregnancy</b>			
Percent distribution of respondents who's wife/daughter-in-law/herself received ANC during pregnancy by category of respondents			
Number of times received ANC	Post-evaluation data (Survey Year 2002)		
	New Mother	Pregnant	Total
1	17.3	16.0	17.0
2	21.8	17.0	19.0
3+	40.3	12.5	26.3
Did not Visit	20.8	54.5	37.8
<b>N</b>	<b>400</b>	<b>400</b>	<b>800</b>

#### 4.2 Reasons for not Visiting Health Center/Facilities

The respondents who did not visit health facility for antenatal care services were asked to provide reasons for not visiting the health facility. In the baseline survey about 89% males reported that they did not think it was necessary and this reduced to about 38% suggesting an important communication and social mobilization effect about the necessity of visiting pregnant mothers to health facility. Similarly two thirds of the mothers in law reported that they did not feel ANC visit was necessary and this has reduced to 35% showing great impact on the motivation

program about the importance of visiting health facility during the pregnancy. Over 80% female customers in the baseline survey provided reason that it was not necessary to visit health facility for ANC services. Table 4.2 shows that reason for not visiting any place during pregnancy. In the baseline the most significant reason for not visiting any health centers was no problem occurred possibly due to non-recognition of danger signs. In the post-evaluation due to motivation and other interventions this has reduced to only about 40% indicating substantial impact of BCC activities at the community level. Baseline survey data shows that 655 numbers of pregnant and new mothers did not visit health centers for ANC, this was reduced to 302 in post-evaluation. Due to increased intervention exposures such as pictorial charts and BCC there was increased percentage of pregnant women and new mothers who visited for ANC recognizing the problems.

<b>Table 4.2 : Reasons for not visiting health centers</b>						
Percentage distribution of the New Mothers and Pregnant Mothers about the reasons not to visit health centers for ANC						
Reasons	Baseline Data (Survey year 2000)			Post-evaluation data (Survey year 2002)		
	New Mother	Pregnant Mother	Total	New Mother	Pregnant Mother	Total
Didn't occur problem	88.6	69.7	74.5	37.5	39.6	39.5
Due to financial problem	11.4	30.1	25.5	62.5	60.4	60.5
<b>N</b> (Those who didn't visit for ANC)	267	388	655	83	219	302

### 4.3 Knowledge on Pregnancy Complications

Knowledge about life-threatening conditions of pregnancy is a precursor to treatment seeking behavior and reductions in maternal mortality and morbidity. Knowledge and awareness about pregnancy related complications by respondents would help to take them to health facility for EOC services. In the baseline survey most of the respondents mentioned complications, which are not directly related to pregnancy complications. For instance, aversion of food, weakness, oedema is not directly related to pregnancy complications. As expected relatively more respondents in the post-evaluation survey mentioned pregnancy-related complications, which included blurred vision, severe headache, convulsion and excessive bleeding. The better knowledge about pregnancy related complications in the post-evaluation survey could be attributed to the distribution of pictorial chart in the community, which describes each problem with a demonstration. *Appendix Table-12* shows the percentage of respondents who reported perceived complications during pregnancy. In the post-evaluation survey relatively a good proportion of the respondents (males and females) mentioned pregnancy related complications, which were blurred vision (20.9%), severe headache (26.9%), convulsion (22.4%) and excessive bleeding (about 12.5%). This information suggests that knowledge and awareness about pregnancy related complications have increased in the post-evaluation survey compared to the baseline survey. This is due to the distribution of BCC materials such as pictorial card containing information on complication during pregnancy and delivery.

Knowledge and awareness regarding complications during pregnancy was also assessed. As evident from the information more females in both baseline and post-evaluation surveys are aware of the complications during pregnancy than their counter males. For instance, in the post-evaluation survey only 8.0% of the males respondents stated that they were aware of blurred vision pregnancy complication. The comparable percentage for females was little over 24%. Similarly knowledge and awareness of pregnancy related complications such as severe headache, swelling in hand/leg, convulsion and excessive bleeding for males were 20.0%, 19.8% 17.3% and 14.5% respectively. The comparable figures for female respondents were higher, 28.7%, 35.3%, 23.7% and 12.5% respectively. Knowledge of pregnancy complications was poor in the baseline survey than that of the follow -up survey. For example, about 9.5% males and 7.7% females knew convulsion as pregnancy complication in the baseline survey. In the post-evaluation this has increased to over 17% and 24% respectively (Table 4.3). The difference in awareness may be attributed to the distribution of pictorial card among the target population and as well as community members.

<b>Table 4.3: Complications may occur during pregnancy</b>						
Percentage of respondents or respondent's wife or daughter-in-law or herself reported about the complication that may occur/faced during pregnancy						
<b>Responses</b>	<b>Baseline data (Survey year 2000)</b>			<b>Post-evaluation data (Survey year 2002)</b>		
	Male	Female	Total	Male	Female	Total
Blurred vision	0.0	1.0	0.8	8.0	24.1	20.9
Severe headache	0.0	0.0	0.0	20.0	28.7	26.9
Swelling in head/leg	0.0	0.0	0.0	19.8	35.3	32.2
Convulsion	9.5	7.7	8.0	17.3	23.7	22.4
Excessive bleeding	1.0	0.1	0.2	14.5	12.5	12.5
Edema	19.9	14.0	15.2	0.0	0.0	0.0
Fever	15.7	17.4	17.1	9.3	9.8	9.7
Weakness	37.8	65.7	60.1	0.0	0.0	0.0
Aversion to food	51.5	88.6	81.1	4.0	4.0	4.0
<b>N</b>	<b>402</b>	<b>1608</b>	<b>2010</b>	<b>400</b>	<b>1600</b>	<b>2000</b>

The information indicates that more related problems of the pregnant are elicited in the post-evaluation survey than in the baseline survey. The post-evaluation data also suggest that more females are aware of pregnancy related problems than their counterparts.

#### **4.4 Place of Delivery**

*Appendix Table-13* presents the information on place of delivery reported by the different categories of respondents. The place of delivery are summarized below:

- Roughly two thirds of the respondents belonging to different categories mention about own home as the place of delivery.

- More than one third of the mothers in law reported maternal house of wife as the place of delivery
- About 5% customers mentioned about the government health facilities as the place of delivery
- Over 11% mothers in law mentioned about the government health facilities as the place of delivery. This is almost 4% higher than the baseline survey-indicating mother in laws are understanding about importance of delivery in the institutional facilities.

#### **4.5 Type of Delivery**

The information on type of delivery is also obtained and is presented in *Appendix Table-13*. The information suggests that:

- About 98% deliveries were normal reported by all types of respondents.
- Slightly over 2% deliveries were caesarian delivery.
- In the baseline about 3% mothers in law mentioned about caesarian deliveries as opposed about 6% in the post-evaluation survey. The increased figure shows that increased number availed institutional services that may be due to social mobilization and their increased awareness about complicated pregnancies.

#### **4.6 Type of Person Assisted During Delivery**

Institutional delivery is still low in Bangladesh. The 1999-2000 BDHS data show that medical personnel assisted only 12% births. The present survey also suggests that situation did not improve much. The information in this regard is presented below:

- About 3% male respondents mentioned that their wives last deliveries were assisted by MBBS doctor
- About 8% new mothers mentioned that their last deliveries were assisted by MBBS doctor and the nurse
- Over 8% currently married women reported that their last deliveries were assisted by MBBS doctor and the nurse
- 18% male respondents mentioned about trained birth attendant. The comparable figures were 22% and 20% respectively by new mother, female customer

#### **4.7 Place of Delivery of ‘New Mothers’**

Information on place of delivery of new mothers was also obtained in both the surveys and is presented in Table 4.4. In the baseline survey only 3% new mothers reported that their deliveries were institutional. The comparable figure was over 8% in the post-evaluation survey. Among the deliveries 5% were in government hospital and 4.3% were in private clinics. The change in the proportions is statistically significant at 5% level of significance.

<b>Table 4.4 : Place of delivery</b>		
Percentage distribution of new mothers with regards to place of delivery		
<b>Place of delivery</b>	<b>Baseline data (Survey Year 2000)</b>	<b>Post-evaluation data (Survey Year 2002)</b>
House	97.0	90.7
Govt. Hospital	1.2	5.0*
Private Hospital	1.7	4.3*
<b>Total</b>	<b>402</b>	<b>400</b>

\* Significant at 5% level

#### **4.8 Decision Makers about the Place of Delivery**

*Appendix Table-14* gives the distribution of respondents by type of persons who took decision about place of delivery by different respondents.

- More than half of the male respondents reported that husband and wife take decision regarding the place of delivery in the post-evaluation survey compared to 31% in the baseline survey.
- About 35% mothers in law in the baseline survey reported that they take decision as against about 23% of the respondents in the post-evaluation survey.
- In the baseline survey 44% male respondents mentioned about self-decision compared to over 20% in the post-evaluation survey.

The difference between the baseline survey and post-evaluation survey may be due to social mobilization and BCC interventions for the reduction of MMR.

#### **4.9 Knowledge and Awareness about Complications During Delivery**

Knowledge and awareness regarding problems during pregnancy was assessed from all type of respondents and it is presented in *Appendix Table-15*.

- With exception of pregnant mothers more than half of the respondents (ranged from over 59% male respondents 53% mothers in law reported complication of prolonged delivery. The comparable figure for pregnant mothers was 44%.
- Between 25 to 33% of the different respondents reported complication during pregnancy was protrusion of the baby's limb instead of head at the time of delivery.
- Between 22 to 38% mentioned complication of convulsion.
- About 8% to 34% mentioned complication about retained placenta

The information is not comparable with the baseline information because in the baseline the information is based on the coded responses while in the post-evaluation survey information is based on spontaneous responses.

#### **4.10 Preparedness to Overcome the Delivery Complications**

Generally, there is no preparedness of the family for a delivery. So when complication arises they do not know what to do mainly because of lack of money. As a part of the community mobilization families are motivated and encouraged for savings so that they can meet the emergency needs if the mother is to move to health facility for pregnancy related complications. The mother may need blood and the family can buy it in case of need. The campaign was done in 30 Upazilas through community mobilization.

The respondents were asked whether they took any preparation to overcome the delivery complications. The respondents who reported that they took preparation of delivery complications were asked to state that type of preparation they took to overcome delivery complications. The information is shown in *Appendix Table-16*.

- An overwhelming majority (69% to about 90%) mentioned about money
- Fixed hospital if needed to go (20% over 54%). A little over 54% of the mothers in law mentioned about fixation of hospital indicating their exposure to knowledge of pregnancy related problems.
- Fixed transportation if needed to go for complication (16% of the pregnant mothers to 43% of the male respondents).

#### **4.11 Type of Post Delivery Complications**

Respondent's knowledge on post delivery complications within 42 days of the delivery was also assessed. The information is presented in *Appendix Table-17*.

- The most stated post complication delivery was lower abdominal pain. It ranged from 4% of pregnant mothers to 50% female customer.
- Oedema post delivery complication reported by 15% male respondents to as high as over 24% by pregnant mothers.
- The other post delivery complications were fever and severe headache. Fever ranged 2.3% pregnant mothers to 24% by mothers in law and severe headache reported by 15% to 19%

## Chapter 5

### PROGRAM INTERVENTIONS AND IMPLICATIONS

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RMM program promoted a national BCC campaign to educate the people on the importance of recognizing the danger signs of pregnancy complications and quickly deciding to transport the pregnant woman to an EOC facility. The importance of regular ANC visits was also promoted to invoke the facility driven health care seeking behavior. The campaign portrayed positive family role models, such as caring husbands and mothers-in-law. Campaign messages were reinforced using an EOC logo to symbolize emergency and danger. The EOC logo was visible on all mass media products and at EOC provider sites. The campaign included development and promotion of mass media and local level interventions, which were EOC Logo, EOC Pictorial Card, Leaflet for Safe motherhood, BTV program coverage, Billboard, Enter-Educate TV Programs, Service Providers Orientation, Community Leaders Orientation, Future Search Conference etc.

#### 5.1 Exposure to Campaign Interventions and Level of Received ANC

Table 5.1 shows the percentage distribution of respondents who received ANC during pregnancy by type of exposures (exposed and non-exposed) new and pregnant mothers regarding campaign interventions at local and mass media levels. In the post-evaluation survey 18.0% of the new and pregnant women who exposed to EOC-card/poster/billboard, health workers conducted IPC, involved in different meetings, rallies etc. visited health facility three or more times compared to 15.2% who are not exposed. Similarly, 13.9% of the new and pregnant mothers exposed to mass media interventions such as TV/Radio visited health facility three or more times. The comparable figure was 10.0%.

<b>Table 5.1: Exposure to Campaign Interventions and Received ANC</b>				
Percentage distribution of new mothers and pregnant mothers who received ANC by not exposed and exposed to campaign interventions during pregnancy				
<b>Number of times received ANC</b>	<b>Exposure to campaign interventions and level of received ANC (Post-evaluation data, 2002)</b>			
	<b>Local level intervention (EOC card/ Poster/Billboard/IPC/Meetings etc.)</b>		<b>Mass Media Intervention (TV/Radio)</b>	
	<b>Not exposed</b>	<b>Exposed</b>	<b>Not exposed</b>	<b>Exposed</b>
1	27.5	30.0	30.1	41.0
2	15.9	26.2	17.4	24.9
3+	15.2	18.0	10.0	13.9
Not visited	42.0	25.8	42.6	20.2

## 5.2 Exposure to Campaign Interventions on Delivery Complications

Table 5.2 shows exposure to campaign among the respondents of non-exposed and exposed to both local and mass media interventions in the post-evaluation survey. In all the instances correct knowledge of delivery complications is relatively higher from non-exposed to exposed respondents. This change in the knowledge of delivery complications attributed to the both local level intervention as well as mass media intervention.

<b>Table 5.2: Knowledge on delivery complications</b>				
Percentage distribution of all respondents with regards to knowledge on delivery complications				
<b>Responses</b>	<b>Exposure to campaign interventions</b> (Post-evaluation data, 2002)			
	<b>Local level intervention</b> (EOC card/ Poster/Billboard/IPC/meetings etc.)		<b>Mass Media Intervention</b> (TV/Radio)	
	<b>Not exposed</b>	<b>Exposed</b>	<b>Not exposed</b>	<b>Exposed</b>
	Excessive bleeding/ Placenta does not come out	84.1	94.6	79.2
Severe headache	49.1	86.4	62.7	86.3
High fever	59.9	91.9	66.5	83.3
Prolonged delivery pain	72.4	91.9	69.9	86.3
Convulsion	62.2	84.6	76.3	81.2
<b>Did not response any of the above</b>	4.5	6.9	7.1	4.3

Multiple responses

## 5.3 Exposure to Campaign Interventions and Delivery Preparedness

Table 5.3 provides exposures to campaign interventions and delivery preparations in the post-evaluation survey. The information demonstrates both local level and mass media interventions, having significant impact on the preparation to overcome delivery complications. For example, 30.5% of the respondents (new and pregnant mother) reported that they fixed transportation, which is due to local level interventions. This has increased to 43.6% who exposed to mass media interventions. Fixed doctor beforehand who had exposed to local and mass media interventions were 27.4% and 31.4%, the comparable figure for non-exposed respondents were 15.1% and 8.9%. The finding clearly demonstrates increased level of preparations that exposed to both types of interventions (local level and mass media), however, with exception of preparation of money, mass media has significant impact than that of the local level intervention.

<b>Table 5.3: Preparation to overcome delivery complications</b> Percentage distribution of new mothers and pregnant mothers who have taken preparation to overcome delivery complications				
<b>Type of Preparation</b>	<b>Exposure to campaign interventions and delivery preparedness (Post-evaluation data, 2002)</b>			
	<b>Local level intervention (EOC card/ Poster/Billboard/IPC/meetings etc.)</b>		<b>Mass Media Intervention (TV/Radio)</b>	
	<b>Not exposed</b>	<b>Exposed</b>	<b>Not exposed</b>	<b>Exposed</b>
Made money available	21.3	35.9	18.6	26.5
Fixed the blood donor	0.5	1.8	0.6	2.9
Fixed the transportation if needed to go anywhere	9.4	30.5	9.1	43.6
Fixed the hospital if needed to go	6.6	19.6	7.8	20.2
To fix doctor beforehand	15.1	27.4	8.9	31.3
Do not have any preparation	61.2	36.5	58.2	30.1

Multiple responses

#### 5.4 Logo Identification

As mentioned before, intervention of different types were reached to target audiences with messages of reducing maternal morbidity and mortality in rural Bangladesh. In the post-evaluation survey respondents were asked whether they have seen/viewed the logos. Overall about 33% of the respondents of different categories reported that they have seen the "smiling sun Logo" and about two thirds (64.7%) of the respondents stated that they have seen the EOC logo. This information implies Logo has demonstrated effect on the target audiences. (Table 5.4)

<b>Table 5.4: Logo identification</b> Percentage distribution of respondents who have seen/view the logos						
<b>Name of Logo</b>	<b>Post-evaluation data (Survey Year 2002)</b>					
	<b>Male</b>	<b>New Mother</b>	<b>Female Customer</b>	<b>Pregnant Mother</b>	<b>Mother in law</b>	<b>Total</b>
Smiling Sun Logo	50.3	32.5	31.8	35.3	13.5	32.7
EOC Logo	85.8	66.5	69.5	65.8	36.0	64.7
<b>N</b>	400	400	400	400	400	2000

#### 5.5 Source of EOC Messages

Sources of EOC messages were also collected in both the surveys. It appears from the Table 5.5 that local level interventions such as EOC-card/poster/billboard/IPC/meeting have significant

impact on messages relating to EOC. Mass media like TV/Radio plays a key role in changing the traditional behavior and accepting the new norms. (Table 5.5)

<b>Table 5.5: Source of EOC message/information</b>		
Percentage distribution of respondents who heard EOC messages/information from different sources		
<b>Source of information</b>	<b>Baseline (Survey Year 2000)</b>	<b>Post-evaluation data (Survey Year 2002)</b>
TV	34.8	39.7
Radio	11.2	19.7
Newspaper	5.2	6.6
Signboard/Billboard	11.4	37.2
Poster/EOC Card	11.4	22.4
<b>N</b>	<b>2010</b>	<b>2000</b>

## **Chapter 6**

### **QUALITATIVE FINDINGS**

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In order to supplement the quantitative finding perception of the community regarding pregnancy, delivery, planning and preparedness for the delivery and other important issues such as care during pregnancy and delivery were assessed. Besides in-depth surveys were also conducted to understand the perception, custom and practice of delivery and care of newborns.

This chapter comprises of the findings that were revealed from the focus group discussions and in-depth interviews that were conducted for the study. A total of 16 group discussions were conducted where the participants were males, females and mothers-in-laws. Likewise, a total of 120 in-depth interviews were also conducted as well among females, mothers-in-law, service providers and opinion leaders. These findings are presented below in brief.

#### **6.1 Perception about Antenatal Care**

##### ***FGD Findings***

###### **Male**

The findings from the focus group discussions indicate that most males know that mothers should be taken care during pregnancy and after delivery. Likewise, a lot of participants/respondents realize the importance of having nutritious supplementary foods, taking routine checkup, abiding by doctor's advice and refraining from doing heavy work during pregnancy. Fruits, vegetables, pumpkin, small fish, red vegetables, small fish, arum leaf were mentioned as important food items for mothers during pregnancy.

A male respondent stated, *"Caution should be taken when walking during pregnancy"*.

###### **Female**

The responses of the females show that they know the aspects of antenatal care and are mostly aware. The majority of them mentioned that the main aspect of antenatal care was taking nutritious food such as fruits, milk, eggs etc. They also stated that pregnant women should take iodized salt, vitamins, visit doctors for routine checkups, and abide by the advice of doctors.

A female respondent stated, *"Pregnant women should keep herself clean, walk regularly and refrain from lifting heavy items."*

Another respondent said, *"Have taken vaccination and had visited doctor whenever they felt sick."*

### Mothers in law

The study reveals that most mothers-in-law know that pregnant women should visit doctors and have meat, fish, and vegetables as well as take vitamins and refrain from doing heavy work.

A mother-in-law stated, *“Advice has to be given to women about pregnancy and they should be told to take nutritious food as well.”*

### **In-depth Interviews**

In-depth Interviews were conducted in the study among females, mothers-in-law, service providers and opinion leaders. Similar findings were revealed in these interviews where the females and opinion leaders also stated that pregnant women should take extra care during pregnancy by following the advice of doctors and taking nutritious food. Majority of them seemed to understand the importance of taking this extra care.

## **6.2 Pregnancy Complications**

### **FGD Findings**

#### Male

The group discussions revealed that the male participants of the survey knew some of the common pregnancy complications that occur among women during pregnancy. A couple of participants mentioned the death of mothers and children occurring due to lack of proper care and recognition of complications during pregnancy. These participants stated that death of mother and child occurred after delivery because they did not take any precaution like consulting doctor, arrangement for hospitalization at delivery time, appointment of trained TBA at delivery time etc.

A respondent cited a case by stating, *“No arrangement was made to hospitalize the pregnant mother in heavy cold weather resulting in death of both the mother and child.”*

#### Female

Females of the study mentioned some instances where they had heard of mothers and their newborn babies dying due to lack of knowledge of pregnancy complications. As a whole, the females could mention some of the complications occurring among pregnant women. The majority of them mentioned excessive bleeding, swelling of the body, fever and others as pregnancy complications. Furthermore, a few mentioned blurry vision, vomiting tendency, eclampsia, convulsion and excessive blood pressure as well.

One respondent cited a case where during the first delivery of a woman, the woman had failed to recognize her labor pain and as a result, no TBA was called in time. During the delivery the legs of the child came out first and the baby died due to this negligence.

It may be mentioned that other females stated that they heard of different stories where pregnant women and their babies were dying due to lack of knowledge regarding pregnancy complications.

A respondent stated, *“During delivery a mother suffers excessive bleeding causing death of mother and /or child. The condition of women become dangerous very quickly and either the pregnant woman or her baby succumb to death.”*

### Mothers in law

The mothers-in-law could mention some of the common complications occurring among women during pregnancy. The majority of them mentioned complications such as excessive bleeding, headache, burning of the eyes, swelling of legs and prolonged labor pains.

A respondent stated, *“My daughter- in-law had suffered burning in her arms and legs during pregnancy and she was advised to take full rest”*.

### **In-depth Interviews**

The in-depth findings indicate that all categories interviewed could mention some of the common modes of pregnancy complications as a whole. As a whole, the in-depth interviews are reflective of the findings found in the focus group discussions where respondents responses similarly.

## **6.3 Complications During and after Delivery**

Participants were asked to mention some of incidences of complications that occurred during and after delivery. The majority of participants from all categories stated that prolonged labor and retention of placenta in the womb were the main complications that were faced by women during and after delivery.

Accordingly other participants mentioned that in some cases women become senseless during delivery while continuous bleeding and headache also occurs among some women as well, especially after delivery.

A respondent stated, *“In general some problems can be solved in the house but at times we call the village doctor if problem is not overcome. Likewise, we also take the decision to take the patient to hospital or health center as well.”*

### **In-depth Interviews**

Through the in-depth interviews it was revealed that opinion leaders and service providers along with other categories also mentioned most of the complications occurring during and after pregnancy. The responses of the service providers was slightly better than the other categories and this is expected with them being health workers.

## **6.4 Place of Birth**

Across the different categories of participants/ respondents, it was revealed that the participants/ respondents think the suitable place for birth was the mother's house of the pregnant woman. Apparently, the majority of them think this because they stated that family and relatives are available to help during the delivery. However, a large number of participants/ respondents also stated that hospitals and clinics are the best place for delivery.

Findings show that pregnant mothers are usually sent to their parent's house for delivery. If the husband and parents-in-law suspect any complication, only then are the pregnant women sent to hospital. Apparently, participants/ respondents do not visit hospitals or health centers unless they face emergencies.

A female respondent said, *"Delivery in one's own house is suitable as long as routine checkups are conducted and complications do not occur."*

It may be mentioned that mothers-in-law who participated in the group discussions also think that the place of birth is vital for safe motherhood. Findings indicate that mothers-in-law think that the best place for delivery is the home as long as no complications occur.

A mother-in-law stated, *"If complication occurs then the hospital is the best choice. So a card should be collected from the hospital just in case even if no problems occur."*

## **6.5 Delivery Preparations**

The study asked the participants of the group discussions as well as the in-depth interviews to mention whether they took any delivery preparations from beforehand. Across the categories participants stated they took the following preparations. It may be mentioned that the majority of respondents, especially from the female category could mention these following modes of delivery preparations.

- Called a doctor
- Visited the local hospital or village health center
- Appointed TBA
- Arranged vehicle or some form of transportation
- Contacted service providers in health centers
- Kept the birthplace clean etc.

## **6.6 Postnatal Care (PNC)**

Most of the participants of the FGDs and in-depth interviews were found more or less aware of how to take care of a woman after delivery. The majority of them mentioned that women should have nutritious food as well as have routine checkups. Others mentioned that women should take vitamin capsules too.

## **6.7 Quality of Service Centers**

Participants/ respondents were queried upon the quality of services regarding the hospitals or health centers they usually visit for ANC and PNC services. It was found that in general participants/ respondents think the government hospitals are adequate and good but are not too satisfied with the quality of services. Most stated how private clinics were better in terms of treatment as well as behavior of doctors and so forth.

A female respondent stated, *“Some government hospitals are good with limited expenses but private clinics are so much better although they are expensive”*. (Jessore)

## **6.8 Source of Information**

The participants/ respondents were asked to mention from where they received information regarding antenatal care, delivery and other maternal and child health issues and immunization etc. Apparently, majority of them came to know various information from sources such as radio, television, and relatives, health service providers who make house visits as well as billboards depicting the 5 dangers of pregnancy. Besides these, they got information from the Sadar hospital and also from women (Health and Family planning workers) who visit their homes.

Furthermore, others have come to know from health staff of government organizations as well as from EOC card, leaflets and from attending health and family planning programs.

# **Chapter 7**

## ***SERVICE PROVIDER'S OPINION***

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### **FINDINGS FROM FGDs AND IN-DEPTH INTERVIEWS**

#### **7.1 Health Services Available**

The participants/ respondents were asked to name the various facilities and health centers available to people of the locality. The service providers mentioned facilities such as health complex, moveable medical center, Union health center, satellite clinic, community clinic and so forth. These centers offer general medical checkup as well as offer advice to pregnant mothers and also to their mother-in-laws.

#### **7.2 Services and Information Rendered**

The service providers were asked to mention what services and information they are offering to people. Apparently, most were advising people to do vaccination, take medical checkup, visit doctor at proper time and arrange TBA at the time of delivery. Others mentioned that they advise people to make delivery preparations from beforehand by arranging money, finding out blood donor's etc in the case of emergencies.

A participant stated, “ *We try to help pregnant mothers but they are referred to upazila hospital if their condition appears dangerous*”. (Dewangonj upazila, Jamalpur)

#### **7.3 Process of Giving Services**

The participants/ respondents stated in the group discussions as well as interviews that the modes of giving advice revolved around primarily providing health education and guardian counseling to people. Other modes of giving services is through distributing leaflets, flip charts and making people listen to the information on the reading cards. The service providers stated that they urge pregnant women to come to the health centers and thus make sure that they receive relevant advice.

#### **7.4 Antenatal Care**

As a whole, the service providers were found to have awareness on the different aspects of antenatal care. Most of the participants/ respondents know that pregnant women should keep herself clean, take vaccination, have a balanced diet, take supplementary food, take routine checkups, take ample rest and refrain from doing heavy work.

## **7.5 Barrier for Receiving Information and Services**

The study required finding out whether people face any barriers while receiving information and services in terms of ANC or PNC. Findings reveal that some mothers-in-law cause tension and oppose their pregnant daughter-in-laws from taking treatment during and after pregnancy. Some mothers-in-law oppose vaccination as well. However, after counseling they understand the importance of vaccination but in some instances mothers-in-law do not agree with the advice given by service providers.

A service provider stated, *“Pregnant women are very often sent to their mother’s house during pregnancy and miss the opportunity to receive our suggestions.”*

Another participant said, *“Most of the problems appear with mothers-in-law as they do not want to follow whatever advice we offer”.*

However, it may be mentioned that according to the service providers, mothers-in-law are becoming more understanding towards their daughter-in-laws than they previously were and are also realizing the need for extra care during pregnancy.

## **7.6 Ways to Overcome the Barrier**

Service providers were asked to mention the ways by which barriers could be overcome. Some of them stated how counseling illiterate and ignorant people, especially mothers-in-law would help to overcome some of the barriers. Others stated that the husbands of pregnant women should also be made more aware of the needs of their wives during pregnancy.

A participant stated, *“Most illiterate people do not understand easily but those who are literate tend to be more positive”.* (Bhangura)

## **7.7 Change of Behavior of Family Members**

According to the service providers there are some apparent changes that are occurring in terms of the behavior and attitude of the mothers-in-law towards their daughter-in-laws and husbands towards their wives. For instance, service providers have observed that more and more people are taking vaccination and mothers-in-law realize that pregnant women should take supplementary food and take adequate rest when pregnant.

A service provider stated, *“It was seen earlier on that the husband used to take the best food in the house but now more husbands give their wife good food while they are pregnant”.* (Bhangura)

Another participant cited, *“Earlier mothers-in-law did not pay heed to the advice we gave them. They used to say that we have given birth to many children and we did not ever need doctors so why the fuss about all this now? However, now they are changing their mind.”* (Dewangonj)

## **7.8 Drama Serial: 'Eyi Megh Eyi Roudro'**

Service providers were queried upon the drama 'Eyi Megh Eyi Roudro' (Now Cloud, Now Sunshine) and whether the drama was effective in spreading awareness. The findings show that some people have viewed the drama and among those who have viewed it, there has been impact since the incidence of maternal mortality has slightly decreased and the child death ratio is being decreased as well. After viewing the drama people have become aware about satellite clinics, vaccination as well as the need for ANC and PNC services in general too.

## **7.9 Ways of Decreasing Maternal Mortality**

Findings from the focus group discussions reveal that the service providers think the government has the role of decreasing the high rate of maternal mortality. Most of the participants/ respondents advocated for the government to have a stronger role in setting up facilities such as arrangement of training, ensuring health education, changing of diet pattern in family, free access of information, orientation for imam etc.

Other participants/ respondents stated that the government should develop and promote EOC as well as satellite and community clinic facilities. Along with this, it should enhance nutrition programs and publicize promotional activities. Furthermore, others mentioned that training needs should be ensured for service providers where field staff is made more professional and accountable.

A participant stated, *"The Chairmen of the Unions can help as they have a lot of influence and if they advise people, then people will listen to them"*.

## **Chapter 8**

### **DISCUSSIONS AND RECOMMENDATIONS**

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#### **Discussions**

Maternal mortality is a global problem and this is related to multifarious problems during the pregnancy and childbirth. Inadequate availability of preventive and promotive health care services in the area of antenatal care, adequate obstetric technique during child birth, lack access to lifesaving procedures in emergency and obstructed labour are important contributing factors to unsafe motherhood. Many of the complications of the above could be prevented by early detection and proper care during pregnancy. UNICEF and UNFPA assisted government for improving EOC facilities at district hospitals, medical college hospitals, selected Upazila Health Complexes and the Maternal and Child Welfare Centers. Lack of awareness coupled with traditional views is the important factors for under utilization of the available services.

Reducing maternal mortality study was conducted in eight districts. Five-target groups of samples were selected for the study to understand their knowledge and awareness on issues related to maternal and child health. The issues are birth planning, antenatal care, complications during pregnancy, safe delivery, delivery plan, and family planning and mass media exposure. From each district 50 sample of each category were selected following completion of household listing. Thus, 400 sample respondents consisting five categories were selected and the total sample size for the entire study was 2000. A baseline survey was also conducted to assess impact of the inventions in increasing knowledge and awareness of the target group of sample respondents.

Following baseline survey several interventions were provided to bring changes in the knowledge and awareness of target groups (currently married males in reproductive ages 15-59; newly married mothers with under one year child; currently pregnant mothers; currently married women in reproductive years and mothers in law). Several invention strategies were considered. This included development of communication messages and orientation training to program personnel and grassroots levels workers. The communication messages were placement of billboards at the important locations, distribution of posters and leaflet containing messages reasons for high maternal mortality and availability of services and how to avail them. The grassroots level providers were given orientation on the reducing maternal mortality strategies that in turn mobilized community target groups.

The follow-up study is aimed to document the changes in the knowledge and awareness of the target respondents and intervention effects on the reduction of maternal mortality. Preventive health care for mothers and children includes prenatal care, vitamin A supplementation, and regular check up of pregnant mothers to reduce disease burden related to pregnancy complications.

Following community mobilization about the early marriage, appropriate age at marriage, the respondents are now aware of it. The respondents mentioned that women who become

pregnant while they are still under 18 years of age have much higher risk of complications during pregnancy and childbirth than do women in their 20s. These complications can harm their health and may lead to maternal death.

The respondents also mentioned that having a large number of children increases the mother's risk of illness or death. The spacing pregnancies – is also very important. They are aware of consequence of births with short intervals. The spacing of pregnancies – the time interval between pregnancies is important. Having births too close together does not allow the woman's body to recover from the strain of pregnancy, childbirth and breast-feeding. Children also suffer when they are born close together in time, when the family is too large, when their mothers are too young or too old. When a woman has pregnancies close together, the likelihood of increases that pregnancy will end in miscarriage or that an infant born alive will die.

Low birth weight is also higher among women who give birth before age 18 years because of undernutrition during pregnancy. Whether a newborn infant is stunted or wasted has an important influence on its future development.

The data show that respondents are aware complications during pregnancy. Decision about delivery is jointly taken i.e. husband and wife. Institutional delivery of births is still low less than 10% of the deliveries. Delivery at home is common. Roughly 20% births are assisted by trained TBAs.

The information also suggests that about 98% of births are normal and remaining is caesarian section. Traditionally mothers in law dominate decision about delivery of births and whether or not pregnant mothers should visit health facility for check –up. The social mobilization at the community level has brought changes on the attitude and behavior of mothers in law. The data show that they are aware of the pregnancy-related complications and are aware of the consequences of these complications if the mother is not taken to health facility for EOC services. The interventions gave them opportunity to know about various issues related to birth planning, early age at marriage and its consequences on maternal and child health, antenatal care, food given during pregnancy, complications during pregnancy and services available to deal with complications.

Compare to the baseline survey data, the follow-up data show significant impact of the interventions in creating awareness among the various target groups including mothers in law. The intervention results are promising despite some limitations of the comparability between the two surveys.

## Recommendations

The impact of the interventions on reducing maternal mortality strategy suggests that the following recommendation can be made:

- The experience of the best contributable sub-interventions may be replicated to other areas of Bangladesh.
- The study suggests that appropriate age at marriage should be beyond 18 years. The message and its benefits learned from BCC interventions provide scopes to be replicated in others areas where age at marriage is still low.
- Short birth interval affects the health of the mother and the child. The finding of the study suggests that a 3 –year spacing message can be replicated to other areas of Bangladesh. Family planning and maternal child health care providers can work together to help women to achieve their preferred birth intervals.
- Use of family planning among the adolescent mothers is low. Only 26% newly married women are using family planning methods. This is very low in view of the early pregnancy risks associated with maternal health. Posters carrying the implications of early marriage and early pregnancy should be campaigned in the community. Besides Mass media like TV, radio can also play a significant role in this respect. The adolescent mothers should be encouraged to use family planning methods. Family planning improves the health of women by helping them to avoid high-risk pregnancies.
- Mothers should be motivated for exclusive breast-feeding for six months and it will improve child survival. Mass media can be used to disseminate the benefits of breast-feeding and its importance on the survival of the baby.
- During pregnancy period nutritional status is important for both mother and the baby. Mothers should be provided with nutrition food during the pregnancy period. Mass Media and display of posters and through health education mothers should be encouraged to take more food and vitaminized food during the pregnancy.
- Educate women and their families and others supporting pregnant women in self-care during pregnancy and childbirth
- The health workers should continue community mobilization through group discussions about need for supportive role of male, mother in law and other members of the family during the pregnancy of women.
- Effort should be made to increase higher proportion of deliveries in institutions with EOC services. This would reduce maternal morbidity and consequently maternal mortality.
- The study findings also demonstrate that EOC pictorial card has lasting effect on respondents having pregnancy complications and the associated support needed. It is recommended that every pregnant mother should be provided with a pictorial EOC card to understand magnitude of the pregnancy-related complications and need for EOC services to reduce risks associated with the complications.

## **Chapter 9**

### **CONCLUSION**

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The Government of Bangladesh is committed to the reduction of maternal mortality. This has been reflected in the goals and strategies of health and population sector program (HPSP). Reducing maternal mortality study consisted of both quantitative and qualitative techniques to understand the effectiveness of intervention activities in rural Bangladesh cultural context. The quantitative study considered five categories of target audience. One of the group's mothers in law is unique considering the key role-played by them during the pregnancy of their daughters in law. The quantitative findings were supplemented by the focus group discussions conducted among the target groups including the service providers. The in-depth analysis was also conducted to assess effectiveness of the intervention components on reducing maternal mortality in Bangladesh. The analysis of the survey data show that all the target groups are aware on the importance of antenatal care, type of complications during and after pregnancy, need for antenatal care during pregnancy. Comparison of information with that of baseline show that mothers in law are more aware of ANC and type of food required for the pregnant mothers. The information also indicates that awareness has increased among all the sample respondents on life threatening complications during and after delivery demonstrating the effectiveness of BCCP program interventions. The focus group discussions and the in-depth studies supported the survey findings. However, majority of the respondents opined place of delivery as the home. This may be attributed to several factors such as the distance of the health facility, transportation facility, economic situation of the family and the quality of services of the government health facilities. The focus group discussions also revealed that general people are dissatisfied with the services of the government health facilities.

The major conclusion of the study is that BCCP's strategy to reduce maternal mortality through behavior change communication and social mobilization program is an important campaign and it should be replicated in other areas of Bangladesh. In context of rural Bangladesh, the strategy is appropriate and sound because male members and mothers in law take most of the household decisions and reaching them with the messages for reducing maternal mortality would ensure safe motherhood. Promoting positive role of women and men and supporting positive action - education, skill development, delaying age of marriage and age at first birth and birth planning, and quality of services and care would help the reduction of maternal mortality in future.

# Appendix Tables

<b>Appendix Table-1: Background characteristics of respondents</b>										
Percentage distribution of respondents according to selected back ground characteristics										
<b>Background</b>	<b>Baseline data (Survey year 2000)</b>					<b>Post-evaluation data (Survey year 2002)</b>				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
<b>Age of the Respondents</b>										
<18 yrs	-	11.2	4.2	12.2	-	-	2.8	1.8	4.8	-
18-25 yrs	8.7	52.7	30.3	53.2	0.2	12.5	55.5	51.5	61.0	-
26-30 yrs	18.7	21.9	26.1	21.4	1.2	22.8	23.0	25.3	21.5	0.5
31-35 yrs	18.2	7.2	18.2	7.7	2.2	27.8	13.0	13.3	10.0	2.8
36-40 yrs	19.9	6.5	13.7	4.7	10.2	18.0	5.0	5.8	2.5	10.0
41-45 yrs	15.4	0.5	6.0	0.5	14.9	9.8	0.8	2.3	0.3	18.0
46-50 yrs	11.4	-	1.5	0.2	26.1	6.3	-	0.3	-	21.0
51-55 yrs	3.5	-	-	-	14.7	2.0	-	-	-	13.3
55+ yrs	4.2	-	-	-	30.3	1.0	-	-	-	34.5
Average age of respondent (in yrs.)	37	24	29	24	49	35	26	27	25	56
<b>Level of Education</b>										
No education	38.3	47.0	47.8	43.0	80.1	50.7	44.8	50.5	45.8	84.8
Class I - V	19.9	24.6	24.9	23.1	15.2	23.3	30.5	26.3	26.0	13.5
Class VI - X	23.4	21.1	21.4	25.4	4.5	15.0	19.8	19.0	20.8	1.3
SSC	7.0	5.2	3.7	4.7	-	4.3	4.3	1.8	4.3	0.5
SSC+	10.4	1.9	2.1	3.7	0.2	6.8	0.8	2.5	3.3	-
<b>N</b>	402	402	402	402	402	400	400	400	400	400

<b>Appendix Table-2: Occupation of the respondent</b>				
<b>Background</b>	<b>Baseline data (Survey year 2000)</b>		<b>Post-evaluation data (Survey year 2002)</b>	
	Male	Female	Male	Female
<b>Major occupation</b>				
Housewife	-	97.5	-	96.3
Unemployed	1.5	-	0.5	0.3
NGO	.	-	4.5	0.3
Service	7.7	-	5.3	1.6
Day labor	8.0	-	11.8	-
Small Business	19.2	-	17.8	-
Large business	4.7	-	5.3	-
Farmer	44.0	-	37.3	-
Rickshaw/Van puller	6.7	-	9.5	-
Others	8.2	2.5	8.0	1.5
N	402	1608	400	1600

<b>Appendix Table 3: Appropriate age of marriage</b>										
Percentage distribution of opinions of all respondents about the appropriate age of a woman										
<b>Appropriate age of marriage</b>	<b>Baseline data</b> (Survey year 2000)					<b>Post-evaluation data</b> (Survey year 2002)				
	Male	New Mother	Female Customer	Mother in law	Total	Male	New Mother	Female Customer	Mother in law	Total
<14 yrs	4.0	3.2	3.2	9.7	4.6	1.5	0.3	2.0	5.8	2.7
14-16 yrs	13.7	10.0	11.7	17.4	12.6	11.5	8.5	6.5	9.3	8.9
17-19 yrs	40.0	32.6	35.3	29.4	35.1	48.0	47.3	47.0	37.8	45.0
20-25 yrs	41.0	52.7	49.5	42.5	46.7	37.0	42.8	43.8	42.5	41.5
26-30 yrs	1.2	1.2	0.2	0.2	0.6	-	-	-	-	0.0
Don't Know/Cant Say	-	0.2	-	0.7	0.3	2.0	1.3	0.8	4.8	2.2
N	402	402	402	402	2010	400	400	400	400	1600

<b>Appendix Table 4: Appropriate age of first child birth of a woman</b>								
Percentage distribution of opinions about the appropriate age of a woman of giving first child birth by category of respondents								
Responses	Baseline data (Survey year 2000)				Post-evaluation data (Survey year 2002)			
	Male	New Mother	Female Customer	Mother in law	Male	New Mother	Female Customer	Mother in law
<18 yrs	5.0	2.7	1.0	7.2	3.5	1.3	2.8	4.8
18-20 yrs	26.1	25.9	31.8	31.6	40.5	33.0	29.8	29.3
21-25 yrs	59.7	62.4	57.7	53.5	50.3	60.8	63.3	57.8
26-30 yrs	8.5	7.5	8.5	5.5	2.8	2.0	2.3	3.0
31-35 yrs	0.7	0.7	0.5	0.5	0.3	-	-	-
35 yrs+	-	-	-	-	0.3	-	-	-
Don't Know/ Can't Say	-	0.7	0.5	1.7	2.8	3.0	2.0	5.3
N	402	402	402	402	400	400	400	400

<b>Appendix Table 7: Appropriate years of gap between two child of a woman</b>										
Percentage distribution of responses about the appropriate years of gap between two child of a woman by category of respondents										
Responses	Baseline data (Survey year 2000)					Post-evaluation data (Survey year 2002)				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
1 yr	-	-	-	-	0.7	6.3	1.3	1.0	0.5	1.0
2 yrs	11.2	7.2	5.7	6.7	9.5	19.0	5.8	8.3	8.5	6.8
3 yrs	28.1	11.2	14.7	17.9	20.1	22.5	18.0	17.8	18.0	24.0
4 yrs	15.7	6.2	7.7	10.0	13.2	11.8	13.8	13.3	13.3	16.5
5 yrs or above	45.0	75.3	71.8	65.3	56.4	40.0	61.3	59.8	59.8	47.8
Don't know/Can't say	-	-	-	-	-	0.5	-	-	-	4.0
N	402	402	402	402	402	400	400	400	400	400

<b>Appendix Table 8: Average number of children a woman should have</b>										
Percentage distribution of respondents about the average number of children of a woman should have by category of respondents										
Responses	Baseline data (Survey year 2000)					Post-evaluation data (Survey year 2002)				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
1	2.2	1.2	2.0	2.2	0.5	1.8	1.8	1.8	-	1.0
2	74.4	75.6	75.1	78.1	54.5	65.8	73.0	74.0	-	56.0
3	19.4	14.9	15.9	14.4	31.1	19.5	16.3	18.3	-	28.0
4	3.0	6.7	6.2	3.0	10.4	4.8	4.0	3.8	-	8.3
5 or more	0.2	-	-	-	0.4	2.0	0.3	0.3	-	1.0
Don't fix	0.5	1.2	0.2	1.0	2.7	5.5	4.0	2.0	-	4.5
DK/CS	0.2	0.2	0.5	1.2	0.2	0.8	0.8	-	-	1.3
N	402	402	402	402	402	400	400	400	-	400

<b>Appendix Table 9: Women received ANC during pregnancy</b>					
Percentage distribution of respondents who's wife/daughter-in-law/herself received ANC during pregnancy by category of respondents					
Number of times received ANC	Post-evaluation data (Survey year 2002)				
	Male (for wife)	New Mother (for daughter -in-law)	Female Customer (for herself)	Pregnant Mother (for herself)	Mother in law (for herself)
1	6.3	17.3	19.0	16.0	9.8
2	16.0	21.8	18.0	17.0	24.0
3+	41.8	40.3	42.3	12.5	50.5
Did not Visit	36.0	20.8	20.8	54.5	15.8
N	400	400	400	400	400

<b>Appendix Table 10: Reasons for not visiting health centers</b>										
Percent distribution of the responses with regards to reasons not to visit health centers for ANC for respondents wife or daughter-in-law or herself										
Reasons	Baseline data (Survey year 2000)					Post-evaluation data (Survey year 2002)				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
Didn't occur problem	88.6	53.1	80.4	71.3	68.0	37.5	39.8	38.6	41.3	34.9
Due to financial problem	5.4	27.6	12.6	14.7	13.4	10.4	19.3	12.0	26.1	7.9
N (Those who don't go anywhere for ANC)	167	98	143	150	97	144	83	83	218	63

<b>Appendix Table 11: Social custom to be followed during pregnancy</b>										
Percentage distribution of reported social custom to be maintained during pregnancy										
Maintained/taken care of health as social custom	Baseline data (Survey year 2000)					Post-evaluation data (Survey year 2002)				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
Regular diet	4.0	1.7	0.7	1.7	-	6.8	2.8	3.8	3.3	4.5
Take rest	55.0	67.2	67.7	65.7	65.4	16.3	12.3	10.0	15.5	11.8
Avoid heavy work	77.9	90.3	85.6	88.1	87.8	59.5	61.0	58.5	65.0	62.8
To take nutritious food	13.9	11.7	7.7	9.7	15.4	21.0	16.3	17.0	11.3	16.5
Not to go out at night	-	-	-	-	3.0	5.0	10.5	10.3	11.0	16.3
Regular check up	17.7	14.7	18.4	15.2	16.2	4.0	0.5	0.8	3.3	0.8
N	402	402	402	402	402	400	400	400	400	400

<b>Appendix Table 12: Complications during pregnancy</b>										
Percentage distribution of respondents knowledge about the complication that may be faced during pregnancy										
Description	Baseline data (Survey year 2000)					Post-evaluation data (Survey year 2002)				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
Vomiting tendency	60.0	87.6	86.6	88.8	86.6	56.8	67.8	66.5	11.8	65.5
Aversion to food	51.5	84.1	91.3	87.8	91.0	4.0	3.8	3.0	4.5	4.8
Weakness	37.8	67.9	62.4	67.7	64.9	-	-	-	-	-
Oedema	19.9	13.2	19.7	10.0	13.2	-	-	-	-	-
Fever	15.7	16.7	20.4	14.4	18.2	9.3	10.5	9.0	12.0	7.5
Pain in lower abdomen	3.5	1.2	0.2	0.5	-	26.3	30.3	30.8	-	21.5
Blurred vision	-	1.2	0.5	0.7	1.5	8.0	22.8	23.3	30.8	19.5
Severe headache	-	-	-	-	-	20.0	24.5	30.3	36.3	23.5
Swelling in hand/leg	-	-	-	-	-	19.8	32.8	36.0	36.8	35.5
Convulsion	9.5	7.0	10.0	5.2	8.5	17.3	22.5	22.8	26.0	23.3
Excessive bleeding	1.0	-	-	-	0.2	14.5	12.5	12.8	14.0	8.8
N	402	402	402	402	402	400	400	400	400	400

<b>Appendix Table 13: Place of last delivery and type of delivery</b>									
Percentage distribution of responses by place of delivery and pattern of delivery of the respondent's wife or daughter-in-law or herself									
<b>Responses:</b>	<b>Baseline data (Survey year 2000)</b>					<b>Post-evaluation data (Survey year 2002)</b>			
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Mother in law
<b>Place of delivery</b>									
Own home	78.6	68.4	69.6	65.2	59.3	70.3	67.5	67.8	51.0
Maternal house of wife	16.2	23.6	26.1	28.7	33.6	24.3	26.8	26.8	35.5
Upazila Health Complex	-	1.2	0.5	0.4	-	2.0	2.0	1.3	3.3
District Hospital	3.3	5.0	3.3	4.7	5.2	1.8	1.5	1.3	4.5
Private Clinic/ hospital	1.9	1.7	0.5	1.1	1.9	0.5	2.3	1.8	3.5
FWC	-	-	-	-	-	-	-	0.3	-
<b>Type of Delivery</b>									
Caesarian	2.2	2.5	1.5	4.7	2.5	1.5	2.5	2.3	5.5
Normal	97.8	97.5	98.5	95.3	97.5	98.5	97.3	97.8	94.3
Forceps	-	-	-	-	-	-	0.3	-	0.3
N	364	402	395	279	324	400	400	400	400

<b>Appendix Table 14: Decision makers for place of delivery</b>										
Percentage distribution of the respondents about decision makers with regards to place of delivery										
<b>Decision makers</b>	<b>Baseline data (Survey year 2000)</b>					<b>Post-evaluation data (Survey year 2002)</b>				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
Husband and wife both	31.0	35.8	38.5	29.7	34.9	51.3	32.3	34.8	31.0	22.5
Wife/husband	10.2	33.3	27.8	39.1	19.4	10.8	16.5	18.0	25.0	7.0
Self	44.0	15.7	19.2	17.9	37.3	20.3	34.0	29.8	22.5	52.0
Father/mother-in-law	11.8	12.2	13.2	8.6	-	8.5	10.3	9.5	16.0	8.5
Mother/mother-in-law	3.8	1.7	2.5	2.9	3.1	5.3	5.0	5.3	1.8	-
N	364	402	395	279	324	400	400	400	400	400

<b>Appendix Table 15: Knowledge about ‘During Delivery Complications’</b>												
Percentage distribution of the respondents with regards to knowledge of delivery complications												
Description of complications	Baseline data (Survey year 2000)						Post-evaluation data (Survey year 2002)					
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Total	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Total
Placenta does not come out	11.0	43.0	44.6	38.7	53.4	38.1	7.5	34.3	31.8	29.0	32.5	27.0
Fever	-	-	-	-	-	0.0	5.3	7.5	7.5	-	6.3	5.3
Excessive bleeding	40.1	52.5	54.2	52.3	61.1	52.0	0.5	33.8	33.0	29.5	37.3	26.8
Protrusion of baby’s limb instead of the head at the time of delivery	-	-	-	-	-	0.0	31.8	32.8	27.5	25.0	30.0	29.4
Convulsion	19.8	35.3	30.1	34.4	36.1	31.1	22.0	38.0	36.5	31.3	35.3	32.6
Severe headache	9.1	10.4	13.9	10.0	9.0	10.5	7.3	14.8	13.3	16.3	10.8	12.5
Prolonged delivery pain	53.8	76.4	71.1	79.2	77.5	1.0	59.3	53.5	55.0	43.8	53.3	0.8
N	402	402	402	402	402	2010	400	400	400	400	400	2000

<b>Appendix Table-16: Preparation to overcome the delivery complications</b>						
Percentage distribution of responses who have taken preparation to overcome delivery complications for the wife or daughter-in-law or herself						
Type of Preparation	Post-evaluation data (Survey year 2002)					
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Total
Made money available	89.5	77.3	77.6	69.2	75.1	40.5
Fixed the blood donor	3.9	4.5	6.3	23.6	5.5	04.6
Fixed the transportation if needed to go anywhere	43.4	33.1	32.8	16.4	29.8	16.2
Fixed the hospital if needed to go	19.5	49.4	48.3	32.3	54.1	21.2
To fix doctor beforehand	5.5	1.9	1.1	-	0.6	0.9
N (Those who took any preparation)	256	154	174	195	181	960

<b>Appendix Table-17: Post delivery complications</b>										
Percentage distribution of knowledge of the respondents about post delivery complications (within 42 days after delivery)										
<b>Complications</b>	<b>Baseline data (Survey year 2000)</b>					<b>Post-evaluation data (Survey year 2002)</b>				
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Male	New Mother	Female Customer	Pregnant Mother	Mother in law
Lower abdominal Pain	35.8	75.4	67.9	66.9	67.9	33.3	47.8	50.0	4.0	44.8
Fever	11.7	27.9	31.8	30.1	34.8	16.0	20.5	23.0	2.3	23.5
Severe headache	1.0	-	-	-	4.5	15.0	14.5	16.3	19.0	16.0
Oedema	-	-	-	-	-	14.8	20.0	19.0	24.4	18.0
N	402	402	402	402	402	400	400	400	400	400

<b>AppendixTable 18: EOC message and source</b>		
Percentage distribution of respondents who heard EOC messages/information from different sources		
<b>Source of information</b>	<b>Baseline data ( Survey year 2000)</b>	<b>Post-evaluation data ( Survey year 2002)</b>
TV	34.84	40.88
Radio	11.20	19.72
Newspaper	05.22	03.84
Signboard/Billboard	11.44	37.18
Poster/EOC Card	11.40	22.42
<b>N</b>	<b>2010</b>	<b>2000</b>

<b>Appendix Table 19: Major mass media exposure</b>												
Percentage distribution of respondents who have exposure to different mass media												
Exposure to Media	<b>Baseline data</b> (Survey year 2000)						<b>Post-evaluation data</b> (Survey year 2002)					
	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Total	Male	New Mother	Female Customer	Pregnant Mother	Mother in law	Total
TV	39.1	21.9	32.1	21.6	11.9	25.3	51.3	29.0	30.3	37.5	16.8	33.0
Radio	34.3	32.1	31.3	27.6	14.2	27.9	50.3	27.5	29.5	34.8	14.5	31.32
Newspaper	29.6	2.0	4.0	4.0	0.0	7.9	25.5	5.5	8.0	10.8	2.3	10.42
N	402	402	402	402	402	<b>2010</b>	400	400	400	400	400	<b>2000</b>

### *BCCP Research Publications*

1. Baseline Survey of Adolescent Reproductive Health Interventions in Bangladesh (June 2003)
2. National Media Survey-2002 by BCCP & SMC (Mar 2003)
3. Evaluation of Smiling Sun Campaign (Mar 2003)
4. Research on Development of Prevention Campaign Logo for Nationwide Campaign for Prevention of Trafficking in Children and Women (Aug 2002)
5. Formative Research on Contraceptive Security in Bangladesh (Mar 2002)
6. Situation Analysis of BCC Materials and Training Needs Assessment for NCPTCW (Mar 2002)
7. BCC Needs Assessment Survey ( Sep 2001)
8. Shabuj Chhata Image Study- Customer Perception (Jan 2001)
9. Shabuj Chhaya Audience Survey 2000 (Nov 2000)
10. Study to Explore Ideas of an Over-Arching Symbol Promoting Quality, Caring and Satisfactory Health Services for Both UFHP & RSDP and pre-testing the best symbols (Oct 2000)
11. Baseline Survey on BCC & Social Mobilization in EOC Service Related to Maternal Mortality (Jul 2000)
12. Report on Pre-testing of EOC Poster & Card (Apr 2000)
13. An evaluation report of workshop on Advances in Family Health and Social Communication (Nov 1999)
14. Report on Pre-testing of communication materials (Nov 1999)
15. Pre-testing of EOC logo & slogan (Oct 1999)
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17. IEC intervention, implementation and impact evaluation of CARE'S IFFD project (Mar 1999)
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19. Situation Analysis of HIV/AIDS; BCC Activities and Resources in Bangladesh (1998)
20. National Media Survey (1998)
21. Communication, Ideation, And Contraceptive Behavior: Evaluation of the Jiggasha Social Network Approach in Bangladesh (Nov 1997)
22. Jiggasha: An Inquiry Reversed The evaluation of a Social Network Approach to Community Mobilization and Sustainability Applied to FP-MCH Program (Oct 1996)
23. Pre-testing of FP-MCH Logo (Mar 1996)
24. Access to Media in Bangladesh : The 1995 National Media Survey (Oct 1995)
25. Awareness Campaign On Reproductive rights through IEC Materials and Assessment of their utilization and impact at some selected sites in Bangladesh