REPORT
on

Impact evaluation of the project titled 'Implementation of the World Health Organization's Framework for Working with Individuals, Families, and Communities (IFC) to Improve Maternal and Newborn Health in Bangladesh'

BRAC James P Grant School of Public Health, BRAC University

Submitted to

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Impact evaluation of the project titled 'Implementation of the World Health Organization's Framework for Working with Individuals, Families, and Communities (IFC) to Improve Maternal and Newborn Health in Bangladesh

The study was conducted by:

Centre for Non-Communicable Disease and Nutrition (CNCDN)
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Abbreviations

ANC	Antenatal Care
BDHS	Bangladesh Demographic and Health Survey
BDT	Bangladeshi Taka
BMMS	Bangladesh Maternal Mortality Survey
BPCR	Birth Preparedness and Complication Readiness
CAG	Community Action Group
CC	Community Clinic
CG	Community Group
CHCP	Community Health Care Provider
CHW	Community Health Workers
CNCP	Comprehensive Newborn Care Package
CSBA	Community Skilled Birth Attendants
CSG	Community Support Group
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DH	District Hospital
DHS	Demographic and Health Survey
ECD	Early Childhood Development
EdM	Enfant du Monde
EmOC	Emergency Obstetric Care
ENAP	Every Newborn Action Plan
ENC	Essential Newborn Care
EPMM	Ending Preventable Maternal Mortality
FP	Family Planning
FWA	Family Welfare Assistant
FWV	Family Welfare Visitor
GoB	Government of Bangladesh
HA	Health Assistant
FANTA	Food and Nutrition Technical Agency
HFIAS	Household Food Insecurity Access Scale
HH	Household
HNPP	Health, Nutrition, and Population Programme

HSC	Higher Secondary Certificate
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
IDI	In-depth Interview
IFC	Individuals, Families and Communities
IQR	Interquartile Range
IRB	Institutional Review Board
IYCF	Infant and Young Child Feeding
KII	Key Informant Interview
LPG	Liquefied Petroleum Gas
MCH	Medical College and Hospital
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MMR	Maternal Mortality Ratio
MNCH	Maternal, Neonatal and Child Health
MNH	Maternal and Newborn Health
MOHFW	Ministry of Health and Family Welfare
MOLGRDC	Ministry of Local Government, Rural Development and Cooperation
MTP	Medically Trained Provider
NGO	Non-Governmental Organization
NMR	Neonatal Mortality Rate
ODK	Open Data Kit
ORS	Oral Rehydration Salt
PNC	Postnatal Care
PPS	Probability Proportional to Size
SDG	Sustainable Development Goal
SMPNS	Safe Motherhood Promotion and Newborn Survival
SMPP	Safe Motherhood Promotion Project
SRH	Sexual and Reproductive Health
SK	*Sasthya Karmi*
SS	*Sasthya Sebika*
SSC	Secondary School Certificate
TBA	Traditional Birth Attendant
TTBA	Trained Traditional Birth Attendant
U-5MR	Under-five Mortality Rate
UHC	Upazila Health Complex

UH&FWC	Union Health and Family Welfare Centre
WHO	World Health Organization

Executive Summary

Background: Health Nutrition and Population Programme (HNPP) of BRAC has been working for decades to ensure basic and quality health care services at the prenatal and postnatal stage through its maternal and neonatal health (MNH) wing. Between 2017-2021, BRAC-MNH implemented a programme modelled on Individual, Family and Community (IFC) Framework of WHO in collaboration with Enfants du Monde (EdM) to improve access to a continuum of care throughout pregnancy, childbirth, and the postpartum periods (WHO 2017). The ultimate aim of the programme was to integrate elements of the IFC components into the national MNH strategy. During 2021-24, the programme will continue to contribute to the reduction of maternal, neonatal and child mortality. This four-year programme will broadly cover three main areas, namely 1. Health education on rights to MNH and on ECD, 2. Capacity building and 3. Accountability/Advocacy for Quality of care in MNCH. The 2021-24 programme will be focused on i) service delivery along the continuum of care, ii) strengthening the health system, iv) improving the quality of care, v) community empowerment and engagement, and vi) multi-sector involvement and action. However, it is important to know how effective the programme was during 2017-2021 in improving MNCH indicators. The objective of this research is to evaluate the impact of the 2017-2021 programme and at the same time to determine the baseline estimates for the 2021-2024 programme.

Objectives: The primary objective of the study is to measure the effect of the package of WHO IFC interventions on MNCH awareness, capacities, and practices of women, husbands, and families. As the 2021-2024 programme also includes ECD interventions, assessment of family care environment will also be included. More specifically, the general objectives of this study are:

- To measure the effect of the 4-year implementation (2017-2021) of the package of WHO IFC interventions on MNCH awareness, and practices of women, husbands and families.
- To measure the effect of a package of health promotion interventions on MNCH awareness and practices of women, husbands, families, and communities for the second phase of the IFC project (2021-2024).

The specific objectives are:

1. To assess the change in utilization of routine and emergency MNCH services (ANC, childbirth, PNC, essential newborn care, child health care, care-seeking for obstetric, newborn, and child emergencies) from medically trained providers.
2. To assess the change in awareness, capacity, and practices of women related to MNCH and ECD.
3. To assess the change in awareness, capacity, and practices of husbands in relation to MNCH and ECD.
4. To assess family care environment and community environment relevant to MNCH and ECD.
5. To assess the change in women empowerment related to self-care and decision-making for routine and emergency MNCH care-seeking.
6. To explore potential roles of the community regarding accountability and advocacy for quality MNCH care and participation in MNCH care.
7. To identify family and community-level barriers, challenges, and facilitators related to the implementation, scalability, and sustainability of the project.

Methods: A mixed-method study design (intervention and comparison areas) was applied to determine the effect of the IFC package on MNH outcomes. Like the icddr,b baseline survey conducted in 2018, this endline survey was conducted in *Sarail* and *Kasba* sub-districts of *Brahmanbaria* (Figure 3) where BRAC HNPP is implementing the IFC model (as intervention areas) and in one adjacent upazila (*Bijoynagar*) which was selected as a comparison area in consultation with concerned personnel from Directorate General of Health Services, Ministry of Health and Family Welfare (MOHFW), Bangladesh. Interviewer-administered structured questionnaires were used to interview the eligible respondents. The questions were developed based on the baseline questionnaire and questionnaires from other relevant studies, including Bangladesh Demographic Health Survey (BDHS). Two different sets of quantitative questionnaires were used: Women's questionnaire and husband's questionnaire. Family-level barriers and facilitators for MNCH care were explored using in-depth interviews with the family members and community-level barriers and facilitators were explored among the community representatives using key-informant interviews (KII). The estimated sample size was 1650 (550 in *Kasba*, 500 in Sarail, and 550 in *Bijoynagar*) women with <12 months old child and 1650 (550 in *Kasba*, 500 in Sarial, and 550 in *Bijoynagar*) husbands with <12 months

old child for quantitative component, and 30 family members and 30 community representatives for qualitative component. For the selection of women and husbands, we adopted multistage cluster sampling techniques. We selected five unions from each sub-district (control and intervention), the unions were divided into clusters of ~1000 households keeping the boundaries of the villages uninterrupted. Two clusters from each union were randomly selected and recruitment of ~55 women and ~55 husbands were planned from each cluster. Data were collected by trained research assistants under supervision of field coordinators and investigators after obtaining informed written consent. We obtained ethical clearance from the Institutional Review Board (IRB) of the BRAC James P Grant School of Public Health, BRAC University, Dhaka, Bangladesh (IRB Reference No.: IRB-3 October'21-029). In this report, we are describing the quantitative findings only.

Results: In the selected clusters, we listed 21,470 households (6552 in *Sarail*, 6665 in *Kasba*, and 8253 in *Bijoynagar*), and interviewed 1670 women and 1650 husbands. From these interviews data were also collected for 2184 children. Mean household size was 5 (5.2 in *Sarail*, 5 in *Kasba*, and 4.8 in *Bijoynagar*). The mean household income was BDT 23,981 (22613 in *Sarail*, 27247 in *Kasba*, and 21605 in *Bijoynagar*. Fifty-eight percent of households were using improved sanitation facilities (36% in *Sarail*, 64% in *Kasba*, and 73% in *Bijoynagar*), and almost all households were using safe drinking water. As per household wealth, Sarial had a higher proportion of households in the lower 2 wealth quintiles (48%) and *Bijoynagar* had a higher proportion of households in the upper 2 wealth quintiles (44%). Overall. Sixty-eight percent households were food secure (57% in *Sarail*, 71% in *Kasba*, and 72% in *Bijoynagar*). *Sarail* had the highest proportion of households with moderate to severe food insecurity (28% in *Sarail*, 11 percent in *Kasba*, and 10 percent in *Bijoynagar*).

Between 2018 and 2022, women with no education declined in all subdistricts (overall, from 10% to 7%; from 16% to 12% in *Sarail*, from 7% to 3% in *Kasba*, and from 8% to 6% in *Bijoynagar*). Overall, 97% women were homemakers. However, among the husbands, the proportion with no education declined in Sarial (from 31% to 30%) and *Kasba* (from 14% to 7%) but increased in Bioynagar (from 20% to 26%). The top two professions among the husbands were business (Overall, 27%; 33% in *Sarail*, 27% in *Kasba*, and 22% in *Bijoynagar*), and unskilled day labor (Overall, 23%; 23% in *Sarail*, 13% in *Kasba*, and 33% in *Bijoynagar*).

Among the women, the mean number of pregnancies was 2.7 (2.9 in *Sarail*, 2.5 in *Kasba*, and 2.7 in *Bijoynagar*). Overall, 43% women used sanitary pads during menstruation (30% in

Sarail, 52% in *Kasba*, and 48% in *Bijoynagar*). Use of modern methods for family planning was higher in *Kasba* (48%), compared to *Sarail* (40%) and *Bijoynagar* (39%). Majority of women were collecting contraceptive methods from private sector (65% in *Sarail*, 76% in *Kasba*, and 68% in *Bijoynagar*).

Between, 2018 and 2022, knowledge of women on the importance of receiving any ANC, importance of receiving the first ANC within the first trimester, and importance of receiving 4 or more ANC increased in both intervention and comparison areas. In *Sarail*, *Kasba*, and *Bijoynagar*, between 2018 and 2022, the knowledge on the importance of any ANC increased from 73% to 97%, 83% to 98%, and 67% to 83%. Therefore, in 2022, in the intervention areas, almost all women knew about the importance of any ANC but that is not the case in the comparison area. A similar trend on the improvement on knowledge on ANC was evident among the husbands.

Between 2018 and 2022, the proportion of women received any ANC, women received 4 or more ANC increased in both intervention and comparison areas and the proportion of women received no ANC decreased in both intervention and comparison areas. In 2022, compared to the comparison areas, more women in both intervention sub-districts received at least one ANC from any provider (88% in *Sarail*, 94% in *Kasba*, and 82% in *Bijoynagar*), and 4 or more ANC (18% in *Sarail*, 36% in *Kasba*, and 16% in *Bijoynagar*). Moreover, in 2022, the quality of ANC was better in *Sarail* and *Kasba* than in *Bijoynagar*. It was also evident that ompared to *Bijoynagar* (39%), in *Sarail* (43%) and *Kasba* (45%), more women were accompanied by their husbands while receiving the ANC. Despite the improvement in ANC, the level of knowledge of both women and husbands on the danger signs of pregnancy decreased in intervention and comparison areas.

Between 2018 and 2022, birth preparedness and complication readiness improved in both intervention and comparison areas. However, in some cases, we observed that the improvement was more in the intervention areas than in the comparison areas. For example, between 2018 and 2022, the proportion of women reported that they identified a health care facility for giving birth increased from 16% to 35% in *Sarail*, from 17% to 38% in *Kasba*, and 17% to 30% in *Bijoynagar*. Moreover, for overall birth preparedness and complication readiness, *Kasba* had a higher level of improvement that *Bijoynagar* and *Sarail*.

In 2022, in *Sarail* and *Bijoynagar*, normal vaginal delivery is the primary mode of delivery, whereas, in *Kasba*, the primary mode of delivery is C-sections (51%). The women in *Kasba*

also reported of having more assisted delivery than in *Sarail* and Bioynagar (2% in *Kasba*, 1% in *Sarail*, and 1% in *Bijoynagar*). Accordingly, *Kasba* had a higher rate of facility-based delivery compared to *Sarail* and *Bijoynagar* (62% in *Kasba*, 40% in *Sarail*, and 57% in *Bijoynagar*). In *Kasba*, the proportion of women knowledgeable on 3 or more danger signs of delivery increased from 27% in 2018 to 36% in 2022. However, in other cases, between 2018 and 2022, there was a decline in the level of knowledge on the danger signs of pregnancy. Between 2018 and 2022, the level of knowledge of husbands on the danger signs of delivery also declined.

Between 2018 and 2022, the proportion of women receiving postnatal care increase in both intervention and comparison areas. Between 2018 and 2022, the proportion of women receiving at least 1 PNC from m medically trained provider increased from 8% to 43% in *Sarail*, 2% to 54% in *Kasba*, and 14% to 52% in *Bijoynagar*. However, between 2018 and 2022, like the danger signs of pregnancy and delivery, the level of knowledge on danger signs of postpartum period declined between 2018 and 2022.

In 2022, overall, 67.2% of the babies received PNC after birth. The highest PNC visits among the newborn were found among the newborn from *Sarail* (82.5%) and the lowest was found among the newborn from *Kasba* (40.2%). Overall, 92% children were ever breastfed, and the proportion of children ever breastfed, and the proportion of children given colostrum were higher in both the intervention areas than the control area. Moreover, in *Bijoynagar*, 65% of children were given food or drinks within 6 months after birth, whereas these proportions were 41% and 39% for children in *Sarail* and *Kasba*, respectively. We also observed that between 2018 and 2022, the proportion of women aware of 3 or more danger signs of newborn increased in the intervention areas (from 33% to 44% in *Sarail*, and from 26% to 59% in *Kasba*) but decreased in the comparison area (from 44% to 39% in *Bijoynagar*). An increase of knowledge on 3 or more danger signs of newborn was also observed among the husbands living in *Kasba* (12% in 2018 to 37% in 2022).

From baseline to endline, knowledge about access to MNH services increased among women and husbands across all the areas. The percentage of women indicating that they should have a right to respectful treatment from health service providers, had significantly increased between 2018 and 2022(*Sarail*: from 14% to 96%; *Kasba*: from 10% to 96%; and *Bijoynagar* from 15% to 57%). Between 2018 and 2019, the proportion of women never allowed to go outside alone or with children declined in the intervention areas (from 18% to 1% in *Sarail*, and from 27%

to 1% in *Kasba*), whereas this proportion increased in the comparison area (from 19% to 22% in *Bijoynagar*).

In the intervention areas (79% in *Sarail* and 74% in *Kasba*), more women opined that they received sufficient support from their husbands on MNH issues than the comparison area (60% in *Bijoynagar*).

Conclusion and recommendations: The first phase of the IFC programme contributed to improvement in several areas of MNCH, including knowledge on ANC, access to ANC, delivery care, PNC, male involvement in maternal health, and women empowerment. Despite the progress made, the second phase of the program should emphasize use of modern contraceptive methods, menstrual hygiene, quality of MNCH care, danger signs relevant to MNH, male involvement in all aspects of MNH, essential newborn care, reduction of C-section, early identification and care seeking for maternal and newborn complications, and early child development.

Introduction

Background

Bangladesh has significantly reduced child mortality in the last two decades and achieved the MDG 4 target in time. However, progress regarding newborn health was relatively slow. Neonatal mortality now accounts for 61% of all under-five deaths as compared to 39% in 1994. Although Bangladesh has made significant strides in maternal health, the efforts were not enough to reach the MDG maternal mortality ratio (MMR) target (144 per 100,000 live births) in time. According to a (2015) estimate by the World Health Organization (WHO), MMR in Bangladesh was 176 per 100,000 live births. Utilization of key maternal and newborn health (MNH) services remains low in Bangladesh as only 47% of women received the recommended 4+ antenatal care (ANC) contacts, 53% deliveries were attended by skilled birth attendants (SBAs), and only 7% newborn received the five recommended essential newborn care (ENC) (BDHS 2017-18). There are also geographical disparities and inequities regarding these estimates.

BRAC's Health Nutrition and Population Programme (HNPP) has been working for decades to ensure basic and quality health care services at the prenatal and postnatal stage through its maternal and neonatal health (MNH) wing. Between 2017-2021, BRAC-MNH implemented a programme modelled on Individual, Family and Community (IFC) Framework of WHO in collaboration with Enfants du Monde (EdM) to improve access to a continuum of care throughout pregnancy, childbirth, and the postpartum periods (WHO 2017). The ultimate aim of the programme was to integrate elements of the IFC components into the national MNH strategy.

During 2021-24, the programme will continue to contribute to the reduction of maternal, neonatal and child mortality in one sub-district of Brahmanbaria district (*Sarail*). More specifically, BRAC HNPP and EdM will collaborate and facilitate the implementation of the National Strategy for Maternal Health (BNSMH) 2019-2030. This four-year programme will broadly cover three primary areas, namely 1. Health education on rights to MNH and on ECD, 2. Capacity building and 3. Accountability/Advocacy for Quality of care in MNCH. The 2021-24 programme will be focused on i) service delivery along the continuum of care, ii) strengthening the health system, iv) improving the quality of care, v) community empowerment and engagement, and vi) multi-sector involvement and action. Moreover, the programme will be implemented in alignment with Maternal Neonatal Child and Adolescent Health

(MNC&AH) January 2017 – June 2022 (MOHFW, 2017) operational plan, National Newborn Health Programme (NNHP) and Integrated Management of Childhood Illness (IMCI), the National Plan of Action for Maternal Health 2020-2030, the Bangladesh every Newborn Action Plan (BENAP[1]), the Comprehensive Social and Behaviour Change Communication Strategy (SBCCS) [2], Community Based Health Care and National[3], Health Information System, and e-Health (HIS & e-H)[4], Reproductive Maternal Neonatal Child Adolescents Health (RMNCAH) Quality Improvement (QI) Framework (MOHFW, 2019) (January 2017 – June 2022) and the guidelines for providing essential Maternal Newborn and child health Services in the context of COVID-19. This four-year programme will focus on three main areas, namely 1. Health education on rights to MNH and ECD, 2. Capacity building and 3. Accountability/Advocacy for Quality of care in MNCH.

Health promotion, community engagement and empowerment, capacity building of health care providers, and advocacy for quality of care in MNCH are essential strategies for improving the MNCH by creating demand for appropriate care, ensuring that quality MNCH care is delivered from the health facilities, and increasing utilization of skilled services. However, it is important to know how effective the programme was during 2017-2021 in improving MNCH indicators. The objective of this research is to evaluate the impact of the 2017-2021 programme and at the same time to determine the baseline estimates for the 2021-2024 programme.

Individuals, families, and communities (IFC) framework: a strategic framework for health promotion and community engagement

The World Health Organization, based on the principles of health promotion as outlined in the Ottawa Charter, has developed a strategic framework for action called "Working with Individuals, Families and Communities (IFC) to improve MNH" (1, 2).

The primary aims (**Figure 1**) of the IFC framework are:

- To empower women, families, and communities to improve and increase their control over MNH.
- To increase access to and utilization of quality MNH services.

[1] The Bangladesh every newborn action plan 2016 -2020. MOHFW. Bangladesh.

[2] Comprehensive Social and Behavior Change Communication Strategy, MOHFW 2016,

[3] Community Based Health Care Operational Plan. MOHFW. Bangladesh

[4] Health Information System and e-Health (HIS & e-H) MOHFW. Bangladesh

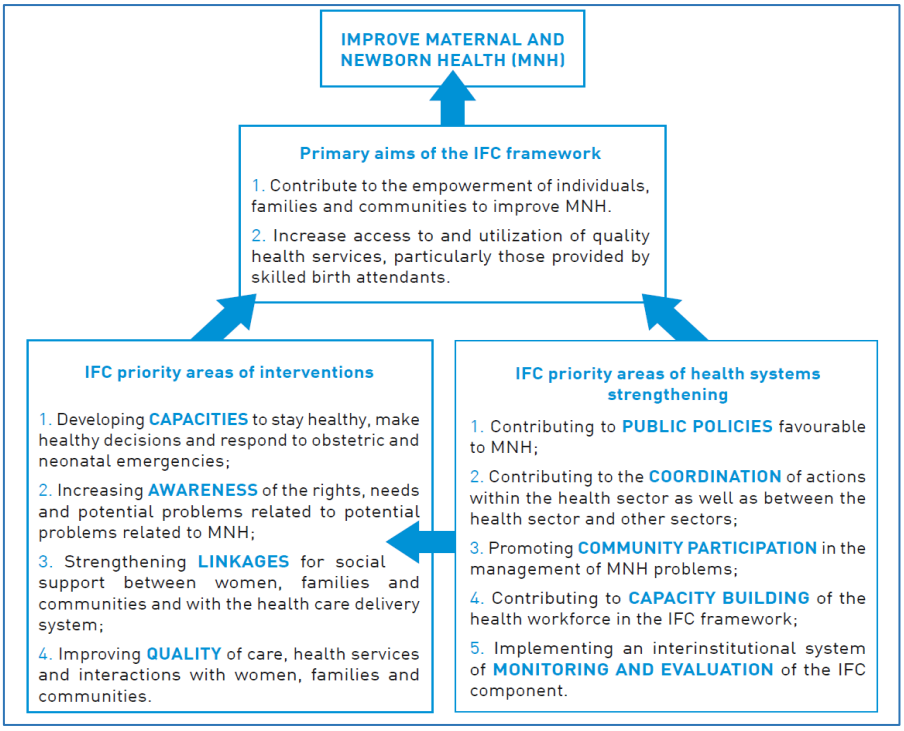


Figure 1: IFC framework objectives and priority areas (Source: World Health Organization, 2017)

As per the IFC framework, there are four priority areas of intervention (**Figure 2**) within which actions should be taken to contribute synergistically toward achieving the primary aims. The priority areas are as follows:

- Developing **CAPACITIES** to stay healthy, make healthy decisions and respond to obstetric and neonatal emergencies.
- Increasing **AWARENESS** of the rights, needs and potential problems related to MNH
- Strengthening **LINKAGES** for social support between women, men, families, and communities and with the health care delivery system.
- Improving **QUALITY** of care and health services and of their interactions with women, men, families, and communities.

Priority areas of intervention	Developing CAPACITIES to stay healthy, make healthy decisions and respond to obstetric and neonatal emergencies	Increasing AWARENESS of the rights, needs and potential problems related to maternal, newborn health	Strengthening LINKAGES for social support between women, families and communities, and with the healthcare delivery system	Improving QUALITY of care, health services and interactions with women, families and communities
Interventions	• Self-care/care in the household* • Care-seeking behaviour* • Birth preparedness and complication readiness	• Male involvement and family support • Promotion of human, sexual, and reproductive rights† • Community participation in maternal death surveillance and response†	• Partnership with traditional birth attendants • Maternity waiting homes‡ • Community-organized transport schemes§ • Community mobilization through participatory learning and action cycle with women's groups	• Community participation in quality-improvement processes • Companion of choice at childbirth • Providing culturally appropriate skilled maternity care • Interpersonal competence of healthcare providers*

Figure 2: Interventions in the four IFC priority areas of interventions (Source: World Health Organization, 2017)

Report outline

This report comprises four chapters followed by references and annexes. The first chapter, introduction, sets the background scenario and context in relation to the maternal and neonatal health including proposed intervention packages in light of the IFC framework. The second chapter of the report provides details about the methodological considerations. It includes study design and areas, sample size and sampling strategy, data collection, data management and analysis process, data quality control and ethical considerations of the study. The next section, results, presents the findings of the study (only quantitative component). In discussion section, the findings are discussed in light of existing literature and programmatic perspectives. Discussion ended with a number of programmatic suggestions to improve and strengthen the existing interventions as well as to scale up the interventions in the areas with similar context. Finally, the conclusion section summarizes the major findings and implications of this evidence for policy and practice with future research direction. In the reference section, all the articles, reports, books, or any other documents reviewed were compiled and after that the annexes provide any supplementary materials of the study where applicable.

Methods

Objectives of the study

General objectives: The primary objective of the study is to measure the effect of the package of WHO IFC interventions on MNCH awareness, capacities, and practices of women, husbands, and families. As the 2021-2024 programme also includes ECD interventions, assessment of family care environment will also be included. More specifically, the general objectives of this study are:

- To measure the effect of the 4-year implementation (2017-2021) of the package of WHO IFC interventions on MNCH awareness, and practices of women, husbands, and families.
- To measure the effect of a package of health promotion interventions on MNCH awareness and practices of women, husbands, families, and communities for the second phase of the IFC project (2021-2024).

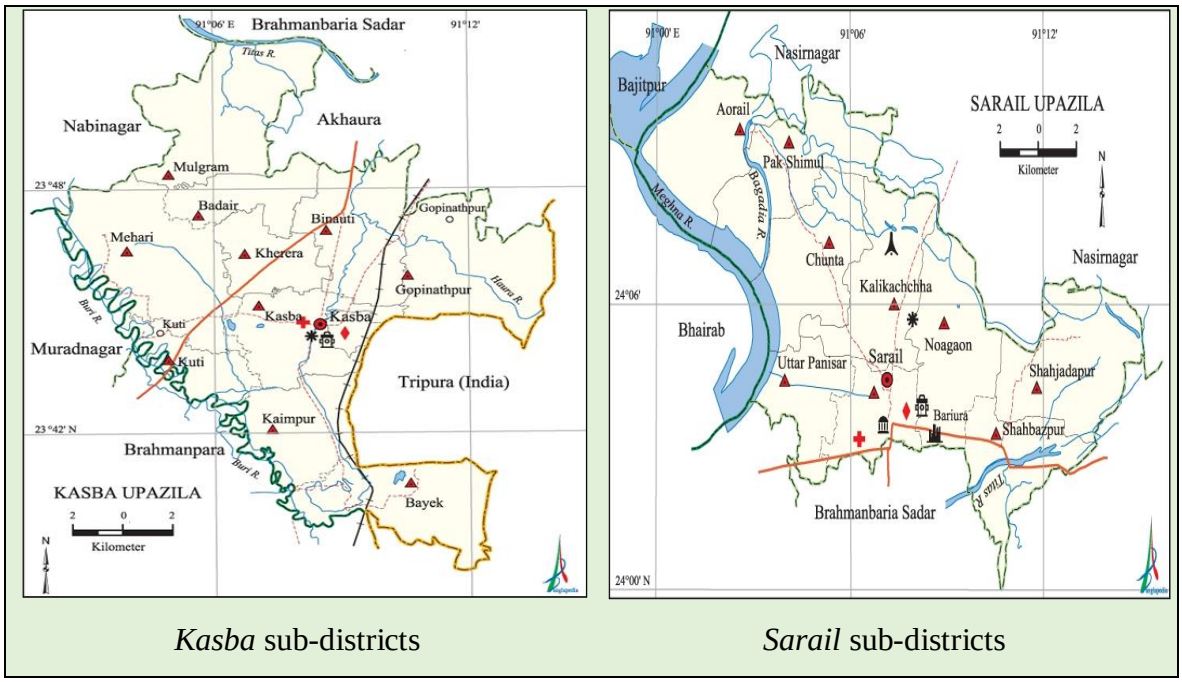
Specific objectives:

1. To assess the change in utilization of routine and emergency MNCH services (ANC, childbirth, PNC, essential newborn care, child health care, care-seeking for obstetric, newborn, and child emergencies) from medically trained providers.
2. To assess the change in awareness, capacity, and practices of women related to MNCH and ECD.
3. To assess the change in awareness, capacity, and practices of husbands in relation to MNCH and ECD.
4. To assess family care environment and community environment relevant to MNCH and ECD.
5. To assess the change in women empowerment related to self-care and decision-making for routine and emergency MNCH care-seeking.
6. To explore potential roles of the community regarding accountability and advocacy for quality MNCH care and participation in MNCH care.
7. To identify family and community-level barriers, challenges, and facilitators related to the implementation, scalability, and sustainability of the project.

Study design, study site, and study population

The current study serves as an endline for the completed programme (2017-2021) of IFC project (baseline was conducted by icddr,b in 2018) and the baseline for the future programme (2021-2024). An endline of the future programme will be conducted in 2024 employing same methods and procedures.

A mixed-method study design (intervention and comparison areas) was applied to determine the effect of the IFC package on MNH outcomes. Like the icddr,b baseline survey, this endline survey was conducted in *Sarail* and *Kasba* sub-districts of *Brahmanbaria* (**Figure 3**) where BRAC HNPP is implementing the IFC model (as intervention areas) and in one adjacent upazila (*Bijoynagar*) which was selected as a comparison area in consultation with concerned personnel from Directorate General of Health Services, Ministry of Health and Family Welfare (MOHFW), Bangladesh. The baseline of this impact evaluation research was conducted in 2018 in the same areas by icddr, b. For specific objectives 1-5, we implemented quantitative research methods, and for objectives 6-7, qualitative research methods were implemented.



Kasba sub-districts *Sarail* sub-districts

Figure 3:IFC project intervention areas

Brahmanbaria is a district in east-central Bangladesh and is a part of the Chittagong Division. **Table 1** displays a number of basic indicators to set the overall context of the intervention areas (*Sarail* and *Kasba*) and comparison area (*Bijoynagar*) of Brahmanbaria district, and **Table 2** presents major health indicators related to MNH to compare Brahmanbaria's performance with national estimates.

Table 1: Basic background information of the study areas of endline survey, 2022

Indicators*	***Sarail***	***Kasba***	***Bijoynagar***
Population	3,27,311	3,31,937	2,57,247
Union	9	10	10
Village	141	209	226
Household area (Sq. kilometer)	215.27	209.77	221.17
Average household size	5.36	5.23	5.28
Literacy rate	40.9	50.7	42.1
Annual growth rate (%)	1.5	1.62	1.68
Source: BBS 2011 **(3)**			

Table 2: Relevant health indicators national vs. Brahmanbaria/Chattogram

Indicator	**Brahmanbaria 2010**	**National 2010**	**Brahmanbaria 2016**	**National 2016**	**BDHS National 2018**	**BDHS Chattogram 2018**
	Per 1000 live birth					
Newborn mortality rate	33	32	32	30	30	31
Infant mortality rate	45	45	38	39	38	33
U-5 mortality rate	52	56	47	47	45	41
	Percentage (%)					
ANC from any provider (At least one visit)	71	71	-	-	92	91
ANC from any provider (At least one visit from MTP)	56.8	53.7	76.4	74.4	81.9	83.2
ANC from any provider (At least four or more visit)	18	23	-	-	47	-
ANC (At least four or more) and at least 1 from MTP	-	-	16.5	33.8	43.7	36.3
Institutional delivery	19	23	31.9	47.1	49	46
PNC from a medically trained provider within two days of delivery	24	23	36	48	52	50.1

Source: BMMS-2010 and BMMS 2016 district profile (last national survey with district-level estimates); BDHS-2017-18.

Like the icddr,b baseline survey, the primary study population was women with a history of recent childbirth (in the 12 months preceding the survey) who resided in the study areas. The secondary study population was the husbands of the women recruited for the study. We interviewed the family members and community representatives for the qualitative components.

Data collection tools and study variables

Interviewer-administered structured questionnaires were used to interview the eligible respondents. The questions were developed based on the baseline questionnaire and

questionnaires from other relevant studies, including Bangladesh Demographic Health Survey (BDHS). Two different sets of questionnaires were used:

Women's questionnaire: The women's questionnaire had 3 sections comprising 15 modules. They are as follows-

- *Section 1. General information:* It comprised four modules on a) household selection, b) socio-economic status, c) WASH, d) household food security.
- *Section 2. Maternal Information:* Includes six modules on a) general information about mothers with recent delivery, b) reproductive health, c) family planning, d) maternal care, e) women empowerment and decision making related to MNH, f) family care environment related to MNH.
- *Section 3. Child information:* Included five modules on a) immediate newborn care, b) infant and young child feeding practices (IYCF), c) child health, d) early childhood development (ECD), e) family care environment related to ECD.

Husband's questionnaire: Husband's questionnaire included four modules: a) household information, b) personal information, c) husband's role in maternal care, d) husband's perception of women empowerment.

The following table (**Table 3**) outlines the broad categories of variables by respondent groups.

Table 3: Broad categories of variables included in data collection during endline survey, 2022

Respondent groups	**Broad categories of quantitative variables**
Women with a history of recent childbirth (in the 12 months preceding the survey)	• Socio-economic status, education, asset, WASH facilities, hygiene practices, household food security. • Reproductive health, family planning, maternal care (antenatal care, delivery care and postnatal care. • Immediate newborn care, breastfeeding and other IYCF, child health, ECD. • Family care environment related to ECD; family care environment related to MNH. • Health-seeking behaviour for maternal and child complications. • MNH rights and women empowerment and decision making regarding MNH etc.
Husbands of the women with a history of recent childbirth (in the 12 months preceding the survey)	• Husband's role in maternal care. • Husbands' awareness and practice about right to MNH. • Husband's knowledge, awareness, and perception regarding women empowerment.

In-depth interview (IDI) guidelines for family members: To explore family-level barriers, challenges, and facilitators related to the implementation, scalability, and sustainability of the project IDI were conducted according to set guidelines.

Key-informant interview (KII) guidelines for community representatives: According to set guidelines, KII was conducted among the community representatives to explore community-level barriers, challenges, and facilitators related to the implementation, scalability, and sustainability of the project and to explore potential roles of the community with regard to accountability and advocacy for quality MNH care, and participation in MNH care.

Sample size and sampling techniques

Childbirths attended by a medically trained provider (skilled birth attendant) was selected as the main outcome of interest based on objective 1. Assuming that the coverage of childbirth by a medically trained provider was 42% at baseline (4), the sample size was calculated to detect a minimum effect size (change over time) 15 percentage point between baseline and endline controlling for the difference in comparison over time. We considered 80% power (two-sided) and 5% type 1 error probability, 10% non-response rate and 2.0 design effect for sample size calculation. Thus, the sample size was 416. From the baseline survey experience, we further adjusted the sample size to get at least 416 triads (Woman-Child-Husband) and the final sample size was 550 per upazila (550 mothers with 12 months old children and 550 the husbands of the mothers).

Table 4: Estimated sample size (qualitative and quantitative) of endline survey, 2022

Respondents	**Intervention**		**Comparison**	**Total**
	Kasba	***Sarail***	***Bijoynagar***	
Quantitative respondents				
• Women to be interviewed in the current study	550	550	550	1650
• Husband's to be interviewed in the current study	550	550	550	1650
Qualitative respondents				
• Family members (for example, husband, mother-in-law/father-in-law, or any other family members who may are related to MNCH or ECD matters in that household)	10	10	10	30
• Community representatives (representative from Community Group/Community Support	10	10	10	30

Respondents	Intervention		Comparison	Total
	Kasba	*Sarail*	*Bijoynagar*	
Group/Community Action Group or other influential community members)				

We adopted a multi-stage cluster sampling technique. First, five unions were randomly selected from each of the intervention sub-districts (*Sarail* and *Kasba*) and comparison sub-district (*Bijoynagar*). The selected unions were divided into segments/clusters with 1000 households (to get at least 55 mothers of less than 12 months years old child we needed 1000 households per cluster considering the availability of the fathers at home for the interview) keeping the geographical demarcation of villages in the union uninterrupted. Finally, two clusters from each of the selected unions were randomly picked as the final data collection cluster (Total 30). Thus, we conducted data collections from 10 clusters in each intervention and comparison sub-districts to reach the required sample size. We went door to door to find the required samples from the randomly selected clusters. For the qualitative data collection, we selected 2 clusters from each sub-district based on the accessibility of the study site and the working experience of the quantitative team. We administered in-depth interviews (IDI) with 10 family members in each cluster and key informant interview (KII) with 10 community representatives.

Data collection and quality control

All interviewers for the quantitative data collection received 4-days of training on the data collection tools followed by 1-day of field practice before the commencement of data collection. The qualitative team received 1 day of training. The training was conducted by the study investigators and trainers specially trained in conducting household surveys and qualitative data collection and analysis.

Listing and household interview: The data collectors listed down all households of the selected cluster for this study. Each household was given were provided with a unique identification number. If the household did not have any child less than 12 months, the data collector proceeded to the next household. While listing if an eligible woman (having a child less than one year) was found, the data collectors conducted the interviewer-administered household interview with the structured questionnaire. Then their husbands were interviewed. Women and their husbands were interviewed separately on the same or separate dates. Thus, household listing simultaneously proceeded with the quantitative interview. Household interviews were conducted from January-March 2022.

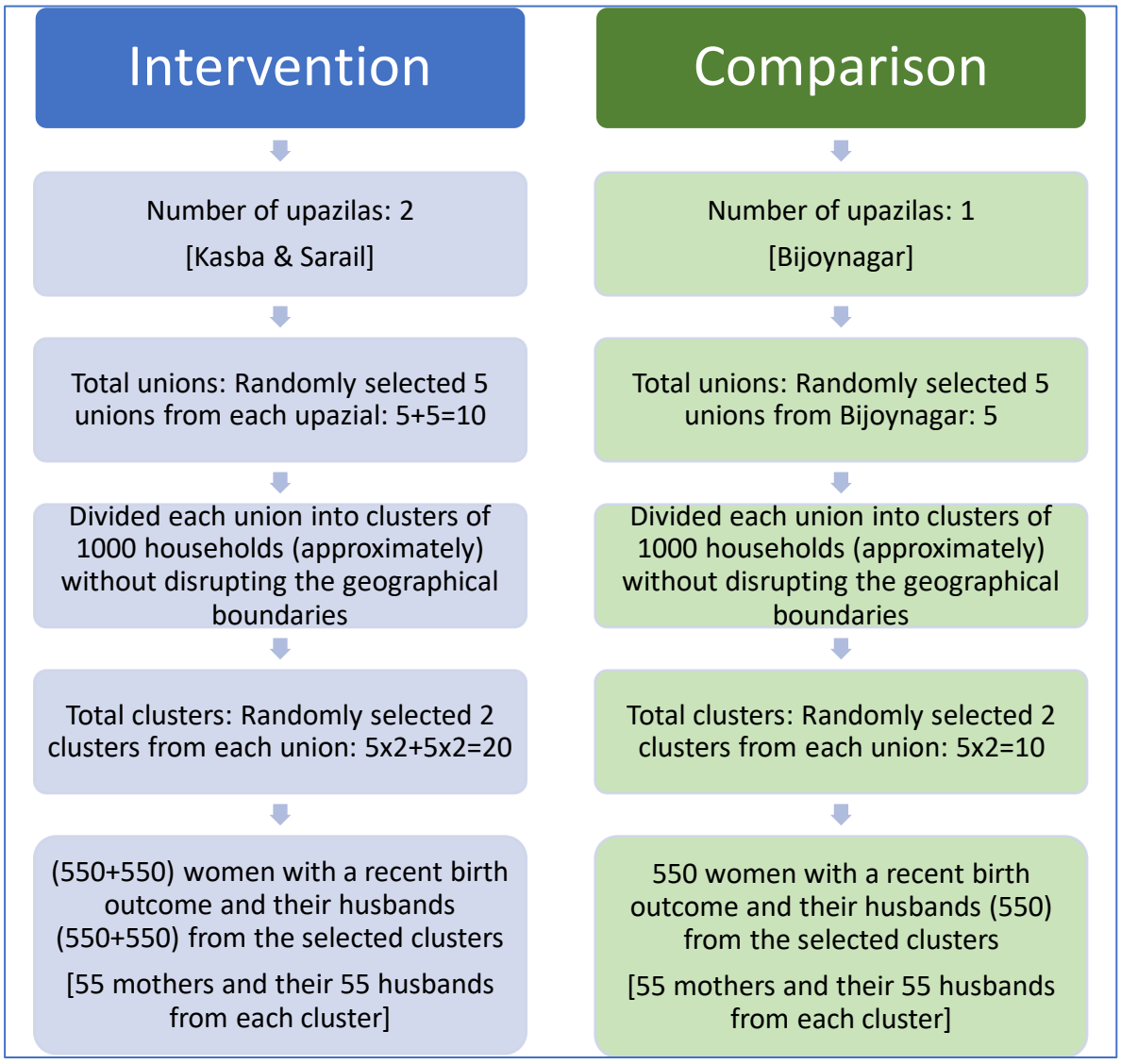


Figure 4: Sampling procedure for quantitative component during the endline survey, 2022

The quantitative study tools, structured questionnaires were developed in English and translated into Bengali (local language). A programmer converted the questionnaire to the format of an Open Data Kit (ODK). We used an online data collection platform named KoboToolbox (https://www.kobotoolbox.org/) to collect and store data throughout the study. Data collectors, statisticians, and investigators had password-protected user account(s) to see, use and upload the data collection forms. Research assistants were recruited and trained, and data were collected data by visiting the households of the selected participants. Field coordinators/researchers/investigators were responsible for field supervision, day-to-day management of data collection, and any necessary troubleshooting. Field coordinators directly observed five percent of interviews and provided feedback if any issues were found. The principal investigator (PI) and other investigators of the study visited data collection activities

several times and later arranged refreshers, particularly on modules on early childhood development, health rights, women empowerment, quality of care etc. based on the field visit findings. A statistician was assigned for interim analysis of the data and for sending the data queries to field coordinators as soon as those were identified.

Qualitative interviews (IDI and KII) among the household members and community representatives were carried out during February-March 2022. Pretested guidelines were used in conducting FGDs and IDIs for qualitative data collection. Qualitative data collectors were directly supervised by investigators.

Data analysis

Data were downloaded, labelled, and cleaned by a senior statistician. We carried out descriptive analysis (frequencies, percentages, mean with standard deviation etc.) for the continuous and categorical variables under the quantitative component. We presented data in tables, graphs, and flowcharts wherever it is suited. All quantitative analyses were conducted using the statistical software Stata version 17.0 (StataCorp LLC, College Station, TX, USA).

The qualitative data analysis was performed using the thematic approach (5,6). The field research assistants transcribed the interviews verbatim, and subsequently the transcripts were reviewed and analyzed by the principal investigator and co-investigators. Both deductive and inductive analysis of the data were done to interpret the findings (6,7). The data was analyzed manually and organized thematically according to the research objectives.

Ethical considerations

We obtained ethical clearance from the Institutional Review Board (IRB) of the BRAC James P Grant School of Public Health, BRAC University, Dhaka, Bangladesh (IRB Reference No.: IRB-3 October'21-029). At the beginning of each interview, the data collectors gave detailed information about the objective of the study. They assured the participants that their participation would be entirely voluntary and that respondents had the right to refuse to answer any questions and to discontinue the interview at any time, even after consenting to the study. Afterward, informed written consent was obtained from each respondent or their legal guardian (if the respondent was less than 18 years old) before collecting data. In case a woman with a child was less than 18-year-old, we administered informed assent form.

Challenges

The team faced several challenges during the data collection activities of the area. One of the major challenges throughout the entire data collection time was reaching the husbands of the mothers of less than 12 months children. In *Branhmanbaria*, a considerable proportion of husbands live away from home, either abroad or in other cities within Bangladesh due to their occupation. The data collectors had to visit husbands at fields, at shops, and at marketplaces, to interview them after communicating over the phone which was time consuming and sometimes difficult for the female data collectors. Like any other research project implementation in this time, the COVID-19 situation in Bangladesh was another major challenge. Several staff at field suffered in symptoms related to CVID-19 along with other sicknesses, although our data collectors and their supervisors took precautionary measures such as wearing double masks, washing hands, and/or applying sanitizers as often as possible. Other challenges include social context such as religious conservativeness, geographical context (hard to reach hilly areas, water bodies), technical issues like recording GPS location, poor internet etc. and accident/unfortunate incidences. In addition, there were few topics in the questionnaire for example right to health, quality of MNCH care, women empowerment, early childhood development etc. which were challenging to make the respondent understand by the data collectors. However, we have overcome these barriers with the dedication of the field team members, continuous troubleshooting by the study investigators, and the cooperation from the BRAC HNPP team working in the area and completed the data collection within the pre-determined timeline.

Results (1): Household characteristics

Key findings

- **Drinking water:** Almost 100% of households had access to an improved source of drinking water. Most of the households (84.3%) used tube wells or borehole water for drinking.
- **Sanitation:** Fifty eight percent of households had improved sanitation facilities. Households in *Sarail* had more unimproved sanitation facilities than the improved ones (64.5% vs. 35.5%). One out of three latrine facilities had flush/pour flush to the septic tank.
- **Handwashing:** About 99.3% of the household had basic handwashing facilities and 99.1% respondents washed their hand with soap in the last 24 hours.
- **Electricity:** Ninety nine percent of households had access to electricity.
- **Access to mobile phone and mass media devices:** Almost all households (97.3%) had access to a mobile phone. However, only 47% of households had television or radio.
- **Cooking fuel:** Most of the households (45.8%) used straw/grass/agri-waste/leaves for cooking.
- **Main house building materials:** Corrugated tin (84.2%) was the most used material to build the roof of the houses and the floor was made of either earth/sand or brick/cement (55.6% vs. 43.3%). Walls of the majority of households were made of tin (62%).
- **Household food security:** Two out of three (66.7%) households were food secure. *Sarail* had a lower proportion of food secure households (57%). The commonest way to cope food insecurity status was by taking a loan (25%).

This report provides the contextual features for the interpretation of demographic and health indicators and also a rough indication of the survey's generalisability by presenting data on the socio-economic status of the households. The living conditions, and water, sanitation, and hygiene (WASH) status are also revealed by this survey.

Accordingly. this section gives details on household coverage, household features, drinking water source, sanitation, hand washing, household possession, household food security, and coping strategies.

Table 5 shows survey coverage for households and individuals. A total of 21,470 households were listed in this survey. A total of 1,670 women, 1,650 husbands, and 2,184 interviews about children younger than 12-months old were conducted. The overall interview completion rate was 97.2%.

Table 5: Household number covered and response rate during the endline survey, 2022.

Interviews	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
HH listing	6,552	6,665	8,253	21,470
Individual interview				
• Woman	555	560	555	1,670
• Child	721	725	738	2,184
• Husband	548	550	552	1,650
• Woman-child-husband triad	382	385	369	1136
Interview completion rate	96.3	98.0	97.2	97.2

Major household features

Table 6 lists the characteristics of the surveyed households. Electricity was available to nearly all households (99.3%). About 45.8% of all households utilized straw/grass/agricultural waste/leaves as cooking fuel, with the greatest percentage in *Bijoynagar* (59.4%). In *Kasba*, on the other hand, people relied heavily on wood (60.4%) for cooking. Tin roofs comprised 84.2%, whereas brick and cement roofs comprised 15.2 % of the structure, according to this research. Forty three percent of the floor in most households were made up of bricks/cement. Tin was the most commonly used wall material in these households (62.0%), but just 41.6% of the households in *Bijoynagar* had tin-made walls. Overcrowding can transmit diseases like tuberculosis, measles, and meningitis, and the number of bedrooms in a household is a good predictor (4,8–10). With a standard deviation of 1.5, the mean number of people in each room was 2.9. One-fifth of surveyed households only had one sleeping room, while two or more sleeping rooms were present in one third of the households. It is estimated that the average household earned 23,981.7 Bangladeshi Taka (BDT). Overall, the average number of person in a household was five which is higher than the national mean size of the household (4.3) (11). Most of the respondents were Muslim (96.5%) followed by Hindu religion (3.5%).

Table 6: Percent distribution of the surveyed households (n=2,184) according to the major household features during the endline survey, 2022

Indicators	*Sarail*	*Kasba*	*Bijoynagar*	Total
	n=721	n=725	n=738	N=2,184
Electricity	99.0	99.5	99.5	99.3
Cooking fuel				
Electricity	1.0	0.3	1.1	0.8
LPG/natural gas/biogas	22.2	10.6	14.4	15.7
Coal/lignite	0.3	0.4	0.0	0.2
Wood	13.0	60.4	20.6	31.3
Straw/grass/agri-waste/leaves	49.9	28.0	59.4	45.8
Animal dung	13.7	0.1	4.3	6.0
Others	0.0	0.1	0.3	0.1
Main roof materials				
No roof	0.0	0.1	0.1	0.1
Tin	86.0	80.7	85.9	84.2
Wood	0.6	0.0	1.0	0.5
Ceramic tiles	0.0	0.1	0.0	0.1
Bricks/cement	13.5	19.0	13.0	15.2
Main floor material				
Earth/sand	59.6	50.8	56.4	55.6
Wood planks	0.1	0.0	0.0	0.1
Ceramic tiles	0.6	1.8	0.8	1.1
Bricks/cement	39.7	47.5	42.8	43.3
Main wall material				
No walls	0.0	0.3	0.0	0.1
Dirt	0.0	4.8	18.2	7.7
Bamboo with mud	0.0	0.1	7.1	2.4
Tin	79.3	65.7	41.6	62.0
Bricks/cement	20.4	29.1	33.2	27.6
Wood planks/shingles	0.1	0.0	0.0	0.1
Others	0.1	0.0	0.0	0.1
Number of persons per room (mean ±SD)	3.4±1.8	2.5±1.1	3.0±1.4	2.9±1.5
Rooms used for sleeping in the households				
One	29.8	11.0	25.1	22.0
Two	36.8	30.9	35.1	34.3
Three	19.0	30.6	19.1	22.9
Four or more	14.4	27.5	20.7	20.9
Household income (BDT)	22613±40688	27747±50771	21605±20592	23981±39405
Mean size of households	5.2	5	4.8	5
Religion				
Islam	97.2	93.7	98.6	96.5
Hinduism	2.8	6.3	1.4	3.5

Indicators	*Sarail*	*Kasba*	*Bijoynagar*	Total
	n=721	n=725	n=738	N=2,184
Others	0.0	0.0	0.0	0.0

Drinking water sources at household level

Improved sources of drinking water provide greater protection against external pollution, increasing the likelihood that the water will be safe to consume. Like BDHS, we explored the access to improved sources of drinking water at household level. Piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, rainwater, water delivered via a tanker truck or a cart with a small tank, and bottled water were considered as improved sources of drinking water in this report (11). In general **Table 7** displays the status of the households drinking water sources. From the surveyed household it was found that almost every household had access to improved drinking water (99.9%), while 84.3% of the households had a tube well or borehole as a source of their drinking water. *Sarail* had the highest proportion of tube wells or boreholes (94.9%) as a source of their drinking water.

Table 7: Percent distribution of the surveyed households (n=2,184) according to the drinking water status during the endline survey, 2022

Indicators	*Sarail*	*Kasba*	*Bijoynagar*	Total
	n=721	n=725	n=738	n=2,184
Access to improved drinking water				
Improved	99.7	100.0	100.0	99.9
Unimproved	0.3	0.0	0.0	0.1
Source of drinking water				
Piped into dwelling/yard/plot	4.7	21.4	19.0	15.1
Public tap	0.1	0.0	0.3	0.1
Tube well/borehole	94.9	78.3	79.7	84.3
Water tanker	0.0	0.3	1.1	0.5
Surface water	0.3	0.0	0.0	0.1

Sanitation

Proper sanitation facilities keep people away from human waste and contribute to the reduction of infectious diseases such as diarrhoea, dysentery, and typhoid transmission (11). We defined the sanitation facilities as an improved sanitation facility if the toilet of the household had flush/pour flush toilets that flush water and waste to a piped sewer system, septic tank, pit latrine with water seal, or pit latrines with slabs. **Table 8** displays household sanitation status. Most of the households surveyed had upgraded sanitary facilities (57.8%), however, in *Sarail*, majority of the household had unimproved sanitary facility (64.5%). When it comes to toilet/latrine facilities, overall flush/pour flush to septic tank (32.7%) was the most common

type of latrine. Again, it was found that households in *Sarail* had toilets that flush/pour flush to septic tank only 19.0% which was the lowest among the three upazila. Furthermore, *Sarail* had the greatest proportion of hanging latrines/open latrines (37.6%) which is alarming.

Table 8: Percent distribution of the surveyed households (n=2,184) according to the sanitation status during the endline survey, 2022

Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
	n=721	**n=725**	**n=738**	**n=2,184**
Type of sanitation facility				
Improved	35.5	64.4	72.9	57.8
Unimproved	64.5	35.6	27.1	42.3
Toilet/latrine facility				
Flush/pour flush to piped sewer system	0.1	0.1	0.0	0.1
Flush/pour flush to septic tank	19.0	28.4	50.3	32.7
Ring slab with water seal	12.3	28.4	21.8	20.9
Pit latrine with water slab	4.0	7.5	0.8	4.1
Ring slab without water seal	14.2	34.2	22.9	23.8
Pit latrine without slab	12.1	1.2	1.8	5.0
Hanging latrine/open latrine	37.6	0.0	2.4	13.2
No facility (bush/open field/river pond)	0.7	0.1	0.0	0.3

Handwashing

Handwashing status in the households are provided in **Table 9**. Washing hands is one of the best approaches to prevent the transmission of germs. Almost every household surveyed had soap (99.3%), and nearly every household reported using soap within the prior 24 hours (99.1%) for various purposes.

Table 9: Percent distribution of the surveyed households (n=2,184) according to the handwashing status during the endline survey, 2022

Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
	n=721	n=725	n=738	n=2,184
Have (any) soap in the households	99.2	100.0	98.6	99.3
Used soap within the last 24 hours	99.3	99.2	98.8	99.1

Household possessions and wealth

Another useful indicator of a household's socioeconomic standing is the possession of durable consumer goods. The availability of such items can have a variety of effects, such as allowing family members to listen to the radio or watch television, which can help them learn more about MNCH services and raising their awareness. Health-seeking habits may be affected by

transportation accessibility. The radio/television ownership rate in households of *Kasba* was higher than *Sarail* (64.3 % vs. 29.8 %), as shown in **Table 10**. In *Kasba*, 24.4 % and 27.3 % of households owned a bicycle and a motorcycle/motor scooter/tempo, respectively, whereas, in *Sarail*, 3.1 % and 4.9 % did. Having a refrigerator was highest in *Kasba* (68%). Based on household characteristics (e.g., cooking fuel and sources of drinking water and sanitation systems) and the durable assets they possess, a composite wealth index was derived using the DHS method, which consists of area-specific indexes combined into an overall model (11). Overall, the level of household wealth was divided equally across all socioeconomic groups. **Figure 5** displays the wealth index of households by study areas in the baseline and the endline. About one-fourth (23.7%) of the population from *Sarail* and 28.3% of the population from *Kasba* were in the poorest quintile, compared with only 9.1% of the population of *Bijoynagar*. In *Sarail*, only 14.2% population belonged to the wealthiest quintile, as compared with 21.9% and 23.7% of the population from *Kasba* and *Bijoynagar*. Compared to the baseline survey, the proportion of poorest households increased sharply in *Kasba* during the endline (from 8% to 28%). On the other hand, in *Bijoynagar*, the proportion of poorest households decreased during the endline (from 22% to 9%) compared to the baseline period.

Table 10: Percent distribution of the surveyed households (n=2,184) according to the household possession of durable goods and assets during the endline survey, 2022

Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
	n=721	**n=725**	**n=738**	**n=2,184**
Entertainment				
Radio/television	29.8	64.3	46.8	47.0
Communication and connectivity				
Telephone/mobile telephone	95.7	98.5	98.5	97.6
Household appliance				
Refrigerator	43.4	68.0	61.0	57.5
Transport				
Bicycle	3.1	24.4	17.9	15.2
Rickshaw/van	3.2	2.8	3.0	3.0
Motorcycle/motor scooter/tempo	4.9	27.3	14.8	15.7
Car/truck	0.4	1.8	0.4	0.9
Wealth quintile				
Lowest	23.7	28.3	9.1	20.3
Second	24.0	15.7	19.5	19.7
Middle	18.2	13.8	27.9	20.0
Fourth	20.0	20.3	19.8	20.0
Highest	14.2	21.9	23.7	20.0

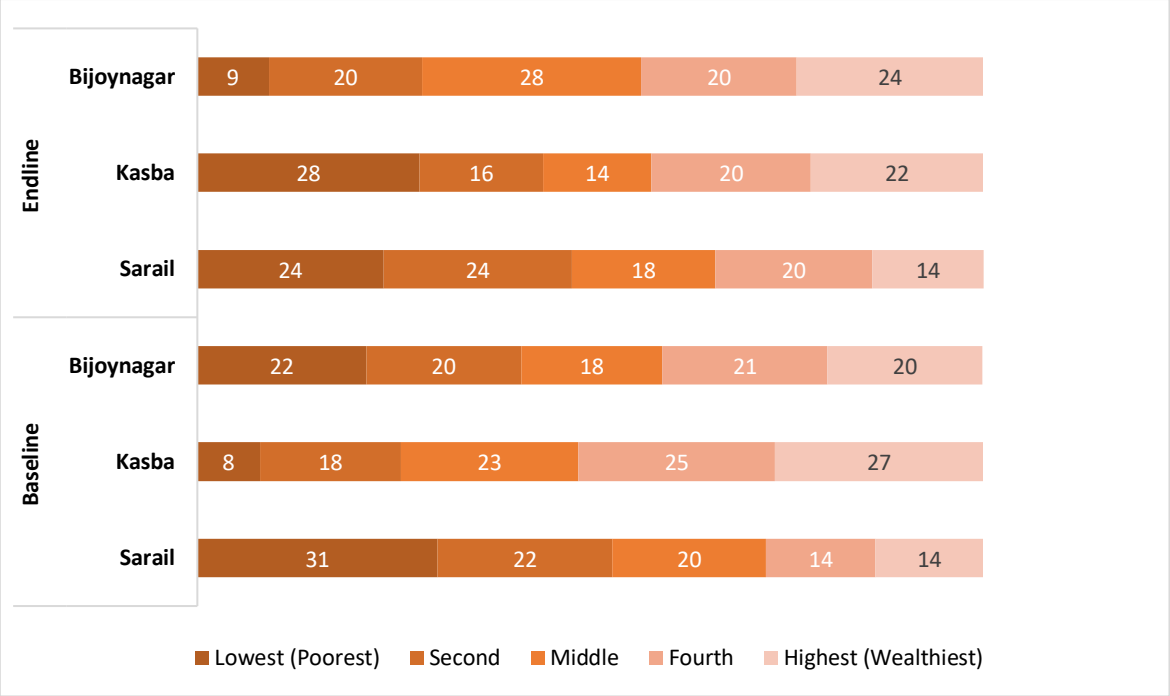


Figure 5: Household wealth by study area: percentage of population by wealth quintiles during the baseline (n=1,367) survey and in the endline (n=2,184) survey, 2022

Household food security and coping strategies

When a household's food needs are greater than its ability to purchase food, several strategies are adopted, such as purchasing lesser quality foods, having shorter or fewer pieces of food, or turning to socially unsustainable activities such as borrowing money and food (12,13). Food insecurity during and after pregnancy can have detrimental effects on both the mother and the child born to a household with food insecurity. We used the Household Food Insecurity Access Scale (HFIAS) questionnaire developed by the Food and Nutrition Technical Agency (FANTA) to collect data on behaviours and attitudes related to three domains of food insecurity (only access domain) experiences including (1) anxiety and uncertainty about the household food supply; (2) insufficient food quality includes variety and preferences of the type of food and (3) insufficient food intake and its physical consequences to estimate the prevalence of food insecurity at the household level in Bangladesh (14). Based on this guideline, we asked nine occurrence questions to the respondents on perceptions of their households' food vulnerability and on their behavioural responses to food insecurity with a recall period of 4 weeks providing the options zero to three indicating frequency of the occurrence as never, rarely, sometimes, and often, respectively. We used HFIA prevalence indicator to categorises households into four levels of household food insecurity (access): food secure, and mild, moderately, and severely food insecure. **Table 11** displays household food security and coping

strategies during the endline. A total of 66.7% of households were food secure, with households from *Sarail* with the lowest percentage (57.0%) of food security. Households in *Sarail* had the highest proportion of severe food insecurity (8.6%). *Sarail* had the largest percentage of households which used unsustainable methods to deal with hunger/shortage of food, with 43.1% households eating low-quality food; 42.9% households reduced their food intake; 18.5% borrowed meals from friends or family; 33.8% of people borrowed money to buy food.

Table 11: Percent distribution of the surveyed households (n=2,184) by the food security status and coping strategies during the endline survey, 2022

Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
	n=721	**n=725**	**n=738**	**n=2,184**
Household food security				
Food secure	57.0	71.0	71.8	66.7
Mild food insecure	15.4	18.1	16.7	16.7
Moderate food insecure	19.0	5.8	5.4	10.0
Severe food insecure	8.6	5.1	6.1	6.6
Households adopting unsustainable means to cope with hunger/shortage of food				
Sell or mortgage assets	5.4	9.7	0.8	5.7
Eat low quality food	43.1	3.5	13.7	20.1
Eat less items of foods	42.9	6.3	9.4	19.5
Stop schooling of HH members	4.6	0.4	1.0	2.0
Borrow food	18.5	5.4	13.8	12.6
Take loan	33.8	18.9	24.0	25.6

Results (2): Respondent's characteristics

Key findings

- **Age:** Most of the mothers belonged to the 20-24 years age group (37.1%) whereas most of the husbands (25.5%) belonged to the 30-34 years age group.
- **Education:** The percentage of women and their husbands with no education had decreased since baseline (2018), from 10% to 7% and from 23% to 21% respectively. On the other hand, the proportion of women who completed at least secondary education had decreased during the endline compared to baseline in 2018 (21% vs. 18%) and among husbands, this proportion had increased slightly (from 15% to 17%).
- **Occupation:** Ninety-seven percent of the surveyed mothers were a homemaker. The majority of the husbands were either unskilled day labourer or businessman, 22.5% and 27.4% respectively.

This chapter discusses the survey respondents' demographic and socioeconomic characteristics, including their age, education attainment, location of residence, marital status, and employment status. This data is helpful in determining the change in the utilization of MNCH services; awareness, capacity, and practices among women and their husbands related to MNCH and early childhood development (ECD); assessing family and community care environment; assessing change in women empowerment.

Background characteristics of women

Table 12 shows socioeconomic and demographic characteristics of female respondents. The majority of the women who took part in the study were between the ages of 20 and 24 years. With a standard deviation of ±5.4 years, the average age of the women surveyed was 24.6 years. Compared to *Sarail* and *Bijoynagar*, women from *Kasba* were better educated. The highest form of education was secondary incomplete, which was most among the women from *Kasba* (49.5%). The vast majority of women (more than 50%) were homemakers (97%) in all upazilas, with nearly equal distribution.

Table 12: Percent distribution of the women with less than 12 months old children according to their background characteristics in the baseline (n= 1,367) and in the endline (n=1,670) survey, 2022

	Baseline (2018)				Endline (2022)			
	Sarail	***Kasba***	***Bijoynagar***	**Total**	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
	n=454	**n=452**	**n=461**	**N=1,367**	**n=555**	**n=560**	**n=555**	**n=1,670**
Age in years (mean ± SD)	NI	NI	NI	NI	24.5 ±5.4	24.5 ±5.2	24.8 ±5.5	24.6 ±5.4
Age in years								
15-19	9.3	11.1	8.7	9.7	16.9	17.0	16.4	16.8
20-24	40.7	38.7	36.9	38.8	36.0	37.1	38.2	37.1
25-29	26.9	28.1	28.9	27.9	25.8	24.8	23.6	24.7
30-34	14.5	17.9	14.8	15.7	14.2	14.3	13.3	14.0
35+	8.6	4.2	10.8	7.9	7.0	6.8	8.5	7.4
Education								
No education	15.6	6.9	7.6	10.0	11.5	3.2	6.3	7.0
Partial incomplete	13.0	5.1	13.9	10.7	16.0	7.7	6.7	10.1
Primary complete[1]	24.0	9.3	16.9	16.8	26.1	13.9	22.3	20.8
Secondary incomplete	31.1	49.8	44.0	41.6	33.2	49.5	48.5	43.7
Secondary complete[2] or higher	16.3	29.0	17.6	20.9	13.2	25.7	16.2	18.4
Occupation								
Farmer	NI	NI	NI	NI	0.0	1.1	0.5	0.5
Unskilled day labor	NI	NI	NI	NI	0.2	0.0	0.0	0.1
Skilled day labor	NI	NI	NI	NI	0.0	0.5	0.2	0.2
Transport	NI	NI	NI	NI	0.2	0.0	0.0	0.1
Salaried	NI	NI	NI	NI	0.9	1.4	0.7	1.0
Business	NI	NI	NI	NI	0.0	0.0	0.2	0.1
Homemaker	NI	NI	NI	NI	97.3	96.3	97.5	97.0
Others	NI	NI	NI	NI	1.4	0.7	0.9	1.0

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.
NI=No information

Background characteristics of husbands

Table 13 represents the demographic characteristics of the husbands. Though most of the husbands (25.5%) in the endline survey belonged to the 30-34 years age group, the highest proportion of the husbands (27.8%) age was recorded in *Kasba* who belong to the 25-29 years age group. The mean age was 32.8 years with an SD of ±7.7. Overall, 24.6% of husbands had completed their primary education, no education was found lowest in *Kasba* (7.5%). In the endline there is a large difference among the women (7%) and husbands (21.1%) with no education level, which was also noticed in the baseline report. Overall, 27.4% of husbands were doing business, it was found highest in *Sarail* (32.6%).

Table 13: Percent distribution of the husbands of women with less than 12 months old children according to their (husbands) background characteristics in the baseline (n=701) and in the endline (n=1,650) survey, 2022

Indicators	Baseline (2018)				Endline (2022)			
	Sarail	*Kasba*	*Bijoynagar*	Total	*Sarail*	*Kasba*	*Bijoynagar*	Total
	n=262	n=153	n=286	N=701	n=548	n=550	n=552	n=1,650
Age in years (mean ± SD)	NI	NI	NI	NI	32.8±7.6	32.4±7.0	33.2±8.3	32.8±7.7
Age in years								
15-19	0.4	1.3	0.0	0.4	0.4	0.2	0.4	0.3
20-24	9.5	9.8	8.7	9.3	9.1	10.2	11.2	10.2
25-29	25.2	20.9	23.1	23.4	24.3	27.8	23.6	25.3
30-34	25.2	30.7	28.3	27.7	26.2	25.3	25.0	25.5
35-39	19.5	21.6	18.9	19.7	19.9	20.7	19.8	20.1
40-44	11.5	5.9	12.9	10.8	11.3	8.7	10.3	10.1
45+	8.8	9.8	8.0	8.7	8.4	7.1	9.8	8.4
Education								
No education	30.5	14.4	20.3	22.8	29.7	7.5	26.1	21.1
Partial incomplete	21.8	12.4	21.7	19.7	14.6	13.5	11.2	13.1
Primary complete[1]	20.2	16.3	17.1	18.1	24.6	26.4	22.6	24.6
Secondary incomplete	16.4	34.6	25.9	24.3	19.5	29.1	24.1	24.2
Secondary complete[2] or higher	11.1	22.2	15.0	15.1	11.5	23.6	15.9	17.0
Occupation								
Farmer	NI	NI	NI	NI	11.1	10.9	8.2	10.1
Unskilled day labor	NI	NI	NI	NI	22.6	12.6	32.3	22.5
Skilled day labor	NI	NI	NI	NI	5.7	17.1	8.9	10.6
Transport	NI	NI	NI	NI	13.1	7.1	12.5	10.9
Fisherman	NI	NI	NI	NI	0.4	0.0	0.2	0.2
Salaried	NI	NI	NI	NI	7.7	21.6	8.5	12.6
Business	NI	NI	NI	NI	32.6	27.3	22.3	27.4
No income	NI	NI	NI	NI	2.7	1.5	3.8	2.7
Immigrant	NI	NI	NI	NI	0.4	1.3	2.0	1.2
Others	NI	NI	NI	NI	3.7	0.7	1.5	1.9

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.
NI=No information

Results (3): Knowledge, awareness, capacity, and utilization of maternal health

Key findings

- **Reproductive history:** Overall, the age of menarche of the respondent was 12.9±0.92 years in the study area. The overall number of pregnancies was 2.7±1.6 and the highest number was found in *Sarail* (2.9±1.7) among three subdistrict. The overall number of live births was 2.4±1.4 and *Sarail* had the highest number of live births as well (2.7±1.6).
- **Menstrual hygiene:** More than half of the mothers (54%) used old clothes, and 43% used sanitary pads during their menstruation. The highest proportion of mothers using sanitary pads was recorded among the mothers from *Kasba* (52%), and the lowest was among the mothers from *Sarail* (30%). The highest proportion of mothers from *Sarail* (67%) used old clothes during their menstruation compared to the other two sub-districts.
- **Family planning:** The highest proportion of mothers of under 01-year child who used contraceptive methods was recorded among the mothers from *Kasba* (49%) among the study areas and the almost all the methods were modern methods (48.4%). The use of the contraceptive method was relatively low in the comparison area than intervention area. Oral contraceptive pills were the commonest among all the contraceptive methods. Private sector was the main source of modern contraceptives methods.
- **Knowledge regarding the importance of ANC:** Almost all the women (92.6%) and the husband (93.9%) in the study area knew the importance of ANC. In all 03 sub-district awareness about the ANC increased from baseline to the endline among the women (18.4% absolute increase) and among their husbands (27% absolute increase). Also, the respondents in the intervention area had more awareness than the comparison area. However, awareness regarding first ANC visit was higher in the comparison area (40.9%) than in the intervention area (*Sarail* 27.6% and *Kasba* 35.4%) in women and the same trend was seen in husbands. Women and husbands from the higher wealth quintile were more aware of the first ANC visits in within first trimester and the need for 4 or more ANCs.

- **Source of knowledge regarding ANC:** Most of the women (80.4%) and their husbands (66.1%) acquired their knowledge about the ANC from family, friends, neighbors, or relatives. Whereas during baseline the most common source knowledge was self (36.8%). NGO staff played important role in the intervention area, in comparison to the reference area as a source for both the women and their husbands.
- **Status of ANC visit:** The proportion of the mother with no ANC visit decreased (13.7%) in the endline. About 13.06% and 14.9% increase in absolute proportion was observed in the case of "at least 01 ANC visit" and "≥4 ANCs visit" respectively. But the proportion of first ANC within the first trimester was decreased from baseline to endline. In all aspects, the women in the intervention areas (*Sarail* and *Kasba*) received more ANC visits than in the comparison area (*Bijoynagar*).
- **ANC visits from medically trained providers (MTP):** The mean number of the ANC visit from MTPs increased from baseline to endline (1.6±0.8 vs 2.8±2), where the highest change was seen among the mothers from *Kasba* than mothers from *Sarail* and *Bijoynagar*. Eight out of 10 women took ANC from MTP and about 8 out of 10 women took their first ANC visit from a qualified doctor. About 8 out of 10 women reported having their last appointment with a trained doctor.
- **Place of the first and last ANC visits of recent pregnancy:** Overall, among the surveyed women it was found that most of the women (75.5%) took the first ANC care from the private sector. Same trend was seen for the last ANC visit (79.7%). Proportion of the ANC visits in the private sector increased from baseline to the endline.
- **Diagnostic tests during the last ANC visits:** Ultrasound was done more in intervention area (*Sarail* 85% and *Kasba* 92%) than the comparison area (*Bijoynagar* 80%) during last ANC visit. During the last ANC visit, women in *Kasba* reported higher proportion of weight measurements, blood pressure measurements, urine test, and blood tests.
- **The message delivery about danger signs during the ANC:** In *Kasba* about half of the women were provided with the information about the danger signs. The lowest percentage was observed among the women from *Bijoynagar*.
- **Quality ANC visit:** Overall, only 13.5% of the women took 4+ ANC visits with all components of ANC.
- **Husband's involvement during ANC visits:** Compared to *Bijoynagar* (39%), in *Sarail* (43%) and *Kasba* (45%), more women were accompanied by their husbands

while receiving the ANC care. Women with secondary complete or higher education (55%) or from the highest wealth (48%) were accompanied more by their husband during the last ANC visit.

- **Knowledge regarding pregnancy danger signs:** Knowledge regarding danger signs of pregnancy decreased from baseline to endline in all the domains, including pregnancy, delivery, postpartum and newborn. About half of the spouses said they were unaware of or had forgotten about pregnancy-related warning flags which is also cause for concern.
- **Medical emergencies during pregnancy:** Thirty-six percent of the women experienced at least one medical emergency or complication during their pregnancies in the endline which is slightly lower than the baseline and a higher proportion of complication was observed among the women from *Sarail* (39%). Mothers who suffered at least one medical emergency, sought for medical attention 6% more at endline than baseline.
- **The place for care seeking during emergency:** About 9 out of 10 women who faced complications sought emergency care from private institutes in the three subdistricts both in baseline and endline. Women from *Bijoynagar* (89.9%) were more leaned toward private institutes than the other two subdistricts during endline. private
- **The provider of care during emergency:** Majority of the women from *Kasba* (77.7%) went to qualified doctors during emergencies, which is the highest among three study sites. Women from *Sarail* and *Bijoynagar* had a similar proportion of patients seeking treatment from both medically trained providers (about 70%) and non-medical providers (about 30%).
- **Birth preparedness and complication readiness (BPCR):** *Bijoynagar* reported the highest number of BPCR practices in six of the nine categories. *Kasba* has the most reports of the other three practices. In *Kasba*, the BPCR practice reported by the women showed more progress than the comparative region in terms of recognizing healthcare facilities and qualified health care providers, conserving money for emergencies, identifying hospitals for any complications that may develop, and picking a companion of choice.
    - In *Sarail*, *Kasba*, and *Bijoynagar*, women reported 8.0%, 23.9 %, and 14.8 %, respective increase of practicing at least five BPCR between baseline to endline.

Women who finished their secondary school or higher education are more likely practice at least 5 BPCR (5 out of 10 women).

- Overall, 2 out of 10 women consulted with the health worker from BPCR. Whereas 6 out of 10 consulted their husband, and 5/10 consulted the family members. The proportion of consultation with health worker increased between baseline and endline.
- Women from *Sarail*, *Kasba*, and *Bijoynagar* received 6%, 2.3% and 3.1% BPRC cards respectively during endline. There was very little improvement in this regard from endline to baseline.
- Among the mother who received BPCR cards, in *Sarail* half of them received their cards at home. However, in *Kasba* equal proportion of women received cards (3 out of 10) from the public facility and at home. In *Bijoynagar* almost all women (9 out of 10) received cards from public facility.

- **Delivery care:** One in every two mothers delivered their newborn through C- section in *Kasba*. While the proportion of normal vaginal delivery was highest in *Sarail* (63%). In *Kasba*, half of the delivery took place in private facilities and in *Sarail* half of the delivery happened in home. Overall, more delivery occurred in private facility than in home (45.6% vs 44.3%).
  - Overall, 57% of the deliveries happened under the supervision of the qualified medical provider. On the other hand, a considerable number of deliveries took place with help of untrained TBA (23%).
  - Women from *Kasba* (35.5%), at the end line, were the most likely to be aware of three or more potential danger signs. In *Sarail* a large proportion of the women (40.5%) were unable to remember or did not know about the danger signs during delivery.
  - About 4 out of 10 husbands responded that they don't know or can't remember the danger sign during delivery. Compared to baseline, the proportion of husband who did not know any delivery/childbirth related danger sign was six times higher (7.3% vs. 46.9%) during endline.
  - The proportion of women reported to have suffered from at least one problem or complication during their last childbirth was highest in the *Sarail* area (39%) followed by *Kasba* (21%) and *Bijoynagar* (17%). There was 15% increase in

the proportion of women who suffered at least one problem during last childbirth from baseline to endline.

- The overall proportion of women who sought care increased; compared to the baseline. Private clinics were the main provider of emergency treatment during the baseline in all three subdistricts, although this decreased in *Kasba* (87% vs. 76.9%) and *Sarail* (88.2% vs 53.7%) during the endline; while increased in *Bijoynagar* (68.1% vs. 73.5%) among the women who sought care for emergencies. A large number of women (91.2%) from *Bijoynagar* went to medically trained providers in case of emergency. Despite of being an intervention site, only 58.1% women from *Sarail* availed service from medically trained providers.

- **Postnatal care (PNC) for women:** Number of patients obtaining PNC care has increased dramatically in the study sites. In *Sarail*, a large proportion of the women received at least one PNC care visit (40.5%), while 33% received at least three PNC care visits. On the other hand, women receiving at least 3 PNC was higher in *Kasba* (39.5%) and *Bijoynagar* (41.1%).
  - Receiving more than 3 PNC care from MTP was found highest among the women from *Bijoynagar* (39.5%) and lowest among the women from *Sarail* (30.6%). The highest increase in the PNC care (at least 3) occurred in *Bijoynagar* (38%) between baseline and endline.
  - Half of the women from both *Kasba* and *Bijoynagar* received their PNC from medically trained providers. In all the subdistrict's qualified doctors were preferred for the PNC care by the women.
  - *Sarail* had the largest percentage of women who received PNC care within 0-24 hours after delivery (80.9%), followed by women from *Bijoynagar* (64.3%), and *Kasba* (52.3%).
  - The percentage of women who did not take PNC from MTP at baseline has decreased significantly during the endline. The PNC obtained within 24 hours after delivery from MTP shows an improvement of 35.8%, 45.5%, and 43.9% for *Sarail*, *Kasba*, and *Bijoynagar* respectively.
  - In the event of first PNC, the private clinic was the major source of treatment in all three sub districts. However, *Sarail* (44%) had a far higher percentage of women staying at home during the post-natal period than the other sub districts.

- Overall, about 5 in 10 women were able to report 1-2 of the postnatal danger signs in all the sub-districts. Most of the spouses (54.9%) in the three sub-districts claimed that they were unaware of or unable to recall the warning signs of the postnatal period.
- Overall, 17% of the women experienced at least one medical emergencies or complication during their post-natal period in the endline which is same as the baseline. Among those who faced medical emergencies about 80% women sought treatment from a health care provider which was higher compared to the baseline (65%).In the event of a mother's postpartum emergency, the private clinic (78%) was the major source of treatment in all three sub districts. During the postpartum emergency period, overall, 70% women sought care from medically qualified providers.

Maternal and new-born health must be a priority for any health care system aiming to minimize the pregnancy related mortality and morbidity. The health care a woman gets throughout pregnancy, during the birth process, and immediately after the birth of the baby is critical to both the mother and the baby's well-being. The Bangladeshi government is dedicated to reaching the Sustainable Development Goal 2 (SDG 2) and SDG 3 goals as set out by the United Nations. This current study which utilizes the WHO IFC framework also focuses on maternal and new-born health care improvement. According to the IFC framework, there are four priority areas:

- Developing capacities to stay healthy, make healthy decisions and respond to obstetric and neonatal emergencies.
- Increasing awareness of the rights, needs, and potential problems related to maternal, new-born health.
- Strengthening linkages for social support among women, families, and communities, and with the healthcare.
- Improving quality of care, health services, and interactions with women, families, and communities.

It is recommended to prioritize 1-2 interventions depending on the needs and circumstances of the community that were discovered via interaction between the community and health providers. By participatory community assessment (PCA) exercise the intervention were

identified and applied in the community during 2017. In this current project, this framework was applied in the *Sarail* and *Kasba* which are the intervention areas.

This section will cover the knowledge, awareness, capacity, and utilization of maternal health services such as antenatal care, delivery care, postpartum care, and neonatal care and care-seeking for obstetric emergencies which will also give an overview of the four priority areas of the IFC framework.

Basic characteristics and reproductive history

The present research focuses on maternal health services and how people are aware of, know about, and whether they utilize those services. **Table 14** contains data on the fundamental features and reproductive history of the mothers in our research, which we need to know before diving deeper. Information on a woman's reproductive health may be gathered from a woman's reproductive history. All the mothers are currently married. The average age of menarche was 12.9 years with a standard deviation (SD) of 0.92. The average number of pregnancies was 2.7 whereas an average number of live births was 2.4.

Table 14: Percent distribution of women with less than 12 months old children (n=1,670) according to their reproductive history during the endline survey, 2022

Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
	n=555	n=560	n=555	n=1,670
Currently married (%)	100.0	99.6	99.3	99.64
Age at menarche in years (Mean ± SD*)	12.8±0.9	13.0±0.9	12.9±1.0	12.9±0.92
Number of pregnancies** (Mean ± SD)	2.9±1.7	2.5±1.5	2.7±1.6	2.7±1.6
Number of live births (Mean ± SD)	2.7±1.6	2.3±1.2	2.4±1.4	2.4±1.4

*Standard deviation; ** Number of pregnancies including miscarriage, menstrual regulation (MR), and abortion

Menstrual hygiene

Menstruation is a normal part of a woman's cycle throughout her reproductive years. However, it is still a taboo subject in many places. To avoid infection, it is essential to practice good menstrual hygiene. It is crucial for every woman to exercise good hygiene practice throughout her menstrual cycle, not only for her own health but also for her reproductive health. **Figure 6** displays the materials used by the interviewed mother during their menstruation period. Among the mothers, more than half of them (54%) used old clothes, and 43% used sanitary pads. Considering study sites, the highest proportion of mothers who used sanitary pads were the mothers from *Kasba* (52%), and the lowest was in *Sarail* (30%). The highest percentage of

women who used old clothes during their menstruation were from *Sarail* (67%) compared to other two sub-districts.

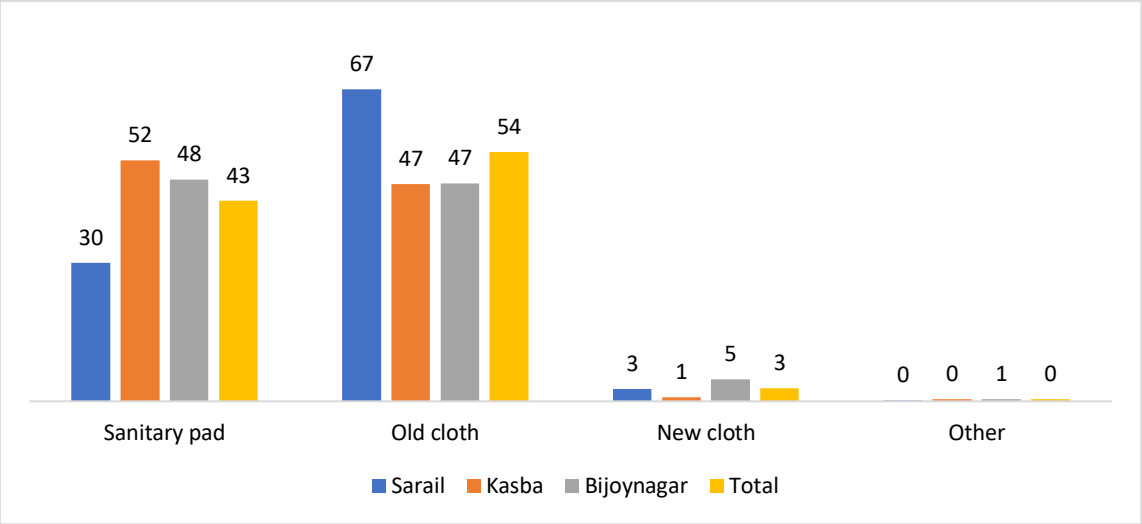


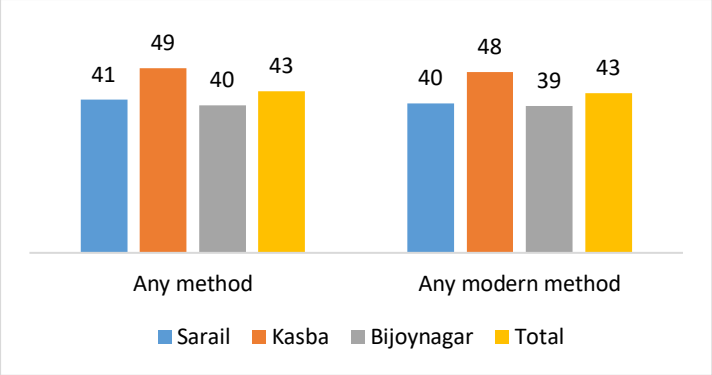
Figure 6: Percent distribution of women with less than 12 months old children (n=1,670) according to the materials used at the time of menstruation during the endline survey, 2022

Family planning (FP)

The number of children a couple has at any one time may be restricted or spaced out using various forms of contraception. In this segment, we will discuss the various forms of contraceptives used by the partners and the source of those methods.

Contraceptive use

Preventing unintended pregnancies and reducing the risk of unsafe abortion are both possible with the use of contraceptive techniques. By allowing women to have fewer pregnancies and spacing between births, contraceptives may have a positive impact on the health of both the mother and the baby. **Figure 7** displays the contraceptives used during the endline period among mother of under one-year children. The contraceptive use prevalence rate among the mothers interviewed was highest in *Kasba* (49.2%). Also, 48.4% of the respondents from *Kasba* used the modern methods, which is the highest among the three study areas. In comparison to the intervention area (*Sarail* and *Kasba*), the use of the contraceptive method is relatively low in the comparison area (*Bijoynagar*). Among those who used any contraceptive methods, pills were by far the commonest form of contraceptive method in all three study areas (*Kasba*: 73%; *Sarail*: 61% and *Bijoynagar* 58%) **(Figure 8)**.



Note: [1]Modern method include male and female sterilization, injectable, intrauterine devices (IUDs), contraceptive pills, implants, condoms, and the lactational amenorrhea method; [2] Traditional methods include safe period and withdrawal method.

Figure 7: Percent distribution of women with less than 12 months old children (n=1,670) according to current use of any contraceptive method and any modern contraceptive method during the endline survey, 2022

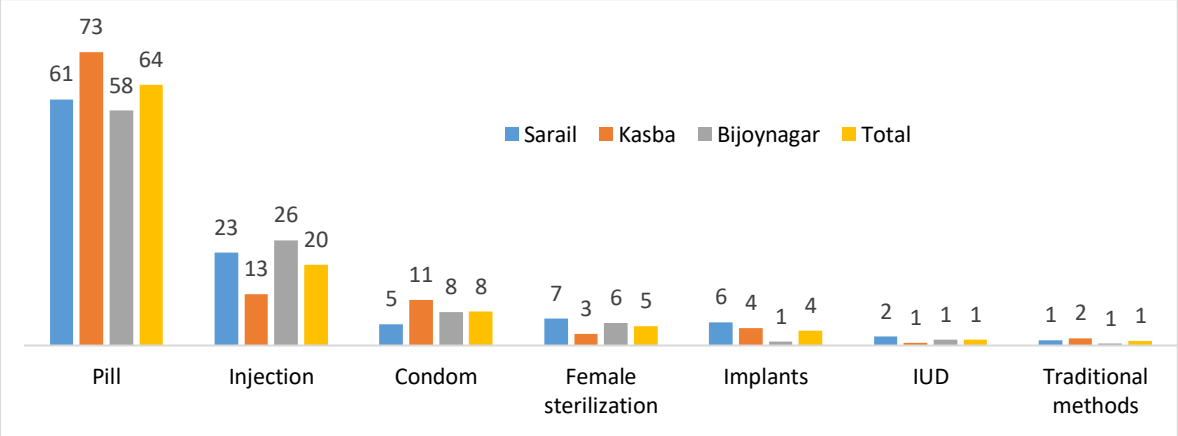
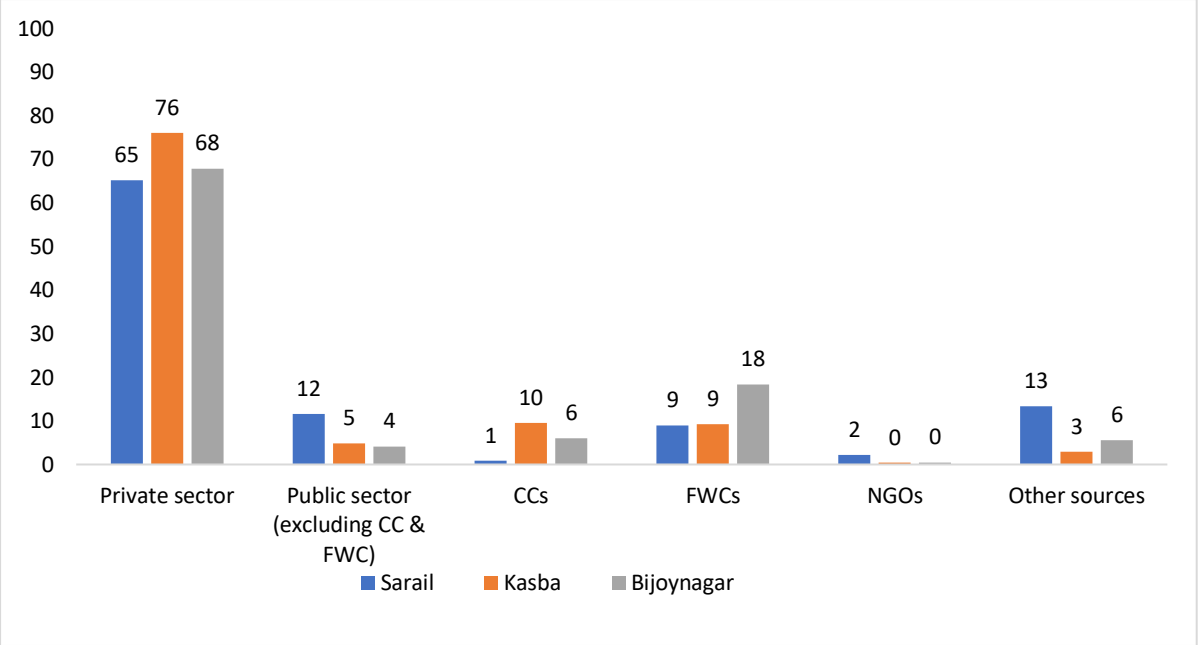


Figure 8: Percent distribution of women with less than 12 months old children (n=722) according to current use of a contraceptive method during the endline survey, 2022

Source of modern contraceptive methods

Respondents were also asked about the sources of the modern family planning methods used by them. The different types of sources of contraceptives in the three sub districts during the endline survey is shown in **Figure 9**. The private medical sector was the most common source for the modern family planning methods followed by the public sector. Among different sources, pharmacy was the most prevalent source (overall 64.4%) in all three study sites (*Sarail*: 58.9%; *Kasba*: 71.6%; *Bijoynagar*: 61%) (See annex: **Table 85**).



Note: **Private sector:** includes Private medical college & hospital, private clinic, Specialized physician's chamber, pharmacy, Physician's chamber; **Public sector:** includes Government medical college & hospital, Government specialized hospital, District hospital (DH), Upazila/thana health complex, Maternal & child welfare centre (MCWC); **FWC:** Family welfare centre (FWC); **CC:** Community Clinic (CC); **NGOs includes** Others NGO hospital/clinic, BRAC NGO; **Other sources** includes home etc.

Figure 9: Percent distribution of the women with less than 12 months old children (n=1,670) according to the types of sources of contraceptive methods in the endline survey, 2022

Antenatal care (ANC)

The antenatal period is the time from the conception time to the onset of labour. The World Health Organization (WHO) advises that pregnant women should undergo at least four ANC visits throughout this period (BDHS, 2014). In this segment we will be displaying the results of the women and her husband's knowledge about the importance of receiving ANC visit; source of their knowledge; status of ANC visit from any provider and specifically from the medically trained providers; providers of the first and last ANC visit; components of the last ANC visit, knowledge regarding the dangers sign of pregnancy among both the mothers and their husbands; care-seeking practices during an emergency situation as well as husbands involvement during the ANC visits.

Knowledge regarding the importance of receiving ANC among women and their husbands.

Table 15 displays the proportion of knowledge among mothers regarding the importance of ANC. The vast majority of the women during the endline were found to be aware of the importance of receiving ANC care (92.6%). However, the proportion of women aware of the importance of the first ANC visit within the first trimester (34.6%) and receiving 4 or more ANC visits (32.8%) is low, in comparison to the proportion of the women who had knowledge about the importance of any ANC care. This reflects that despite those who know that ANC

care is necessary, not all are knowledgeable about the importance of first ANC during the first trimester and that 4 or more ANC visits are needed. But still, improvements are there in comparison to the baseline. The proportion of women who are aware of the importance of any ANC has an 18.4% increase during the endline compared to the baseline. In regard to women who realize that ANC visits are important, the women in the intervention regions (*Sarail* and *Kasba*) are more aware of its significance than the women from *Bijoynagar* (83.2%). But in *Bijoynagar*, women are more knowledgeable about the importance of receiving the first ANC visit within the first trimester (40.9%). Women in *Kasba* are more aware of the necessity of at least four ANC visits (51.3%). Whereas, *Sarail* had a lower percentage of women who are aware of this of the necessity of at least four ANC visits (22.9%), in relation to *Bijoynagar* (24.1%) which is the comparison area. Educated mothers and mothers who belonged to highest wealth quintile were more knowledgeable in the above-mentioned issues compared to their counterparts.

Table 15: Percent distribution of women with less than 12 months old children according to their knowledge regarding the importance of receiving ANC in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)			Endline (2022)		
Indicators	**Importance of receiving any ANC**	**Importance of receiving first ANC within first trimester**	**Importance of receiving ≥4 ANC**	**Importance of receiving any ANC**	**Importance of receiving first ANC within first trimester**	**Importance of receiving ≥4 ANC**
Age (women)						
15-19	79.5	13.6	11.4	91.8	30.0	28.9
20-24	76.8	15.5	8.9	92.3	35.0	31.5
25-29	73.8	17.3	8.9	94.4	37.5	35.8
30-34	73.5	18.1	6.0	91.0	34.3	38.2
35+	57.4	12.0	7.4	93.6	33.9	28.2
Education (women)						
No education	50.4	10.9	2.2	87.2	16.2	18.0
Partial incomplete	63.7	5.5	4.1	92.9	26.6	23.1
Primary complete[1]	67.7	13.1	5.2	90.5	25.4	23.6
Secondary incomplete	77.0	14.2	9.0	93.2	34.9	34.0
Secondary complete[2] or higher	90.6	29.4	15.7	95.8	55.7	51.5
Upazila						
Sarail	72.5	15.2	5.9	96.9	27.6	22.9
Kasba	83.4	15.3	11.1	97.7	35.4	51.3
Bijoynagar	66.8	17.4	8.7	83.2	40.9	24.1
Wealth quintile						
Lowest	55.5	6.6	1.8	94.1	29.6	34.9
Second	67.4	10.6	2.6	89.9	21.1	25.4
Middle	73.7	12.8	7.7	91.3	30.8	27.3
Fourth	84.2	21.6	11.4	94.6	44.6	37.1

Highest	90.1	28.2	19.4	93.1	46.7	39.2
Total	**74.2**	**15.9**	**8.6**	**92.6**	**34.6**	**32.8**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 16 represents the husband's knowledge regarding the importance of ANC care visits for pregnant mothers during the baseline and the endline. The majority of the husbands are aware of the importance of receiving ANC visits (93.9%) during the pregnancy period; However, the proportion of husbands who are aware of the necessity of the first ANC visit during the first trimester (29%) and the necessity of 4 or ANC visit (21.3%) was low; similar to the women interviewed during the endline. This again shows that despite the fact that many husbands know that ANC treatment are required, not everyone is aware of the significance of the initial ANC visit in the first trimester and the fact that at least 4ANC visits are essential. Regarding the awareness of the importance of any ANC, first ANC during the first trimester and at least 4 ANC visits, there were 27%, 15.6%, 13.6% increase in proportion respectively in the endline compared to the baseline. Those husbands who completed their secondary education were more knowledgeable about ANC visits during the pregnancy. The interviewed husbands during the endline, hailing from the intervention area (*Sarail* and *Kasba*) knew less about the initial ANC visit during the first trimester compared to the *Bijoynagar* (38.6%); which is the comparison area. But for the knowledge about the importance of any ANC and at least 4 ANC was higher among the husbands from the intervention area (*Sarail* and *Kasba*), in relation to the comparison area (*Bijoynagar*).

It was found that men were less aware than women, about the importance of receiving their first ANC visit within the first trimester (29.0% vs. 34.6%), as well as the necessity for at least four ANC appointments throughout the pregnancy period (21.3% vs. 32.8%).

Table 16: Percent distribution of husbands of the women with less than 12 months old children according to their (husbands) knowledge regarding the importance of receiving ANC during the baseline (n=701) and the endline (n=1,650) survey, 2022

	Baseline (2018)			**Endline (2022)**		
Indicators	**Importance of receiving any ANC**	**Importance of receiving first ANC within first trimester**	**Importance of receiving ≥4 ANC**	**Importance of receiving any ANC**	**Importance of receiving first ANC within first trimester**	**Importance of receiving ≥4 ANC**
Age (husbands)						
15-19	100.0	0.0	0.0	100.0	20.0	20.0
20-24	56.9	9.2	6.2	92.9	28.6	16.7
25-29	73.2	17.1	9.1	94.7	27.5	21.1
30-34	71.6	10.8	7.7	94.8	25.2	22.6

Indicators	Baseline (2018)			Endline (2022)		
	Importance of receiving any ANC	Importance of receiving first ANC within first trimester	Importance of receiving ≥4 ANC	Importance of receiving any ANC	Importance of receiving first ANC within first trimester	Importance of receiving ≥4 ANC
35-39	68.1	14.5	8.7	93.1	31.0	22.0
40-44	57.9	19.7	9.2	94.6	34.1	19.2
45+	52.5	6.6	1.6	90.7	33.8	23.7
Education (husbands)						
No education	51.9	8.1	3.1	87.4	18.1	13.8
Partial incomplete	58.0	8.7	2.9	93.1	23.2	16.7
Primary complete[1]	64.6	7.9	1.6	94.6	23.0	14.8
Secondary incomplete	76.5	18.2	14.1	96.3	32.5	24.8
Secondary complete[2] or higher	88.7	26.4	17.9	98.2	50.2	38.1
Upazila						
Sarail	69.1	14.9	6.5	98.0	20.4	17.2
Kasba	74.5	9.8	9.2	96.2	27.6	29.8
Bijoynagar	60.8	14.0	8.0	87.5	38.6	16.7
Wealth quintile						
Lowest	49.8	6.8	2.4	93.6	20.3	20.9
Second	64.2	9.1	3.0	92.5	20.4	11.1
Middle	71.5	13.9	6.6	92.7	23.9	16.8
Fourth	83.5	24.3	12.6	94.9	35.8	28.5
Highest	84.6	23.1	24.2	95.8	44.2	28.8
Total	**66.9**	**13.4**	**7.7**	**93.9**	**29.0**	**21.3**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Source of knowledge regarding ANC among women and their husbands.

The sources of information about the ANC among women are shown in **Table 17.** The majority of the women acquired their knowledge about the ANC from family, friend, neighbours, or relatives (80.4%) followed by MBBS doctors (12.3%) and BRAC NGO workers (9.7%). When comparing the intervention area *Sarail* (14.4 %) and *Kasba* (15.1%) to the reference area of *Bijoynagar* (0.6%), it is clear that NGO employees are an important source of information for ANC among the women. Whereas in the baseline the most common source of knowledge about ANC for women was self (36.8%) followed by family/friends (21.4%).

Table 17: Percent distribution of the women with less than 12 months old children according to the source of knowledge (care provider) regarding ANC during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Baseline (2018)										
	Medically trained provider (MTP)					Non--medically trained provider				
Indicators	**MBBS doctor**	**Nurse/ midwife**	**Paramedic**	**FWV**	**CSBA/HA/FWA**	**Trained TBA**	**Unqualified provider**	**Family/ friends**	**Self**	**Others**
Age (women)										
15-19	7.6	0.0	0.0	5.3	0.0	0.0	7.6	24.2	40.9	0.8
20-24	8.5	1.1	0.0	4.0	2.8	0.2	7.7	21.7	36.6	0.2
25-29	7.9	0.3	0.8	3.1	2.1	0.0	10.2	22.5	35.6	0.5
30-34	6.5	0.5	0.0	6.5	0.9	0.0	8.4	16.3	42.3	0.9
35+	6.5	0.0	0.0	3.7	2.8	0.9	14.8	22.2	25.9	0.0
Education (women)										
No education	3.6	1.5	0.0	3.6	0.0	0.0	8.0	29.2	21.9	0.0
Partial incomplete	4.8	0.7	0.7	4.8	0.0	0.0	17.8	24.0	26.0	0.7
Primary complete[1]	4.8	0.4	0.9	3.5	1.7	0.9	8.7	21.4	34.5	0.0
Secondary incomplete	9.1	0.4	0.0	4.0	3.3	0.0	8.8	22.3	38.0	0.7
Secondary complete[2] or higher	10.8	0.7	0.0	5.2	1.7	0.0	5.9	14.3	49.0	0.3
Upazila										
Sarail	3.3	0.2	0.0	2.2	0.9	0.2	7.5	33.0	24.2	0.0
Kasba	12.2	1.5	0.7	4.6	4.6	0.0	6.2	13.7	50.7	0.4
Bijoynagar	7.8	0.0	0.0	5.9	0.7	0.2	13.4	17.4	35.6	0.9
Wealth quintile										
Lowest	5.1	0.7	0.7	2.9	0.4	0.0	12.4	27.4	23.7	0.4
Second	4.4	0.7	0.0	5.1	2.6	0.7	9.5	21.2	36.3	0.0
Middle	6.2	0.0	0.4	2.6	4.0	0.0	9.5	22.6	40.5	0.4
Fourth	9.5	1.1	0.0	4.4	1.5	0.0	7.0	17.6	41.4	1.1
Highest	5.1	0.7	0.7	2.9	0.4	0.0	12.4	27.4	23.7	0.4
Total	7.8	0.6	0.2	4.2	2.0	0.1	9.1	21.4	36.8	0.4

Endline (2022)																
	Medically trained provider (MTP)					Non-medically trained provider										
										Others						
Indicators	**MBBS doctor**	**Nurse/ midwife**	**Paramedic/ MA/ SACMO**	**FWV**	**CSBA/HA/FWA**	**Trained TBA**	**Unqualified provider**	**Family/ relative/ neighbour/ friend**	**Self**	**CHCP**	**BRAC NGO worker**	**Other NGO worker**	**Social media***	**TV**	**Others**	**Do not know/Can't**
Age (women)																
15-19	8.5	0.0	0.0	2.8	4.2	0.0	5.6	77.9	0.0	0.0	8.9	0.0	0.5	1.4	2.4	0.5
20-24	10.3	1.0	0.6	1.6	4.9	0.4	6.5	84.2	0.0	0.4	7.1	1.4	1.0	2.4	0.6	0.0
25-29	16.9	0.6	0.3	2.7	10.1	0.6	4.7	75.4	0.0	0.3	11.5	0.9	0.3	1.5	1.2	0.3
30-34	13.3	0.6	0.0	2.8	8.9	0.0	6.7	78.3	0.0	0.0	15.0	1.7	0.6	2.2	1.1	0.0
35+	13.1	0.0	1.0	3.0	5.1	0.0	6.1	86.9	0.0	1.0	8.1	2.0	0.0	2.0	1.0	0.0
Education (women)																
No education	12.0	0.0	0.0	0.0	2.7	0.0	4.0	81.3	0.0	0.0	6.7	0.0	0.0	1.3	1.3	0.0
Partial incomplete	9.5	0.0	0.0	0.0	5.5	0.0	6.3	78.0	0.0	0.0	11.8	0.0	0.0	0.8	0.0	0.8
Primary complete[1]	10.7	0.4	0.8	2.7	7.3	0.4	8.1	77.8	0.0	0.4	9.2	1.5	0.0	0.8	0.8	0.4
Secondary incomplete	11.8	0.9	0.2	2.7	7.0	0.3	4.6	81.4	0.0	0.3	10.8	1.0	0.7	2.1	1.0	0.0
Secondary complete[2] or higher	16.3	0.7	0.7	2.9	6.9	0.4	6.9	81.5	0.0	0.4	7.6	1.8	1.5	3.6	2.2	0.0
Upazila																
Sarail	13.8	0.0	0.6	4.4	7.2	0.0	2.8	76.0	0.0	0.0	14.4	1.7	0.3	0.8	0.8	0.3
Kasba	11.0	0.4	0.4	1.2	6.0	0.0	5.6	80.8	0.0	0.4	15.1	1.5	0.8	2.5	1.2	0.0
Bijoynagar	12.5	1.3	0.2	1.9	6.9	0.8	8.6	83.3	0.0	0.4	0.6	0.4	0.6	2.3	1.3	0.2
Wealth quintile																
Lowest	8.8	0.4	1.1	2.6	6.2	0.0	6.6	77.3	0.0	0.7	17.2	0.4	0.7	2.2	1.1	0.0
Second	12.5	0.0	0.4	0.4	5.2	0.0	5.2	80.7	0.0	0.0	8.2	1.7	0.0	1.7	0.4	0.9
Middle	7.9	0.8	0.0	3.0	7.9	0.4	7.1	85.3	0.0	0.0	6.0	1.5	0.4	0.4	0.8	0.0
Fourth	15.9	1.5	0.4	4.4	8.3	0.7	5.4	74.6	0.0	0.4	10.1	1.5	0.7	2.5	1.8	0.0
Highest	16.3	0.4	0.0	1.1	5.4	0.4	5.1	84.1	0.0	0.4	6.5	0.7	1.1	2.9	1.4	0.0
Total	**12.3**	**0.6**	**0.4**	**2.3**	**6.6**	**0.3**	**5.9**	**80.4**	**0.0**	**0.3**	**9.7**	**1.1**	**0.6**	**2.0**	**1.1**	**0.2**

*Social media includes Facebook/ YouTube/ Internet.

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Table 18 presents the sources of information about ANC for the husbands of the women with a recent history of childbirth. As part of our research, we gathered information from the spouses regarding from whom they learned about ANC from. Six out of ten spouses said they learned about it via family members, neighbours, or friends in each of these three study sites. Only

8.5% spouses in *Bijoynagar* said that they had no idea, or they can't remember where their information came from. The spouses from *Sarail* (23.5%) and *Kasba* (22.5%) had higher percentages than the spouse from *Bijoynagar* in this regard. Men in *Bijoynagar* (16.1%) are more likely than their *Sarail* (11.5%) or *Kasba* (9.6%) counterparts to cite MBBS doctors as a reliable source of knowledge.

For both the women and the husbands, the primary source of information regarding ANC were family members, neighbours, or friends. We also analysed the data for BRAC NGO workers separately. A higher proportion of women reported BRAC NGO workers as the source of information than their husbands (9.7% vs 1.2%).

Table 18: Percent distribution of the husbands of the women with less than 12 months old children according to the source of knowledge (care provider) regarding ANC during the baseline (n=701) and the endline (n=1,650) survey, 2022

Baseline (2018)										
Indicators	**Medically trained provider (MTP)**					**Non-medically trained providers**				
	MBBS doctor	Nurse/ midwife	Paramedic	FWV	CSBA/HA/FWA	Trained TBA	Unqualified provider	Family/ friends	Self	Others
Age (husbands)										
15-19	0.0	0.0	0.0	0.0	0.0	0.0	33.3	33.3	33.3	0.0
20-24	3.1	0.0	0.0	0.0	1.5	0.0	10.8	13.8	55.4	0.0
25-29	7.3	0.6	0.0	3.0	1.2	0.0	10.4	22.6	29.9	0.6
30-34	5.7	0.5	0.0	6.7	2.1	0.5	6.7	22.2	32.0	0.0
35-39	5.8	0.0	0.0	2.9	0.7	0.0	7.2	16.7	45.7	0.7
40-44	6.6	0.0	0.0	5.3	2.6	1.3	10.5	22.4	26.3	1.3
45+	19.7	0.0	0.0	8.2	1.6	0.0	8.2	16.4	21.3	0.0
Education (husbands)										
No education	2.5	0.0	0.0	4.4	0.6	0.0	5.0	28.1	31.3	0.0
Primary incomplete	5.1	0.0	0.0	22	0.0	0.7	16.7	22.5	31.2	0.7
Primary complete[1]	3.1	1.6	0.0	4.7	0.8	0.0	9.4	26.0	28.3	0.8
Secondary incomplete	11.8	0.0	0.0	6.5	1.2	0.0	7.1	12.4	41.8	0.0
Secondary complete[2] or higher	14.2	0.0	0.0	3.8	6.6	0.9	5.7	9.4	41.5	0.9
Upazila										
Sarail	3.8	0.0	0.0	0.8	0.4	0.4	2.3	34.7	25.6	0.0
Kasba	14.4	1.3	0.0	8.5	2.0	0.0	1.3	5.9	45.8	1.3
Bijoynagar	6.3	0.0	0.0	5.6	2.4	0.3	18.5	14.0	37.4	0.3
Wealth quintile										
Lowest	2.4	0.5	0.0	4.4	0.5	0.5	11.7	22.4	27.8	0.0
Second	6.1	0.6	0.0	7.3	2.4	0.0	6.7	24.8	32.7	0.6
Middle	9.5	0.0	0.0	2.9	2.9	0.0	6.6	24.1	35.0	0.0
Fourth	6.8	0.0	0.0	1.9	0.0	0.0	13.6	12.6	41.7	1.0
Highest	16.5	0.0	0.0	4.4	2.2	1.1	3.3	7.7	46.2	1.1
Total	**7.1**	**0.3**	**0.0**	**4.4**	**1.6**	**0.3**	**8.7**	**20.0**	**34.8**	**0.4**
Endline (2022)										

	Medically trained provider (MTP)					Non-medically trained provider										
										Others						
Indicators	MBBS doctor	Nurse/ midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Trained TBA	Unqualified provider	Family/ relative/ neighbour/ friend	Self	CHCP	BRAC NGO worker	Other NGO worker	Social media*	TV	Others	Do not know/ Cannot remember
Age (husbands)																
15-19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
20-24	5.9	0.0	0.6	0.6	4.2	0.6	3.0	70.8	0.0	0.0	1.2	0.0	5.4	2.4	1.8	13.7
25-29	7.7	0.0	1.0	0.7	2.9	0.5	7.2	66.3	0.0	0.5	1.2	0.0	5.5	3.8	0.7	17.2
30-34	13.3	0.2	0.5	1.2	1.0	0.2	4.5	72.5	0.0	0.2	0.5	0.0	2.4	3.3	0.2	13.8
35-39	17.5	0.6	0.0	1.2	3.9	0.6	5.4	62.4	0.0	0.3	2.1	0.3	3.0	5.1	0.0	14.8
40-44	18.0	0.6	0.6	1.8	3.6	0.0	7.2	53.3	0.0	0.6	1.2	0.6	0.6	7.2	0.6	18.6
45+	13.7	0.0	0.0	0.7	1.4	0.0	10.8	64.0	0.0	0.0	0.7	0.7	0.0	4.3	0.7	18.0
Education (husbands)																
No education	8.9	0.3	0.3	0.9	0.9	0.3	4.3	65.0	0.0	0.3	0.9	0.3	0.3	2.3	0.0	22.4
Partial incomplete	12.0	0.0	0.5	0.9	1.9	0.0	6.0	68.5	0.0	0.0	1.9	0.0	0.9	3.7	0.0	16.7
Primary complete[1]	9.4	0.5	0.3	1.0	2.0	0.5	4.9	67.9	0.0	0.0	1.2	0.0	2.7	4.7	0.5	17.0
Secondary incomplete	10.5	0.0	0.3	1.3	4.3	0.0	6.5	68.5	0.0	0.3	1.3	0.0	4.0	3.8	0.5	12.3
Secondary complete[2] or higher	24.2	0.4	1.4	1.1	4.3	1.1	8.9	59.4	0.0	1.1	0.7	0.7	8.2	6.8	1.8	9.6
Upazila																
Sarail	11.5	0.6	0.4	2.0	2.0	0.0	4.4	63.9	0.0	0.0	1.5	0.0	0.2	0.4	0.6	23.5
Kasba	9.6	0.0	0.0	0.4	1.3	0.4	4.4	67.5	0.0	0.0	1.5	0.2	8.2	8.0	1.1	15.1
Bijoynagar	16.1	0.2	1.1	0.7	4.7	0.7	9.2	66.9	0.0	0.9	0.5	0.4	1.3	4.2	0.0	8.5
Wealth quintile																
Lowest	9.7	0.3	0.0	0.0	1.5	0.6	7.3	73.0	0.0	0.0	1.2	0.0	3.6	4.9	0.9	11.2
Second	7.5	0.3	0.3	0.9	2.1	0.3	4.2	59.2	0.0	0.6	1.8	0.0	2.1	4.5	0.3	24.0
Middle	11.3	0.3	0.3	0.6	1.8	0.3	6.4	68.8	0.0	0.3	0.6	0.0	2.1	2.8	0.6	15.0
Fourth	15.2	0.3	1.2	2.4	4.2	0.0	6.7	63.3	0.0	0.0	0.9	0.0	3.6	2.7	0.6	15.2
Highest	18.5	0.0	0.6	1.2	3.6	0.6	5.5	66.1	0.0	0.6	1.2	0.9	4.6	6.1	0.3	13.0
Total	**12.4**	**0.2**	**0.5**	**1.0**	**2.7**	**0.4**	**6.0**	**66.1**	**0.0**	**0.3**	**1.2**	**0.2**	**3.2**	**4.2**	**0.6**	**15.7**

*Social media includes Facebook/ YouTube/ Internet.

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Status of ANC visits from any providers

Table 19 displays the status of ANC visits from any provider among women during the baseline and the endline with a recent history of childbirth. In the endline 12% of interviewed women were found not taking any ANC visits, which had decreased from the baseline. So, in the endline there is an increased number of women taking ANC visits. In the endline, the proportion of women receiving at least 1 ANC visit from any provider had increased from 74.3% (baseline) to 88.0% (13.7% increase). The proportion of women receiving at least 4 visits also increased from baseline (8.6%) to the endline (23.5%). But the proportion of women receiving first ANC within first trimester had seen a decline from baseline (15.9%) to the

endline (8.0%). These proportions were relatively higher among 25-29 years old women, women who completed at least secondary education and women belonged to highest wealth quintile compared to their counterparts. However, the proportion of women who received first ANC within first trimester and also took 4 or more ANC visits had seen a slight increase from the baseline (4.7%) to the endline (5.9%). In all aspects the women in the intervention areas (*Sarail* and *Kasba*) are receiving more ANC visit in relation to the comparison area (*Bijoynagar*). During the endline survey, we did not ask the respondents about ANC visit information for each trimester separately.

Table 19: Percent distribution of women with less than 12 months old children according to their status of antenatal care (ANC) visits from any provider during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Baseline (2018)							
Indicators	**None**	**Received at least 1 ANC from any provider**	**Received ≥4 ANCs from any provider**	**Received first ANC within first trimester**	**Received first ANC within first trimester and took ≥4 ANCs**	**Received at least 1 ANC from any provider in each trimester**	**Mean number of ANC visit SD**
Age (women)							
15-19	19.7	80.3	11.4	13.6	6.1	6.8	2.2 ±1.2
20-24	23.2	76.8	8.9	15.5	4.7	8.1	2.1 ±1.1
25-29	26.2	73.8	8.9	17.3	5.2	10.7	2.2 ±1.1
30-34	26.0	74.0	6.0	18.1	3.7	10.2	2.1 ±1.1
35+	43.5	56.5	7.4	12.0	2.8	5.6	2.0 ±1.3
Education (women)							
No education	48.9	51.1	2.2	10.9	2.2	2.9	1.9 ±1.1
Partial incomplete	37.7	62.3	4.1	5.5	2.1	3.4	2.3 ±1.0
Primary complete[1]	32.3	67.7	5.2	13.1	3.1	7.0	2.2 ±1.1
Secondary incomplete	22.8	77.2	9	14.2	4	8.4	1.9 ±1.1
Secondary complete or higher[2]	9.1	90.9	15.7	29.4	9.8	16.8	2.3 ±1.0
Upazila							
Sarail	27.3	72.7	5.9	15.2	4.4	6.8	1.9 ±1.1
Kasba	15.9	84.1	11.1	15.3	4.4	9.7	2.3 ±1.0
Bijoynagar	33.8	66.2	8.7	17.4	5.2	10.0	2.2±1.1
Wealth quintile							
Lowest	45.3	54.7	1.8	6.6	1.1	1.1	1.6 ±0.8
Second	32.2	67.8	2.6	10.6	0.4	4.8	1.9 ±1.0
Middle	26.3	73.7	7.7	12.8	4	6.9	1.9 ±1.1
Fourth	15.4	84.6	11.4	21.6	6.2	12.1	2.4 ±1.1
Highest	9.5	90.5	19.4	28.2	11.7	19.4	2.5 ±1.2
Total	**25.7**	**74.3**	**8.6**	**15.9**	**4.7**	**8.9**	**2.1 ±1.1**
Endline (2022)							

Indicators	None	Received at least 1 ANC from any provider	Received 4 or more ANCs from any provider	Received first ANC within first trimester	Received first ANC within first trimester and also took 4 or more ANCs	Mean number of ANC visit (SD)
Age (women)						
15-19	11.1	88.93	19.6	7.5	6.1	2.6±1.8
20-24	10.2	89.84	22.9	7.4	5.0	2.8±2.0
25-29	9.9	90.07	26.4	9.4	7.3	2.9±2
30-34	15.9	84.12	24.0	7.3	5.6	3.1±2.3
35+	23.4	76.61	24.2	8.9	6.5	2.9±2.0
Education (women)						
No education	29.1	70.94	10.3	3.4	0.9	2.2±1.5
Partial incomplete	17.8	82.25	14.8	4.7	3.6	2.5±2.0
Primary complete[1]	18.7	81.27	17.9	4.3	3.8	2.5±1.8
Secondary incomplete	9.0	90.96	23.3	7.5	5.3	2.8±1.9
Secondary complete[2] or higher	2.0	98.05	40.1	16.9	13.0	3.6±2.3
Upazila						
Sarail	12.3	87.75	18.2	11.0	7.8	2.6±2.0
Kasba	6.1	93.93	36.1	8.9	7.3	3.4±2.2
Bijoynagar	17.8	82.16	16.0	4.1	2.7	2.5±1.6
Wealth quintile						
Lowest	10.0	90.03	20.8	6.7	4.4	2.7±1.8
Second	22.9	77.06	16.2	3.1	1.8	2.5±1.9
Middle	18.0	82.04	17.1	5.4	3.9	2.6±1.8
Fourth	5.4	94.61	27.5	10.5	8.4	3.1±2.0
Highest	4.2	95.81	35.6	14.4	11.1	3.4±2.3
Total	**12.0**	**87.96**	**23.5**	**8.0**	**5.9**	**2.9±2.0**

Note: In the endline, we did not inquire about ANC visits in each trimester

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Status of ANC visits from medically trained providers (MTPs).

Antenatal care (ANC) from a medically trained provider (MTP) is essential to monitor a pregnant woman's health by detecting and managing issues early on and reducing the likelihood of a poor pregnancy outcome. **Table 20** displays the status of ANC practices from MTPs among women during baseline and endline with a recent history of childbirth. The proportion of women who received at least 1 ANC from MTP was found to be highest among the woman from *Kasba* (90.7%) lowest among the women from *Bijoynagar* (81.8%). Also, women who received at least 4 ANC was found to be highest among the women from *Kasba* (34.5%) and lowest among the women from *Bijoynagar* (15.4%). Similarly, it was found that the percentage of women from *Kasba* who received first ANC within the first trimester from MTP (24.6%) and the received first ANC within the first trimester and also took at least 4

ANC from MTP (16.3%) was highest among all sub-districts. During the endline survey, we did not ask the respondents about ANC visit information for each trimester separately.

Table 20: Percent distribution of women with less than 12 months old children according to their status of ANC practices from medically trained providers (MTPs) during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)						Endline (2022)				
Indicators	**Received at least 1 ANC from MTP**	**Received ≥4 ANC from MTP**	**Received first ANC within first trimester from MTP**	**Received first ANC within first trimester and also took 4 or more ANCs from MTP**	**Received at least 1 ANC from in each trimester from MTP**	**Mean number of ANC visits (SD) from MTP**	**Received at least 1 ANC from MTP**	**Received ≥4 ANC from MTP**	**Received first ANC within first trimester from MTP**	**Received first ANC within first trimester and also took 4 or more ANCs from MTP**	**Mean number of ANC visits (SD) from MTP**
Age (women)											
15-19	78.8	11.4	12.9	6.1	6.8	2.2(1.2)	87.9	19.3	19.6	12.1	2.6±1.8
20-24	75.8	8.7	15.5	4.7	8.5	2.1(1)	87.1	21.9	21.8	12.4	2.8±2
25-29	72.5	8.4	16.8	4.7	10.5	2.2(1.1)	87.9	25.4	24.7	13.8	2.9±2
30-34	72.6	6.0	17.2	3.7	9.8	2.1(1.1)	82.4	23.6	26.6	16.3	3.1±2.3
35+	55.6	7.4	11.1	2.8	5.6	2(1.3)	75.8	23.4	18.6	9.7	2.8±1.9
Education (women)											
No education	48.9	2.2	10.2	2.2	2.9	1.8(1)	70.1	10.3	9.4	2.6	2.2±1.5
Partial incomplete	62.3	3.4	4.8	1.4	2.7	1.7(0.9)	79.3	14.2	15.4	8.3	2.5±2
Primary complete[1]	65.9	4.8	12.2	2.6	7.0	1.9(1)	79.5	17.3	13.3	8.4	2.5±1.8
Secondary incomplete	76.1	8.8	14.1	4	8.1	2.1(1)	88.8	22.3	23.0	12.5	2.8±1.9
Secondary complete[2] or higher	89.9	15.7	29.0	9.8	17.8	2.5(1.2)	96.1	39.1	41.0	26.4	3.6±2.2
Upazila											
Sarail	70.7	5.5	14.5	4.2	6.8	1.9(1)	85.2	17.7	21.8	12.6	2.6±2
Kasba	82.3	10.8	15.0	4.2	10.0	2.3(1)	90.7	34.5	24.6	16.3	3.4±2.1
Bijoynagar	66.4	8.7	16.9	5.2	9.8	2.2(1.2)	81.8	15.9	21.3	10.3	2.5±1.6
Wealth quintile											
Lowest	54.7	1.8	6.6	1.1	1.1	1.6(0.8)	87.4	20.5	19.4	10.3	2.7±1.8
Second	65.9	2.2	9.5	0.4	4.4	1.8(0.8)	73.1	14.1	11.0	5.2	2.4±1.8
Middle	72.6	7.7	12.8	4	6.9	2(1.1)	80.5	16.2	18.6	9.9	2.5±1.7
Fourth	82.8	10.6	20.5	5.5	11.4	2.3(1.1)	94.3	27.3	31.1	18.3	3±2
Highest	89.4	19.4	28.2	11.7	20.5	2.5(1.2)	94.0	35.3	32.6	21.6	3.4±2.3
Total	**73.1**	**8.3**	**15.5**	**4.5**	**8.9**	**1.6 (0.8)**	**85.9**	**22.7**	**22.6**	**13.1**	**2.8±2**

Note: In the endline, we did not inquire about ANC visits in each trimester

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Providers of the first and last ANC visits of most recent pregnancy

The providers for the first ANC visit for women with a recent history of childbirth, during the endline is listed in **Table 21.** Overall, about 7 out of 10 women reported taking their first ANC visit from qualified doctor. Among the 3 subdistricts, *Kasba* reported the highest proportion of women receiving

their first ANC from a qualified doctor. Women from the intervention area reported higher proportion women who visited the qualified doctor, in relation to comparison area (74.6%).

Table 21: Percent distribution of women with less than 12 months old children according to the health provider of the first ANC visits during the endline (n=1,670) survey, 2022

	Endline (2022)													
	Medically trained provider (MTP)						Non-medically trained provider							
Indicators	MBBS doctor	Nurse/ midwife	Paramedic/ MA/ SACMO	FWV	CSBA/HA/FWA	**Total**	Trained TBA	Unqualified provider	Family/ relative/ Neighbour/ friend	CHCP	BRAC *Shasthya Karmi*	Other NGO workers	**Total**	**No ANC**
Age (women)														
15-19	82.5	0.0	0.0	2.5	1.4	**86.4**	0.0	0.7	0.0	0.4	1.4	0.0	**2.5**	11.1
20-24	80.0	0.8	0.5	1.9	2.1	**85.3**	0.0	2.3	0.0	0.5	1.8	0.0	**4.5**	10.2
25-29	80.2	0.0	0.2	4.1	1.7	**86.2**	0.2	1.7	0.0	0.0	1.9	0.0	**3.9**	9.9
30-34	70.8	1.3	0.0	3.4	3.0	**78.5**	0.0	1.7	0.4	0.0	3.4	0.0	**5.6**	15.9
35+	69.4	0.8	0.8	1.6	1.6	**74.2**	0.0	0.8	0.0	0.0	0.8	0.8	**2.4**	23.4
Education (women)														
No education	65.0	0.0	0.9	0.9	0.9	**67.5**	0.0	1.7	0.0	0.0	1.7	0.0	**3.4**	29.1
Partial incomplete	68.1	0.0	0.0	5.9	2.4	**76.3**	0.0	2.4	0.0	0.0	3.6	0.0	**5.9**	17.8
Primary complete[1]	72.1	0.6	0.3	2.3	2.0	**77.3**	0.0	2.0	0.3	0.0	1.7	0.0	**4.0**	18.7
Secondary incomplete	81.2	0.8	0.1	2.9	2.2	**87.3**	0.1	1.2	0.0	0.4	1.8	0.1	**3.7**	9.0
Secondary complete[2] or higher	89.6	0.3	0.7	2.0	1.6	**94.1**	0.0	2.0	0.0	0.3	1.6	0.0	**3.9**	2.0
Upazila														
Sarail	77.5	0.2	0.5	3.2	1.4	**82.9**	0.0	1.1	0.0	0.0	3.8	0.0	**4.9**	12.3
Kasba	83.0	0.4	0.4	1.8	2.3	**87.9**	0.2	3.6	0.0	0.5	1.6	0.2	**6.1**	6.1
Bijoynagar	74.6	1.1	0.0	3.2	2.2	**81.1**	0.0	0.4	0.2	0.2	0.4	0.0	**1.1**	17.8
Wealth quintile														
Lowest	76.8	0.3	0.9	4.1	2.9	**85.0**	0.0	2.1	0.0	0.3	2.6	0.0	**5.0**	10.0
Second	66.1	0.6	0.3	2.1	2.1	**71.3**	0.3	2.8	0.3	0.3	2.1	0.0	**5.8**	22.9
Middle	74.0	0.6	0.0	1.5	2.1	**78.2**	0.0	1.5	0.0	0.6	1.8	0.0	**3.9**	18.0
Fourth	85.6	0.6	0.3	4.5	1.2	**92.2**	0.0	0.3	0.0	0.0	2.1	0.0	**2.4**	5.4
Highest	89.2	0.6	0.0	1.5	1.5	**92.8**	0.0	1.8	0.0	0.0	0.9	0.3	**3.0**	4.2
Total	**78.4**	**0.5**	**0.3**	**2.8**	**2.0**	**84.0**	**0.1**	**1.7**	**0.1**	**0.2**	**1.9**	**0.1**	**4.0**	**12.0**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 22 lists the providers for the last ANC visit for women who had just given birth. Eight out of 10 women reported having their last appointment with a trained doctor. *Kasba* (88.6%) had the largest percentage of women who reported that their last ANC visit from a qualified doctor among the three sub-districts. Women from the intervention area reported higher proportion women who visited the qualified doctor, in relation to comparison area (77.7%).

Table 22: Percent distribution of women with less than 12 months old children according to the health provider of the last ANC visits during the endline (n=1,670) survey, 2022

	Endline (2022)													
	Medically trained provider (MTP)						Non-medically trained provider							
Indicators	Qualified doctor	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	**Total**	Trained TBA	Unqualified provider	Family/ Relative/ Neighbor/Friend	CHCP	BRAC Shasthya Karmi	Other NGO workers	**Total**	**No ANC**
Age (women)														
15-19	85.7	0.0	0.0	1.1	1.1	**87.9**	0.0	0.4	0.0	0.0	0.7	0.0	**1.1**	11.1
20-24	83.9	0.7	0.7	1.0	1.0	**87.1**	0.2	1.3	0.2	0.3	0.7	0.2	**2.7**	10.2
25-29	84.0	0.2	0.2	2.9	0.5	**87.9**	0.2	1.0	0.0	0.0	1.0	0.0	**2.2**	9.9
30-34	76.8	0.9	0.4	2.6	1.7	**82.4**	0.0	0.4	0.4	0.0	0.9	0.0	**1.7**	15.9
35+	69.4	0.8	0.8	3.2	1.6	**75.8**	0.0	0.0	0.0	0.0	0.8	0.0	**0.8**	23.4
Education (women)														
No education	66.7	0.9	0.9	0.9	0.9	**70.1**	0.0	0.9	0.0	0.0	0.0	0.0	**0.9**	29.1
Partial incomplete	75.2	0.0	0.0	3.0	1.2	**79.3**	0.0	1.2	0.0	0.0	1.8	0.0	**3.0**	17.8
Primary complete[1]	75.5	0.3	0.6	1.7	1.4	**79.5**	0.0	0.9	0.3	0.0	0.6	0.0	**1.7**	18.7
Secondary incomplete	84.5	0.8	0.4	1.8	1.2	**88.8**	0.3	0.6	0.1	0.3	0.8	0.1	**2.2**	9.0
Secondary complete or higher[2]	93.8	0.0	0.3	2.0	0.0	**96.1**	0.0	1.3	0.0	0.0	0.7	0.0	**2.0**	2.0
Upazila														
Sarail	80.2	0.4	0.7	2.3	1.6	**85.2**	0.0	0.9	0.0	0.0	1.6	0.0	**2.5**	12.3
Kasba	88.6	0.2	0.5	0.7	0.7	**90.7**	0.4	1.6	0.4	0.2	0.5	0.2	**3.2**	6.1
Bijoynagar	77.7	0.9	0.0	2.5	0.7	**81.8**	0.0	0.0	0.0	0.2	0.2	0.0	**0.4**	17.8
Wealth quintile														
Lowest	83.3	0.6	0.6	1.8	1.2	**87.4**	0.0	1.8	0.3	0.0	0.6	0.0	**2.6**	10.0
Second	69.4	0.6	0.3	1.5	1.2	**73.1**	0.3	1.5	0.0	0.3	1.5	0.3	**4.0**	22.9
Middle	77.3	0.6	0.0	1.5	1.2	**80.6**	0.3	0.3	0.0	0.3	0.6	0.0	**1.5**	18.0
Fourth	89.5	0.6	0.9	2.7	0.6	**94.3**	0.0	0.0	0.0	0.0	0.3	0.0	**0.3**	5.4
Highest	91.0	0.0	0.3	1.8	0.9	**94.0**	0.0	0.6	0.3	0.0	0.9	0.0	**1.8**	4.2
Total	**82.2**	**0.5**	**0.4**	**1.9**	**1.0**	**85.9**	**0.1**	**0.8**	**0.1**	**0.1**	**0.8**	**0.1**	**2.0**	**12.0**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Place of the first and last ANC visits of most recent pregnancy

Table 23 below provides the information on the facilities or place the women visited to receive their first ANC visit during both baseline and the endline. Among the women enrolled in the study, majority of the women took the first ANC care from the private sector (75.5%). However, from baseline to endline the proportion increased most for *Bijoynagar* (11.3% increase) among the 3 subdistricts. Compared to baseline, the proportion of women visited UH&FWC, and CCs for ANC slightly increased during endline. Considering only the number

of women who received at least one ANC (n=1,469) as denominator, the percent distribution is shown in annex (**Table 86**).

Table 23: Percent distribution of women with less than 12 months old children according to the place for any ANC for the first contact of women during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018) *							Endline (2022)							
Indicators	**Public-DH/ or MCH/MCWC**	**Public- UHC**	**Public- UH&FWC**	**Public-CC**	**Private sector**	**NGO**	**Home**	**Public-DH/ or MCH/MCWC**	**Public-UHC**	**Public- UH&FWC**	**Public-CC**	**Private sector**	**NGO**	**Home**	**No ANC**
Age (women)															
15-19	2.3	3.8	0.0	0.8	69.7	2.3	0.8	1.1	3.9	3.2	0.0	78.6	0.0	2.1	11.1
20-24	2.5	2.3	0.4	0.2	68.7	1.1	1.7	2.3	3.2	2.6	0.7	78.7	0.8	1.6	10.2
25-29	2.9	2.4	0.3	0.3	65.7	1.0	1.3	2.9	5.1	4.1	0.7	75.1	0.5	1.7	9.9
30-34	3.3	3.7	0.5	1.9	60.9	1.4	1.9	2.2	4.3	3.9	1.3	69.1	0.4	3.0	15.9
35+	3.7	0.9	0.0	0.0	50.9	0.9	0.9	3.2	3.2	2.4	0.0	66.1	0.8	0.8	23.4
Education (women)															
No education	2.2	2.9	0.7	0.7	41.6	0.0	2.2	1.7	3.4	0.9	0.0	63.3	0.0	1.7	29.1
Partial incomplete	4.1	3.4	0.0	0.0	51.4	1.4	3.4	1.8	6.5	3.0	0.0	66.3	0.0	4.7	17.8
Primary complete[1]	2.6	1.3	0.4	0.9	59.4	1.7	1.3	2.0	3.8	2.6	0.6	70.3	0.3	1.7	18.7
Secondary incomplete	2.6	3.3	0.4	0.2	68.0	1.4	1.1	1.8	4.4	3.8	0.7	78.1	0.4	1.8	9.0
Secondary complete[2] or higher	2.8	1.4	0.0	1.0	83.2	1.0	1.0	4.2	2.0	3.6	1.0	85.0	1.6	0.7	2.0
Upazila															
Sarail	1.1	0.4	0.0	0.4	67.0	0.7	2.9	0.4	5.2	1.3	0.2	76.2	1.1	3.4	12.3
Kasba	1.3	7.1	0.0	0.9	70.6	3.1	0.4	3.4	3.6	3.8	1.1	80.4	0.4	1.4	6.1
Bijoynagar	5.9	0.2	0.9	0.2	58.6	0.0	1.1	3.1	3.1	4.7	0.5	69.9	0.2	0.7	17.8
Wealth quintile															
Lowest	3.6	1.1	0.4	0.7	47.1	0.7	1.8	1.5	5.0	4.7	0.0	76.3	0.6	2.1	10.0
Second	3.7	0.7	0.7	0.4	59.0	0.7	2.2	3.1	4.3	3.7	1.2	62.4	0.0	2.5	22.9
Middle	2.9	4.0	0.4	0.4	62.8	2.2	1.1	1.2	3.9	2.7	0.6	70.7	0.3	2.7	18.0
Fourth	1.1	4.4	0.0	0.7	74.4	1.8	1.8	3.3	3.0	3.6	0.0	82.3	0.6	1.8	5.4
Highest	2.6	2.6	0.0	0.4	83.5	0.7	0.4	2.4	3.6	1.5	1.2	85.6	1.2	0.3	4.2
Total	**2.8**	**2.6**	**0.3**	**0.5**	**65.3**	**1.2**	**1.5**	**2.3**	**4.0**	**3.2**	**0.6**	**75.5**	**0.5**	**1.9**	**12.0**

*Total is not 100%

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Table 24 represents the place for the last ANC visit among the women with recent history of childbirth. Private sector remains the highest among all the facilities. The highest proportion of women who visited the private sector was found among the women from *Kasba* (85.5%). However, it was found that in *Sarail*, *Kasba* and *Bijoynagar* there was an increase in the proportion of women who sought ANC care during their last visit from the private sector with a 12.1%, 14.9%, 16.1% rise, respectively, from the baseline to the endline. So, in *Bijoynagar* the last ANC visit in the private sector among the women increased the most among the study sites like the first ANC visit. Additionally, we added the percent distribution of the women according to the place for the last ANC during the endline (n=1,670) survey in annex (**Table**

87) considering only the number of women who received at least one ANC (n=1,469) as denominator.

Table 24: Percent distribution of women with less than 12 months old children according to the place for the last ANC during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)							Endline (2022)							
Indicators	**Public-DH/ or MCH/MCWC**	**Public- UHC**	**Public- UH&FWC**	**Public-CC**	**Private sector**	**NGO**	**Home**	**Public-DH/ or MCH/MCWC**	**Public- UHC**	**Public- UH&FWC**	**Public-CC**	**Private sector**	**NGO**	**Home**	**No ANC**
Age (women)															
15-19	3.0	3.0	0.0	0.8	69.7	1.5	1.5	0.4	3.9	1.1	0.0	82.1	0.4	1.1	11.1
20-24	2.3	2.6	0.2	0.0	68.9	1.1	1.7	2.4	2.1	1.1	0.7	82.1	0.5	1.0	10.2
25-29	3.4	2.6	0.3	0.0	65.4	0.8	1.3	2.2	3.6	1.9	0.0	81.1	0.2	1.0	9.9
30-34	3.3	3.7	0.5	1.9	60.9	1.4	1.9	1.7	3.4	2.2	0.0	75.1	0.4	1.3	15.9
35+	4.6	0.9	0.0	0.0	50.0	0.9	0.9	1.6	3.2	3.2	0.0	66.1	1.6	0.8	23.4
Education (women)															
No education	2.2	4.4	0.7	0.7	40.1	0.0	2.2	1.7	2.6	1.7	0.0	65.0	0.0	0.0	29.1
Partial incomplete	4.1	3.4	0.0	0.0	51.4	1.4	3.4	1.8	4.7	1.2	0.0	71.0	0.6	3.0	17.8
Primary complete[1]	3.1	1.3	0.4	0.4	59.4	1.3	1.7	1.7	3.2	2.0	0.0	73.2	0.0	1.2	18.7
Secondary incomplete	2.6	3.2	0.2	0.2	68.5	1.2	1.1	1.4	3.4	1.9	0.6	81.9	0.7	1.1	9.0
Secondary complete or higher[2]	3.5	1.7	0.0	0.7	82.5	1.0	1.0	3.3	1.3	0.7	0.0	92.2	0.7	0.0	2.0
Upazila															
Sarail	1.1	0.4	0.0	0.2	67.2	0.7	2.9	0.4	4.0	1.1	0.0	79.3	0.9	2.2	12.3
Kasba	1.5	7.5	0.0	0.7	70.6	2.7	0.4	2.9	2.9	1.6	0.5	85.5	0.2	0.4	6.1
Bijoynagar	6.3	0.2	0.7	0.2	58.1	0.0	1.3	2.3	2.3	2.2	0.2	74.2	0.4	0.5	17.8
Wealth quintile															
Lowest	3.6	1.5	0.4	0.4	47.4	0.4	1.8	1.2	3.8	2.4	0.0	80.9	0.3	1.5	10.0
Second	3.3	1.1	0.4	0.4	59.0	0.7	2.6	2.1	3.4	2.1	0.6	67.0	0.0	1.8	22.9
Middle	2.6	3.6	0.4	0.4	63.9	2.2	0.7	1.5	3.9	1.5	0.3	73.7	0.3	0.9	18.0
Fourth	2.2	4.4	0.0	0.4	74.0	1.5	1.8	2.7	2.1	0.9	0.0	87.4	0.9	0.6	5.4
Highest	3.3	2.9	0.0	0.4	82.1	0.7	0.7	1.8	2.1	1.2	0.3	89.2	0.9	0.3	4.2
Total	3.0	2.7	0.2	0.4	65.3	1.1	1.5	**1.9**	**3.1**	**1.6**	**0.2**	**79.7**	**0.5**	**1.0**	**12.0**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Components of the last ANC visits

Women were asked about the examinations which were done during the last ANC visit. **Figure 10** below shows the proportion of women who reported availing of those services. According to the data, the proportion of women who had ultrasonograms done in *Kasba* and *Sarail* was reported respectively as 92% and 85% which was higher in comparison to the women from *Bijoynagar* (80.2%). In addition, the proportion of women from *Kasba* and *Sarail* who reported having abdominal exams done was respectively 67% and 32%, which is higher compared to the proportion of women in *Bijoynagar* (18%). Women who reported having weight measurements, blood pressure measurements, urine test, and blood tests done during the last ANC visit were reported highest among the women from *Kasba*. It is worth noting that despite

Sarail being the intervention area, there are significant differences between *Sarail* and *Bijoynagar* when it comes to weight measurement (52% vs. 63%), blood pressure measurement (52% vs. 66%), urine test (47% vs. 59%), and blood test (49% vs. 62%).

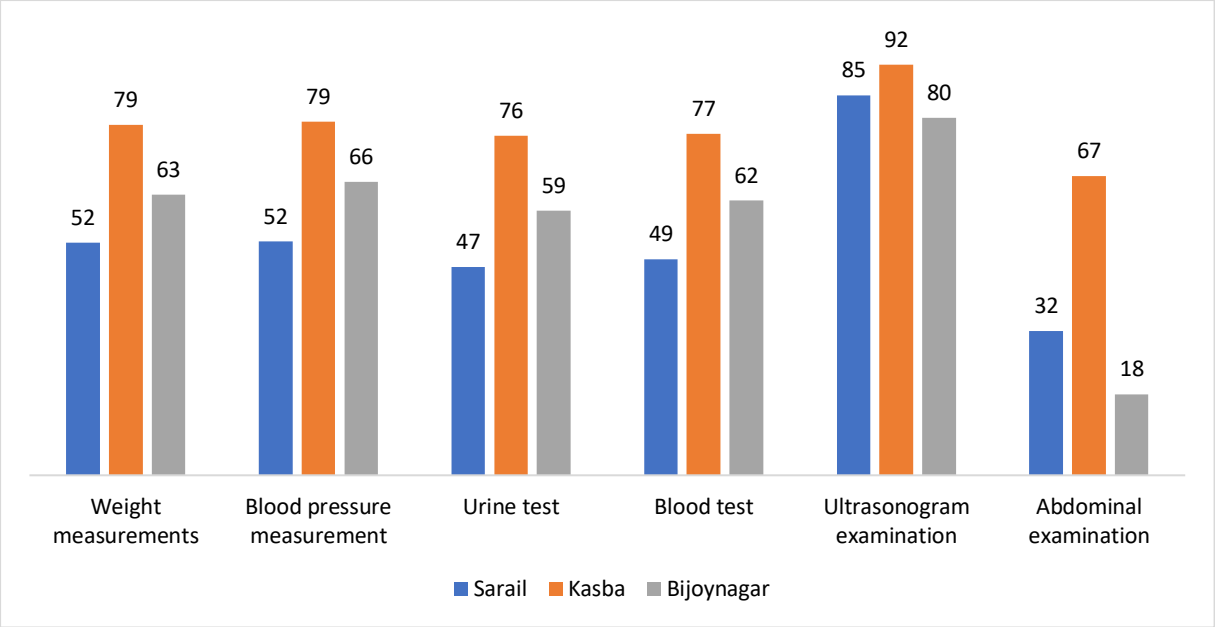


Figure 10: : Percent distribution of women with less than 12 months old children according to the examinations done during the ANC visit during the endline (n=1,670) survey, 2022

To reduce maternal mortality, it is vital to provide pregnant women with information related to the danger signs and where to seek care if such signs appear. **Figure 11** displays the percent of women who reported that they received information about the danger signs of pregnancy and the places where they sought health services if there were any such signs during their last pregnancy. In *Kasba,* about half of the women (48%) received the information about the danger signs. In the *Bijoynagar*, 1 in 5 women received such information which was the lowest among the three areas.

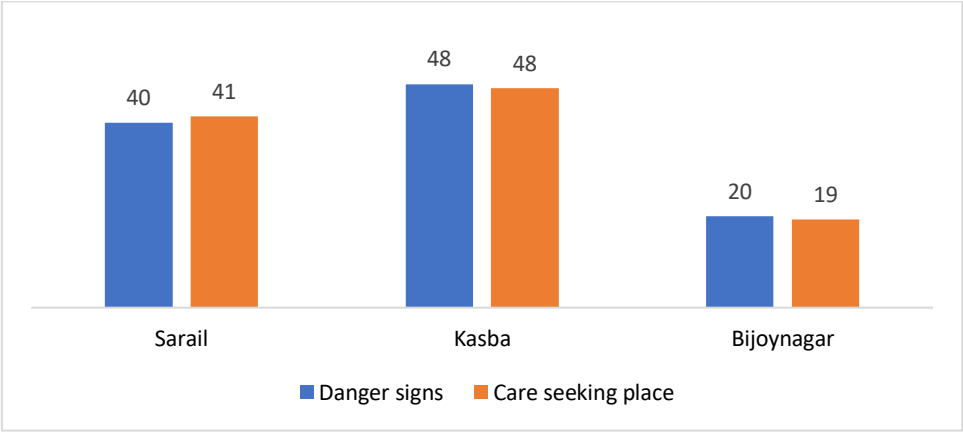


Figure 11: : Percent distribution of women with less than 12 months old children according to the message delivery about danger signs during the ANC visits in the endline (n=1,670) survey, 2022

Quality of antenatal care (ANC)

Quality ANC is defined as woman receiving four or more ANC visits with at least one of which is from a medically trained provider and receives all of the basic components of ANC (weight and blood pressure measurements, urine and blood tests, as well as information on danger signs) at least once during her pregnancy (11). In our report, we considered the visit from a medically trained provider during the last visit in measuring the quality ANC **(Table 25).** In the three sub districts, women from *Kasba* reported the highest number of ANC visits with the latest visit from MTP (3 out of 10 women); obtaining all the fundamental components of ANC care (about 6 out of 10 women); and also taking at least four ANC visits with receiving all the components of ANC care (about 3 out of 10 women). Compare to *Bijoynagar* the intervention areas were doing better in respects to receiving quality ANC care.

Table 25: Percent distribution of women with less than 12 months old children according to the quality ANC care they received during the endline (n=1,670) survey, 2022

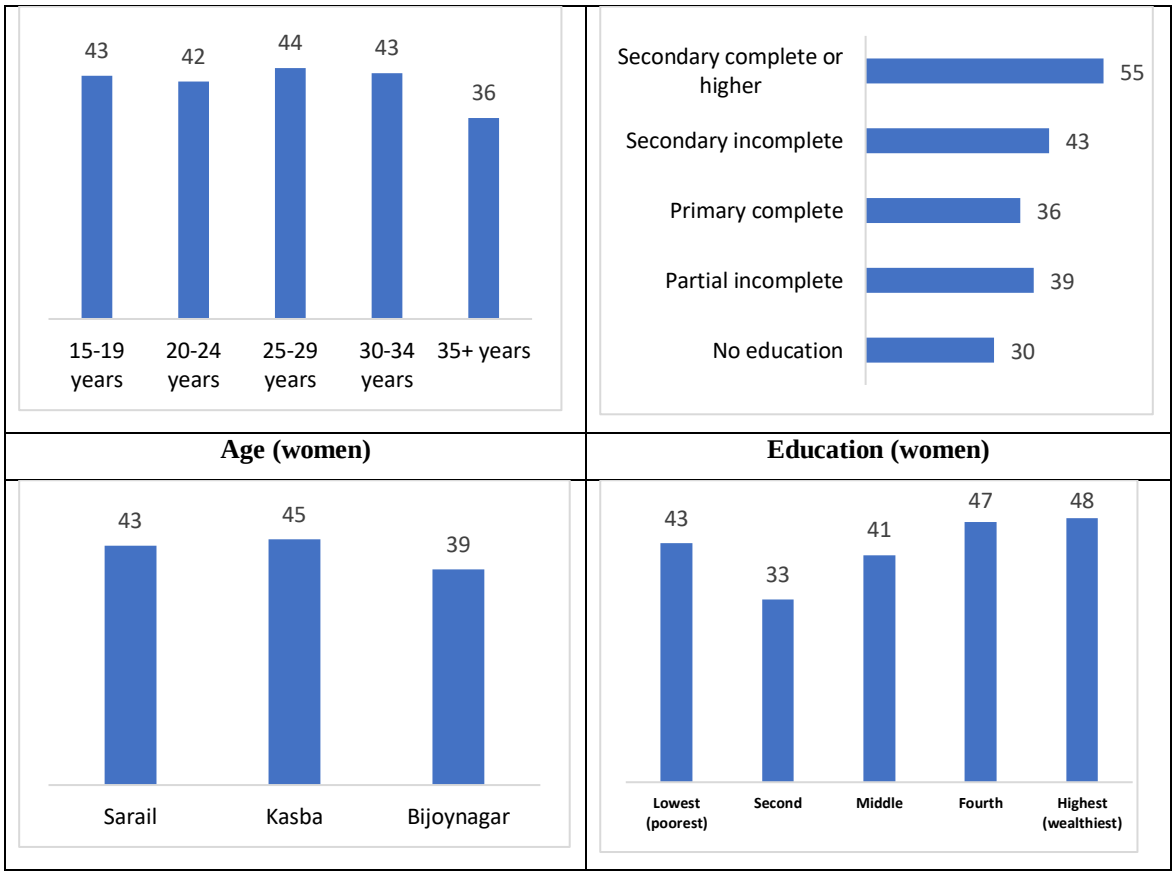
Indicators	Percentage with 4+ ANC visits and the last visit from MTP[3]	Percentage receiving all basic components of ANC	Percentage with 4+ ANC visits and all components of ANC
Age (women)			
15-19	19.3	31.8	11.8
20-24	21.9	30.5	12.3
25-29	25.4	33.4	14.5
30-34	23.6	31.8	16.3
35+	23.4	26.6	15.3
Education (women)			
No education	10.3	15.4	6.0
Partial incomplete	14.2	23.1	9.5
Primary complete[1]	17.3	24.2	10.1
Secondary incomplete	22.3	32.1	13.2
Secondary complete[2] or higher	39.1	48.2	23.5
Upazila			
Sarail	17.7	23.6	11.0
Kasba	34.5	57.1	26.4
Bijoynagar	15.9	13.0	3.1
Wealth quintile			
Lowest	20.5	40.2	15.5
Second	14.1	19.9	8.3
Middle	16.2	24.9	9.9

Indicators	Percentage with 4+ ANC visits and the last visit from MTP[3]	Percentage receiving all basic components of ANC	Percentage with 4+ ANC visits and all components of ANC
Fourth	27.3	33.8	14.1
Highest	35.3	37.4	19.8
Total	**22.7**	**31.3**	**13.5**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.
[3] MTP (Medically trained provider) includes qualified doctor, nurse/midwife/paramedic, family welfare visitor, community skilled birth assistant, and sub-assistant community medical officer. [2] Weighed, blood pressure measured, urine and blood samples taken, and informed of danger signs during pregnancy.

Husband's involvement during ANC visits

The husband's presence during the ANC visit (reported by their wives) is presented in **Figure 12** according to age categories, educational attainment of the respondent women and study sites, wealth quintiles as well. Regarding age of the respondents, older women (age 35 and above) were less likely to go to ANC visit with their husbands compared to women from other younger age groups. Considering the educational attainment, the proportion of women accompanied by their husband during ANC visit was highest (55%) among the women with secondary complete or higher education compared to their counterparts. Compared to *Bijoynagar* (39%), in *Sarail* (43%) and *Kasba* (45%), more women were accompanied by their husbands while receiving the ANC care.



Study sites	Wealth quintile

Figure 12: Percent distribution of women with less than 12 months old children according to the presence of their husbands during ANC visits from any provider (n=1,670) during the endline survey, 2022 by background characteristics

Knowledge regarding danger signs related to pregnancy among women and their husbands. Pregnancy-related risks should be understood by all members of a family with a pregnant woman, since the effects may be unexpected. In the survey, we inquired whether the women and the husbands are aware about vaginal bleeding, fever, severe abdominal pain, headache/ blurred vision, convulsions/fits, foul smelling vaginal discharge, reduced or absent foetal movement, oedema of hand/fingers, oedema of face/ leg and high blood pressure as the danger sign. **Table 26 and Table 27** respectively show the number of dangers signs the women and the husbands are aware of during the baseline and the endline. The analysis reveals that only in *Bijoynagar* there was a slight increase in the proportion of women who are aware of 1-2 dangers signs of pregnancy when we compare the baseline (50.1%) to the endline (59.5%). In *Kasba* (57.1% vs. 54.5%) and *Sarail* (56.1% vs. 41.4%) the proportion decreased. In the comparison area, *Bijoynagar* there is a 26% decrease in the proportion of women who are aware of 3 or more of the danger signs from baseline (46.4%) to the endline (20.4%) which was the highest among the 3 sub-districts. In *Sarail* there was a 19.6% and in *Kasba* there was a 4.4% decrease in the proportion of women. Although the comparison area had seen the highest decent in awareness than the intervention area, the effectiveness of the work in this area raises questions. We questioned the mothers a little bit differently from the baseline and questioned the mother related to the danger signs and also gathered information about whether they do not know or cannot recall. We found that a significant proportion of women in *Sarail* (37.1%), *Kasba* (17.7%) and *Bijoynagar* (20.2%) who did not know or could not recall the danger signs during pregnancy period. Due to the COVID-19 pandemic, courtyard sessions—one of the key activities of IFC project to improve the knowledge —were put on hold for a while, which could have a negative impact on participants' knowledge of danger signs.

Table 26: Percent distribution of women with less than 12 months old children according to their knowledge regarding pregnancy danger signs in the baseline (n=1,367) and in the endline (n=1,670) survey, 2022 (unprompted)

	Baseline (2018)			Endline (2022)		
Indicators	**0**	**1-2**	**3 or more**	**0***	**1 and 2**	**3 or more**
Age (women)						
15-19	6.1	50.8	43.2	35.7	46.4	17.9
20-24	5.7	56.4	37.9	27.1	50.8	22.1
25-29	4.7	50.5	44.8	19.9	54.0	26.2

	Baseline (2018)			Endline (2022)		
Indicators	**0**	**1-2**	**3 or more**	**0***	**1 and 2**	**3 or more**
30-34	5.1	58.6	36.3	16.3	58.4	25.3
35+	6.5	57.4	36.1	23.4	49.2	27.4
Education (women)						
No education	1.5	67.2	31.4	37.6	48.7	13.7
Partial incomplete	9.6	50.7	39.7	31.4	51.5	17.2
Primary complete[1]	5.2	58.1	36.7	28.8	52.7	18.4
Secondary incomplete	5.6	53.4	40.9	23.8	53.7	22.5
Secondary complete[2] or higher	4.9	50.3	44.8	15.0	47.6	37.5
Upazila						
Sarail	2.2	56.8	41.0	37.1	41.4	21.4
Kasba	10.6	57.1	32.3	17.7	54.5	27.9
Bijoynagar	3.5	50.1	46.4	20.2	59.5	20.4
Wealth quintile						
Lowest	4.4	53.3	42.3	17.3	59.8	22.9
Second	7.0	58.2	34.8	35.5	49.2	15.3
Middle	5.5	60.6	33.9	26.1	49.1	24.9
Fourth	6.6	54.9	38.5	26.4	49.7	24.0
Highest	3.7	46.2	50.2	20.1	50.9	29.0
Total	5.4	54.6	39.9	**25.0**	**51.8**	**23.2**

*Includes do not know/cannot remember.

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

During the endline study, around half of the spouses stated that they were unaware of or had forgotten about pregnancy-related danger signs. Among the three sub districts, husbands in *Bijoynagar* (47.3%) had the maximum familiarity with 1 to 2 danger signs. Furthermore, men in the *Kasba* region (16.6%) are more likely than their counterparts from *Sarail* (10.4%) or *Bijoynagar* (9.6%) to exhibit knowing three or more of the signs. When completing baseline and endline assessments, the percentage of spouses who knew about 1-2 and at least 3 danger indicators decreased by 25.2 % and 25.5 %, respectively, in *Sarail*. For *Kasba*, the percentage of spouses who knew about 1-2 and at least 3 danger indications decreased from the baseline to the endline, respectively by 20.9% and 6.3%. For *Bijoynagar*, the proportion of spouses who are aware of 1-2 and at least 3 danger indicators decreased from baseline to endline by 7.6% and 32.7%, respectively. It's clear that no region's spouses are becoming better at recognizing the warning signs of pregnancy, which is also cause for concern.

Table 27: Percent distribution of the husbands of the women with less than 12 months old children according to their (husband's) knowledge regarding danger signs during pregnancy in the baseline (n=701) and in the endline (n=1,650) survey, 2022 (unprompted)

Indicators	Baseline (2018)			Endline (2022)		
	0	1-2	3 or more	0*	1-2	3 or more
Age (husbands)						
15-19	0.0	33.3	66.7	40.0	60.0	0.0
20-24	3.1	72.3	24.6	48.2	41.7	10.1
25-29	5.5	56.7	37.8	52.6	32.8	14.6
30-34	10.8	56.2	33.0	49.6	39.9	10.5
35-39	6.5	59.4	34.1	43.1	45.5	11.5
40-44	6.6	52.6	40.8	44.3	42.5	13.2
45+	6.6	47.5	45.9	46.8	39.6	13.7
Education (husbands)						
No education	6.3	58.8	35.0	62.1	33.9	4.0
Partial incomplete	5.1	60.9	34.1	52.3	42.1	5.6
Primary complete[1]	11.0	51.2	37.8	51.6	37.8	10.6
Secondary incomplete	5.3	62.9	31.8	43.5	42.5	14.0
Secondary complete[2] or higher	9.4	48.1	42.5	29.2	43.8	27.1
Upazila						
Sarail	5.7	58.4	35.9	56.4	33.3	10.4
Kasba	17.6	59.5	22.9	44.9	38.6	16.6
Bijoynagar	2.8	54.9	42.3	43.1	47.3	9.6
Wealth quintile						
Lowest	6.8	54.6	38.5	43.3	43.9	12.7
Second	6.7	59.4	33.9	59.5	32.7	7.8
Middle	8.8	62.0	29.2	51.1	39.8	9.2
Fourth	3.9	64.1	32.0	43.0	39.7	17.3
Highest	9.9	44.0	46.2	43.6	42.4	13.9
Total	**7.1**	**57.2**	**35.7**	**48.1**	**39.7**	**12.2**

*Includes do not know/cannot remember.

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Medical emergencies during pregnancy and care seeking practices.

In the survey we asked whether the women faced any medical emergencies or complications during pregnancy like blurred vision with severe headache, convulsion/eclampsia/unconscious, high blood pressure, excessive vaginal bleeding, not delivering even after 6 hours of membrane rupture, oedema of hand/feet/body and whether they seek care during this emergency situation. Overall, 36% of the women experienced at least one medical emergencies or complication during their pregnancies in the endline, which is slightly lower than the baseline **(Figure 13).** The proportion of women reported to have suffered from at least one problem or complication during their last pregnancy was highest in the *Sarail* area (39%) followed by *Kasba* (35%) and *Bijoynagar* (35%). The proportion of women with at least one medical emergency increased in

Kasba and *Sarail* whereas this proportion was decreased among the women from *Bijoynagar* (from 52% to 35%).

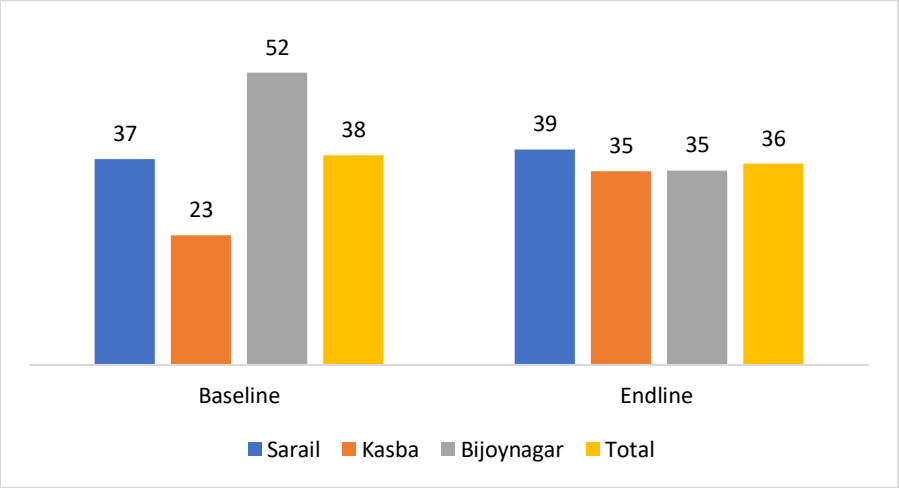


Figure 13: Percent distribution of women with less than 12 months old children who have reported at least one complications/medical emergencies during pregnancy in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Out of the 601 women experiencing medical emergencies during pregnancy, 428 (71%) sought treatment from a health care provider which was higher compared to the baseline (65%). The care seeking practice for medical emergencies among women in the study sites is given in **Figure 14**. In general, the women from the *Sarail* area sought health care for pregnancy complications in the highest proportions compared to those who resided in *Kasba* and *Bijoynagar* areas.

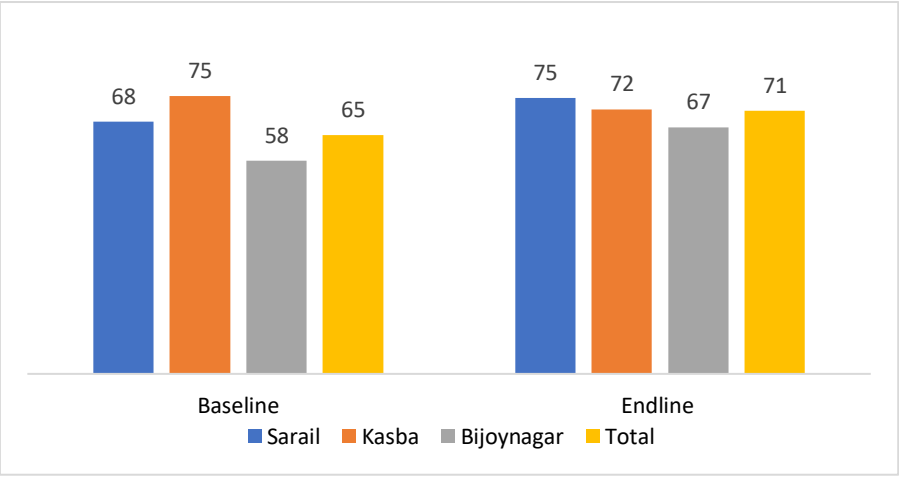


Figure 14: Percent distribution of women with less than 12 months old children who had at least one complication during pregnancy according to the care seeking practice (seek care) for medical emergencies during the baseline (n=513) and the endline (n=601) survey, 2022

Table 28 represent the place for care seeking during emergency. More women in *Bijoynagar* (89.9%) than in the intervention area got emergency medical treatment at private institutions, with an average of almost 8 out of 10 women who sought such care in three subdistricts when they faced complications. During the endline, *Sarail* (81.3%) had the lowest proportion of women who used a private clinic; nevertheless, the number of women who choose to get medical care at home was higher in *Sarail* (6.9%). In the baseline private setting was the most commonly sought placed among the three subdistricts. The proportion of women who sought care for medical emergency during pregnancy from UH&FWC increased mostly in *Kasba* (baseline 1.3% vs. endline 3.6%).

Table 28: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during pregnancy according to the care seeking practice (place) during baseline (n=332) and the endline (n=428) survey, 2022

	Baseline (2018)							Endline (2022)						
	Public-DH/MCH/MCWC	Public-UHC	Public-UH&FWC	Private sectors	NGO	Home	Others	Public-DH/MCH/MCWC	Public-UHC	Public-UH&FWC	Private sectors	NGO	Home	Community clinic (CC)
Age (women)														
15-19	2.6	0	0	92.1	0	5.3	0	1.4	4.3	2.9	81.4	2.9	7.1	0.0
20-24	3.4	0.8	1.7	87.4	0	5	1.7	3.1	2.5	1.9	84.0	1.9	4.9	1.9
25-29	3.4	4.5	1.1	85.2	1.1	3.4	1.1	1.0	4.9	1.0	89.2	2.0	2.0	0.0
30-34	4.9	3.3	0	85.2	0	6.6	0	1.6	4.9	1.6	90.2	0.0	1.6	0.0
35+	3.8	3.8	0	80.8	0	11.5	0	0.0	3.0	3.0	78.8	3.0	12.1	0.0
Education (women)														
No education	3.4	0	0	89.7	0	6.9	0	0.0	2.9	2.9	80.0	0.0	14.3	0.0
Partial incomplete	3.2	3.2	3.2	87.1	0	3.2	0	4.4	8.7	2.2	71.7	2.2	10.9	0.0
Primary complete[1]	3.7	3.7	1.9	81.5	0	9.3	0	1.2	2.4	1.2	90.2	0.0	4.9	0.0
Secondary incomplete	5.4	3.4	0	84.6	0.7	4.7	1.3	1.2	3.6	3.0	86.2	2.4	2.4	1.2
Secondary complete[2] or higher	0	0	1.4	92.8	0	4.3	1.4	3.1	3.1	0.0	87.8	3.1	2.0	1.0
Upazila														
Sarail	1.8	1.8	0	93.9	0	0.9	1.8	1.9	6.3	0.6	81.3	2.5	6.9	0.6
Kasba	2.5	7.6	1.3	82.3	0	5.1	1.3	2.9	3.6	3.6	85.6	0.0	2.9	1.4
Bijoynagar	5.8	0	1.4	82.7	0.7	9.4	0	0.8	0.8	1.6	89.9	3.1	3.9	0.0
Wealth quintile														
Lowest	8.5	0	0	83	0	8.5	0	2.7	2.7	2.7	86.7	0.0	5.3	0.0
Second	2.7	2.7	1.4	89.2	0	4.1	0	1.3	5.1	1.3	80.8	2.6	6.4	2.6
Middle	1.5	2.9	0	85.3	0	7.4	2.9	1.3	2.7	5.3	77.3	2.7	10.7	0.0
Fourth	1.4	2.9	1.4	84.3	0	8.6	1.4	1.0	3.1	0.0	90.8	3.1	2.0	0.0
Highest	5.5	2.7	1.4	89	1.4	0	0	2.9	4.9	1.0	88.2	1.0	1.0	1.0
Total	**3.6**	**2.4**	**0.9**	**86.4**	**0.3**	**5.4**	**0.9**	**1.9**	**3.7**	**1.9**	**85.3**	**1.9**	**4.7**	**0.7**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 29 shows the provider to whom pregnant women sought treatment during pregnancy-related medical emergencies. Among the three subdistricts, *Kasba* has the greatest percentage (82%) of women who sought emergency treatment from a medically trained practitioner. While *Sarail* and *Bijoynagar* had a similar number of patients who sought treatment from both medically trained (about 70%) and non-medical providers (about 30%).

Table 29: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during pregnancy according to the care seeking practice (care provider) during the endline (n=428) survey, 2022

	Endline (2022)												
	Medically trained provider (MTP)						Non-medically trained provider						
	MBBS doctor	Nurse/ midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	Trained TBA	Unqualified provider	Family/ Relative/ neighbour/ Friend	CHCP	BRAC worker	Other NGO worker	Total
Age (women)													
15-19	61.4	0.0	1.4	2.9	0.0	65.7	1.4	28.6	4.3	0.0	0.0	0.0	34.3
20-24	66.7	0.0	1.2	1.9	1.2	71.0	0.6	23.5	3.1	1.2	0.0	0.6	29.0
25-29	78.4	2.0	0.0	2.9	0.0	83.3	0.0	14.7	1.0	1.0	0.0	0.0	16.7
30-34	65.6	1.6	0.0	3.3	3.3	73.8	1.6	23.0	0.0	0.0	1.6	0.0	26.2
35+	72.7	0.0	0.0	6.1	0.0	78.8	3.0	18.2	0.0	0.0	0.0	0.0	21.2
Education (women)													
No education	51.4	0.0	0.0	2.9	5.7	60.0	2.9	34.3	2.9	0.0	0.0	0.0	40.0
Partial incomplete	43.5	2.2	0.0	8.7	4.4	58.7	2.2	32.6	4.4	0.0	0.0	2.2	41.3
Primary complete[1]	62.2	0.0	0.0	2.4	0.0	64.6	0.0	31.7	3.7	0.0	0.0	0.0	35.4
Secondary incomplete	74.9	0.6	1.8	1.8	0.0	79.1	0.6	16.8	1.2	1.8	0.6	0.0	21.0
Secondary complete or higher[2]	82.7	1.0	0.0	2.0	0.0	85.7	1.0	12.2	1.0	0.0	0.0	0.0	14.3
Upazila													
Sarail	63.1	0.0	0.0	5.6	1.3	70.0	2.5	21.9	4.4	0.0	0.6	0.6	30.0
Kasba	77.7	2.2	0.7	0.7	0.7	82.0	0.0	14.4	1.4	2.2	0.0	0.0	18.0
Bijoynagar	66.7	0.0	1.6	1.6	0.8	70.6	0.0	29.5	0.0	0.0	0.0	0.0	29.5
Wealth quintile													
Lowest	66.7	0.0	0.0	4.0	1.3	72.0	1.3	24.0	1.3	1.3	0.0	0.0	28.0
Second	53.9	0.0	1.3	1.3	0.0	56.4	1.3	38.5	2.6	1.3	0.0	0.0	43.6
Middle	56.0	0.0	1.3	4.0	2.7	64.0	1.3	29.3	4.0	0.0	1.3	0.0	36.0
Fourth	75.5	1.0	0.0	3.1	1.0	80.6	1.0	15.3	2.0	0.0	0.0	1.0	19.4
Highest	85.3	2.0	1.0	2.0	0.0	90.2	0.0	7.8	1.0	1.0	0.0	0.0	9.8
Total	**68.9**	**0.7**	**0.7**	**2.8**	**0.9**	**74.1**	**0.9**	**21.7**	**2.1**	**0.7**	**0.2**	**0.2**	**25.9**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Birth preparedness and complication readiness (BPCR)

In order to ensure a safe birth, it is important to plan and prepare ahead of time, anticipating the activities that must be performed in the event of an emergency is known as BPCR. The lives of women and babies may be saved by being appropriately prepared for delivery and for emergency complications, and delays in obtaining treatment in obstetric crises can be minimized. In this survey, we inquired about the birth preparedness during the last pregnancy focusing on the many indicators like whether they identified the place of delivery, birth attendance, saved money arranged blood, etc. prior to the delivery. All the BPCR indicators are listed in **Table 30.**

BPCR practice during last pregnancy

Overall, *Bijoynagar* reported the highest percentage of BPCR practices in terms of identifying the place of delivery (85.1%), identifying birth attendants (66.3%), saving money for emergency situations (49.6%), arranging emergency transports (28.8%), identifying hospitals prior to facing complications (32.1%), and identifying companion of choice (96.2%) among the three subdistricts during the endline. *Bijoynagar* reported the greatest number of BPCR practices in six of the nine categories. *Kasba* had the most reports of the other three practices. Those are identifying healthcare facility for delivering the baby (37.8%), identifying skilled health care providers (36.1%), and arranging blood donor prior to the delivery (17.9%). Nevertheless, in *Kasba*, the BPCR practice showed more progress than the comparative region in terms of recognizing healthcare facilities and qualified health care providers, conserving money for emergencies, identifying hospitals for any complications that may develop, and picking an accompany of choice with an improvement of 20.8%, 16.4%, 17.2%, 9.6%, 64.6%, respectively, for baseline to endline improvement.

Table 30: Percent distribution of women with less than 12 months old children according to their BPCR practices during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)								
	Identified place for delivery	Identified healthcare facility for delivery.	Identified birth attendant	Identified skilled healthcare provider.	Saved money	Arranged transport	Arranged blood donor	Identified hospital for facing complication.	Identified companion of choice/ accompanying person
Age (women)									
15-19	86.4	12.9	72.7	18.2	38.6	17.4	8.3	31.1	53.8
20-24	82.1	18.7	66.0	18.3	34.9	13.2	8.1	31.1	46.6
25-29	77.2	16.5	64.9	18.3	30.9	14.7	8.9	25.7	45.3
30-34	80.5	16.7	65.1	12.6	33.5	13.5	10.2	28.8	47.0
35+	78.7	13	69.4	11.1	30.6	7.4	10.2	27.8	47.2
Education (women)									
No education	85.4	10.2	67.2	7.3	24.1	8.8	2.2	23.4	49.6
Primary incomplete	79.5	6.2	65.8	5.5	25.3	9.6	4.1	19.2	52.7
Primary complete[1]	81.7	9.6	72.5	11.4	32.8	10.0	4.4	25.8	48.9
Secondary incomplete	80.8	16.7	65.2	16.7	35.3	16.3	9.7	29.9	45.7
Secondary complete[2] or higher	77.6	31.1	64.3	31.8	39.5	15.4	16.4	37.4	44.1
Upazila									
Sarail	85.9	15.9	17.4	17.4	31.7	12.3	6.6	38.3	58.1
Kasba	76.3	17.0	19.7	19.7	22.3	13.1	8.6	18.4	27.4
Bijoynagar	79.6	17.4	13.4	13.4	46.4	15.4	11.3	30.2	55.3
Wealth quintile									
Lowest	80.3	5.1	67.5	7.3	23.7	8.4	2.2	18.6	54.4
Second	81.0	12.8	66.3	11.0	27.5	8.8	5.5	26.4	44.7
Middle	78.8	15	62.8	13.9	34.3	15.3	9.1	26.6	44.5
Fourth	80.2	18.7	67.0	20.1	38.5	15.0	8.8	31.1	46.2
Highest	82.8	32.2	68.9	31.9	44.0	20.5	18.7	42.1	45.4

Total	**80.6**	**16.8**	**66.5**	**16.8**	**33.6**	**13.6**	**8.9**	**29.0**	**47.0**
	Endline (2022)								
	Identified place for delivery	Identified healthcare facility for delivery	Identified birth attendant	Identified skilled healthcare Provider	Save money for any emergency during delivery	Arrange emergency transport	Arrange blood donor	Identified hospital for facing complication	Identified companion of choice/ accompanying person
Age (women)									
15-19	63.9	22.9	52.5	19.1	41.8	23.6	11.8	24.6	92.5
20-24	71.5	31.2	57.3	27.9	41.6	25.5	19.4	29.7	96.0
25-29	71.4	41.7	54.7	34.5	40.9	23.0	18.2	34.1	94.7
30-34	64.4	40.0	53.7	28.0	39.1	21.0	18.5	27.9	91.0
35+	67.7	33.3	53.2	28.8	33.1	20.2	13.7	29.0	93.6
Education (women)									
No education	72.7	17.7	48.7	15.8	23.9	17.1	8.6	19.7	94.0
Partial incomplete	68.6	26.7	55.6	18.1	30.8	18.9	10.1	24.9	97.0
Primary complete[1]	63.4	24.1	51.0	20.3	32.0	14.7	8.4	23.1	93.1
Secondary incomplete	68.6	34.9	56.2	28.3	43.0	24.8	16.6	30.0	93.8
Secondary complete[2] or higher	74.6	50.7	59.0	44.8	55.7	35.5	36.2	42.7	94.8
Upazila									
Sarail	62.7	35.3	42.9	26.5	32.3	17.3	16.4	28.8	94.4
Kasba	59.1	37.8	55.9	36.1	39.5	24.5	17.9	28.0	92.0
Bijoynagar	85.1	30.1	66.3	22.6	49.7	28.8	17.5	32.1	96.2
Wealth quintile									
Lowest	55.7	29.5	51.6	27.3	37.2	14.1	10.9	20.8	90.6
Second	67.6	19.5	48.6	18.2	27.5	18.7	10.1	19.9	95.7
Middle	70.4	28.5	53.9	21.1	38.3	23.4	14.7	27.5	94.6
Fourth	74.6	43.8	62.0	33.8	47.0	32.6	21.9	38.6	95.5
Highest	76.7	44.9	59.0	37.6	52.1	29.0	28.7	41.3	94.6
Total	**68.9**	**33.9**	**55.0**	**28.2**	**40.5**	**23.5**	**17.3**	**29.6**	**94.2**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 31 displays BPCR practice levels among women during the baseline and endline. Women who reported practicing at least five BPCR showed an improvement from baseline to endline, according to the analysis. In *Sarail*, *Kasba*, and *Bijoynagar*, 8.0%, 23.9 %, and 14.8 %, respectively, are the gains. So, the highest improvement is noticed in the *Kasba* region reported by the women. In the endline survey, the largest percentage of women who reported at least 5 BPCR practice was highest in *Bijoynagar* (38.4%) and lowest in *Sarail* (25.4%). Among the three subdistricts, the lowest improvement from baseline to the endline was observed in *Sarail*. So, among the three subdistricts in respect of practicing at least 5 BPCR *Sarail* districts was not doing well. Overall, women who finished their secondary school or had better educational degrees been viewed more likely to exercise at least 5 BPCR (5 out of 10

women). Also practice of at least 5 BPCR is noticed among women who were from fourth (4 out of 10 women) and the highest quintiles (about 5 out of 10 women).

Table 31: Percent distribution of women with less than 12 months old children according to their level of BPCR practices during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)						Endline (2022)					
	0 BPCR	**1 BPCR**	**2 BPCR**	**3 BPCR**	**4 BPCR**	**≥5 BPCR**	**0 BPCR**	**1 BPCR**	**2 BPCR**	**3 BPCR**	**4 BPCR**	**≥5 BPCR**
Age (women)												
15-19	6.1	15.9	17.4	21.2	17.4	22.0	3.2	15.4	21.1	16.8	15.4	**28.2**
20-24	10.4	15.8	17.9	22.6	14.5	18.7	0.8	14.7	16.0	19.0	16.6	**32.9**
25-29	12.3	16.8	19.1	21.2	15.7	14.9	1.0	14.5	17.7	17.9	12.6	**36.3**
30-34	10.2	14.0	20.9	21.9	17.2	15.8	3.0	17.6	19.7	15.5	13.3	**30.9**
35+	12.0	11.1	21.3	24.1	18.5	13.0	0.0	25.0	13.7	20.2	9.7	**31.5**
Education (women)												
No education	9.5	13.1	24.8	27.0	15.3	10.2	0.9	18.8	28.2	19.7	12.8	**19.7**
Partial incomplete	10.3	15.8	21.2	29.5	12.3	11.0	1.2	20.1	18.3	21.3	12.4	**26.6**
Primary complete[1]	8.3	15.7	21.0	21.8	21.0	12.2	1.4	21.0	22.2	18.2	15.9	**21.3**
Secondary incomplete	9.7	17.4	18.5	20.0	15.5	19.0	2.2	14.4	15.9	18.8	14.7	**34.1**
Secondary complete[2] or higher	15.0	12.2	14.3	20.3	14.7	23.4	0.3	10.4	12.1	13.4	14.0	**49.8**
Upazila												
Sarail	6.6	7.5	17.8	31.3	19.4	17.4	1.4	21.8	24.1	18.9	8.3	**25.4**
Kasba	15.5	27.2	20.8	16.2	10.4	10.0	2.9	21.4	13.0	13.9	14.8	**33.9**
Bijoynagar	9.8	11.7	18.2	18.9	17.8	23.6	0.2	4.5	15.7	21.1	20.2	**38.4**
Wealth quintile												
Lowest	9.5	14.6	25.2	28.5	12.8	9.5	3.5	25.5	14.1	20.2	12.3	**24.3**
Second	11.4	19.0	17.2	23.8	15.4	13.2	1.2	18.0	26.0	20.8	13.5	**20.5**
Middle	12.8	16.8	17.2	21.2	13.9	18.2	1.2	14.7	17.7	21.9	17.4	**27.3**
Fourth	11.7	12.8	19.8	18.7	18.7	18.3	0.6	11.7	15.6	12.9	16.2	**43.1**
Highest	7.7	13.9	15.4	18.3	18.7	26.0	0.9	9.6	15.0	14.1	12.9	**47.6**
Total	**10.6**	**15.4**	**18.9**	**22.1**	**15.9**	**17.0**	**1.5**	**15.9**	**17.6**	**18.0**	**14.4**	**32.6**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Discussion with health workers, husbands, and other family members.

Table 32 lists the women who had chosen to engage in BPCR, after consulting with a health worker, their spouse, or other family members. Overall, around 2 out of 10 women consulted with health workers about the BPCR. Regarding consultation with the husbands, analysis revealed that about 7 in 10 women were consulting with the husbands in *Bijoynagar*, which is the maximum among the 3 subdistricts. In *Kasba* (about 6 in 10 women) the maximum women are found consulting with other family members. In *Kasba* there is a 30.6% improvement in

the proportion of the women discussing with other family members from the baseline to the endline, which was more than *Bijoynagar* (9.5% improvement).

Table 32: Percent distribution of women with less than 12 months old children according to their discussion about BPCR with health workers, husbands, and other family members during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)			Endline (2022)		
	Discussed with health worker	**Discussed with husband**	**Discussed with other family members**	**Discussed with health worker**	**Discussed with husband**	**Discussed with other family members**
Age (women)						
15-19	12.9	73.5	51.5	18.9	62.5	58.6
20-24	14.0	72.3	43.0	25.7	62.7	56.5
25-29	11.8	64.4	31.7	30.0	67.6	49.2
30-34	14.4	68.8	30.7	30.0	63.1	42.9
35+	12.0	68.5	26.9	21.8	66.1	32.3
Education (women)						
No education	10.2	60.6	30.7	17.1	48.7	27.4
Primary incomplete	11.6	67.8	28.8	20.1	55.6	44.4
Primary complete[1]	12.7	76.9	35.8	19.6	58.5	47.8
Secondary incomplete	13.5	69.2	38.3	27.1	67.5	53.4
Secondary complete or higher[2]	15.0	68.5	44.8	36.8	73.3	63.2
Upazila						
Sarail	17.8	82.4	43.6	24.5	54.1	45.1
Kasba	10.0	48.7	29.0	25.2	64.3	59.6
Bijoynagor	11.7	76.8	39.7	28.1	74.2	49.2
Wealth quintile						
Lowest	12.0	69.0	29.9	20.5	62.8	53.7
Second	12.5	72.2	33.0	18.7	54.1	40.7
Middle	11.7	63.9	31.0	23.7	68.9	49.1
Fourth	11.4	68.1	43.6	32.0	67.1	56.6
Highest	18.3	73.6	49.8	34.7	68.0	56.3
Total	**13.2**	**69.3**	**37.5**	**25.9**	**64.2**	**51.3**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

BPCR, ANC, and PNC card coverage and usage

Table 33 shows how many pregnant women received BPCR cards and at what point in the pregnancy they got the cards, its usage, usefulness, and coverage. Only 6% women from *Sarail* had their BPCR cards during the time data were collected. This proportion was lowest in *Kasba* (2.3%). Overall, the percentage of women in the intervention areas who received a BPCR card decreased from the baseline to the endline period. However, the proportion increased from baseline to endline in the *Bijoynagar* subdistrict.

Table 33: Percent distribution of women with less than 12 months old children according to their BPCR cards coverage and usability during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)									
	Received BPCR card during pregnancy	Received first BPCR card				Used the card during pregnancy	Card was helpful/useful	Used card for BPCR planning	Easy usage	Recommended the card to other pregnant women
		first trimester	2nd trimester	3rd trimester	Do not know					
Age (women)										
15-19	4.5	1.5	1.5	1.5	0.0	4.5	4.5	4.5	4.5	3.8
20-24	4.0	1.9	1.1	0.8	0.2	3.2	3.2	2.8	3.2	3.0
25-29	3.7	0.8	1.8	1.0	0.0	2.6	2.6	2.4	2.6	1.8
30-34	3.3	0.9	1.4	0.9	0.0	3.3	3.3	3.3	3.3	3.3
35+	0.9	0.0	0.9	0.0	0.0	0.9	0.9	0.9	0.9	0.0
Education (women)										
No education	2.9	1.5	0.0	1.5	0.0	2.9	2.9	2.2	2.9	2.2
Primary incomplete	3.4	2.1	0.7	0.7	0.0	3.4	3.4	3.4	3.4	3.4
Primary complete[1]	4.4	1.3	1.7	1.3	0.0	3.1	3.1	3.1	3.1	3.1
Secondary incomplete	3.3	0.7	1.8	0.7	0.2	2.5	2.5	2.3	2.5	1.6
Secondary complete[2] or higher	3.8	1.7	1.4	0.7	0.0	3.8	3.8	3.5	3.8	3.8
Upazila										
Sarail	6.2	2.4	2.0	1.8	0.0	5.5	5.5	5.5	5.5	4.6
Kasba	2.9	0.9	1.1	0.7	0.2	2.0	2.0	1.3	2.0	1.8
Bijoynagar	1.7	0.4	1.1	0.2	0.0	1.5	1.5	1.5	1.5	1.3
Wealth quintile										
Lowest	2.9	0.7	1.1	1.1	0.0	2.2	2.2	2.2	2.2	1.8
Second	4.0	1.1	1.1	1.8	0.0	3.7	3.7	3.3	3.7	3.3
Middle	2.9	1.1	1.5	0.4	0.0	1.8	1.8	1.5	1.8	1.5
Fourth	5.5	2.6	1.8	0.7	0.4	5.1	5.1	4.8	5.1	4.4
Highest	2.6	0.7	1.5	0.4	0.0	2.2	2.2	2.2	2.2	1.8
Total	**3.6**	**1.2**	**1.4**	**0.9**	**0.1**	**3.0**	**3.0**	**2.8**	**3.0**	**2.6**

	Endline (2022)								
	Received BPCR card during pregnancy	Received first BPCR card				Card was helpful/useful	Used card for BPCR planning	Easy usage	Recommended the card to other pregnant women
		First trimester	Second trimester	Third trimester	Do not Know				
Age (women)									
15-19	3.2	0.7	1.8	0.7	0.0	1.8	1.8	1.8	1.8
20-24	3.9	1.0	1.9	0.8	0.2	2.4	2.4	2.3	1.9
25-29	3.9	1.2	1.9	0.7	0.0	1.5	1.7	1.2	1.7
30-34	4.3	1.7	0.9	1.3	0.4	0.9	0.9	0.9	0.9
35+	3.2	1.6	0.8	0.8	0.0	0.8	0.8	0.8	0.0
Education (women)									
No education	5.1	1.7	1.7	1.7	0.0	1.7	2.6	1.7	2.6
Primary incomplete	7.7	3.0	2.4	1.8	0.6	3.0	3.0	3.0	2.4
Primary complete[1]	2.6	0.6	0.6	1.2	0.3	1.4	1.4	1.4	1.4
Secondary incomplete	3.2	0.6	2.1	0.6	0.0	1.5	1.5	1.4	1.4
Secondary complete or higher[2]	3.9	2.0	1.6	0.3	0.0	2.0	2.0	1.6	1.3
Upazila									
Sarail	6.0	2.3	2.3	0.9	0.4	3.4	3.6	3.2	3.2
Kasba	2.3	0.2	0.9	1.3	0.0	0.7	0.7	0.7	0.5
Bijoynagar	3.1	0.9	1.8	0.4	0.0	1.1	1.1	0.9	0.9

	Baseline (2018)								
	Received BPCR card during pregnancy	Received first BPCR card				Used the card during pregnancy	Card was helpful/useful	Used card for BPCR planning	Easy usage	Recommended the card to other pregnant women
		first trimester	2nd trimester	3rd trimester	Do not know					
Wealth quintile										
Lowest	3.2	0.6	1.8	0.6	0.3	1.2	1.2	0.9	0.6	
Second	3.7	1.5	1.2	0.9	0.0	1.8	2.1	1.5	2.1	
Middle	3.6	0.6	2.4	0.6	0.0	1.8	1.8	1.8	1.8	
Fourth	5.7	2.1	2.1	1.2	0.3	2.7	2.7	2.7	2.4	
Highest	2.7	0.9	0.9	0.9	0.0	1.2	1.2	1.2	0.9	
Total	**3.8**	**1.1**	**1.7**	**0.8**	**0.1**	**1.7**	**1.8**	**1.6**	**1.6**	

*Note in the endline we did not ask about BPCR card used during pregnancy
[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Place of receiving BPCR card

Among the mother who received BPCR cards, in *Sarail* half of them received the cards at home **(Figure 15).** While in another intervention area, the *Kasba* equal proportion of women received cards (3 out of 10) from the public facility and at home. In *Bijoynagar* almost all women (9 out of 10) received cards from public facility.

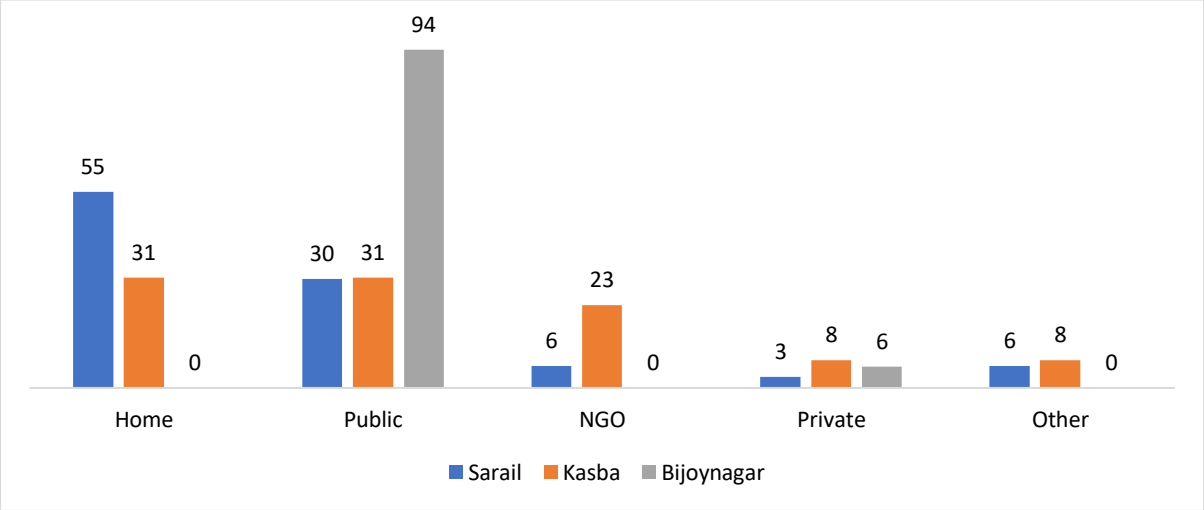


Figure 15: Percent distribution of women with less than 12 months old children according to place of receiving the BPCR during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Delivery care

Care during the birth is crucial both for the mother and infant. Decisions on how to spend resources may be aided by information about delivery care. In the survey we questioned about the method, location, and provider for the birth of the expecting mothers. Also, we enquired about their understanding about the danger indications associated to the delivery and their care seeking practice during such circumstance which will be mentioned in this section.

Mode of delivery

Reduced maternal and new-born mortality and complications may be achieved by increasing the availability of caesarean sections (C-sections) procedures to more women. Women's health may suffer in the short and long term if C-sections are performed on them without a medical need to do so. The proportion of C- section was the highest in *Kasba* compared to *Sarail* and *Bijoynagar*. One in every 2 mothers delivered their newborn through C- section in *Kasba*. While the proportion of normal vaginal delivery was highest among the women from *Sarail* (63%) **(Figure 16).**

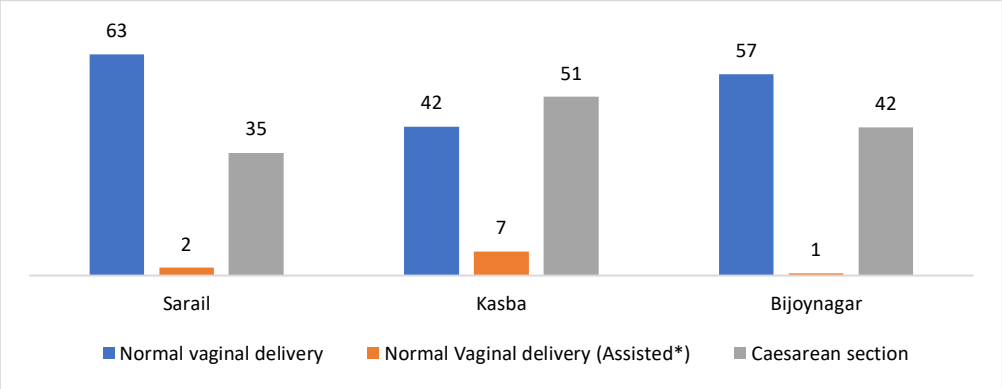


Figure 16: Percent distribution of women with less than 12 months old children according to mode of delivery during the endline (n=1,670) survey, 2022

Place of delivery

Complications and infections that might lead to death or severe sickness for the mother can be reduced with proper medical care and sanitary settings during delivery. Because of this, it is critical to improve the percentage of delivery that occurs in a medically supervised setting. **Table 34** shows the place of delivery among the women in this study. In *Kasba*, the majority of the deliveries took place in the health facilities with private setting being the highest. About half of the women delivery in *Kasba* took place in a private setting. While in *Sarail* half of the deliveries took place in the home setting.

Table 34: Percent distribution of women with less than 12 months old children according to the place of delivery during the endline (n=1,670) survey, 2022

Indicator	Health Facility			Home	Other
	Public	Private	NGO		
Age (women)					
15-19	8.6	46.1	0.4	41.4	**3.6**
20-24	6.6	46.9	0.0	43.7	**2.7**
25-29	7.3	47.0	0.2	42.6	**2.9**
30-34	6.4	41.2	0.0	50.2	**2.2**

Indicator	Health Facility			Home	Other
	Public	Private	NGO		
35+	8.1	41.1	0.0	47.6	**3.2**
Education (women)					
No education	4.3	18.8	0.0	73.5	**3.4**
Primary incomplete	6.5	30.2	0.0	58.6	**4.7**
Primary complete[1]	6.3	33.4	0.0	57.6	**2.6**
Secondary incomplete	7.7	49.3	0.3	40.0	**2.7**
Secondary complete[2] or higher	8.5	69.1	0.0	20.2	**2.3**
Upazila					
Sarail	3.2	36.8	0.0	52.1	**7.9**
Kasba	6.4	55.2	0.0	38.2	**0.2**
Bijoynagar	11.9	44.7	0.4	42.5	**0.5**
Wealth quintile					
Lowest	7.0	39.9	0.0	48.1	**5.0**
Second	6.1	33.6	0.0	57.8	**2.5**
Middle	9.0	38.0	0.0	50.0	**3.0**
Fourth	6.6	54.2	0.3	37.4	**1.5**
Highest	7.2	62.0	0.3	28.1	**2.4**
Total	**7.2**	**45.6**	**0.1**	**44.3**	**2.9**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Providers of delivery care

In order to reduce maternal and newborn mortality, a qualified provider must be present at the time of birth. Medically trained providers, also known as skilled birth attendants, are expected to deliver 65 percent more babies by 2022 as part of the 4th HPNSP (11). Providers of the delivery care for the endline assessment are shown in the **Figure 17**. Overall, 57% of the deliveries happen under the supervision of the qualified provider. On the other hand, a considerable number of deliveries took place with help of untrained TBA (23%).

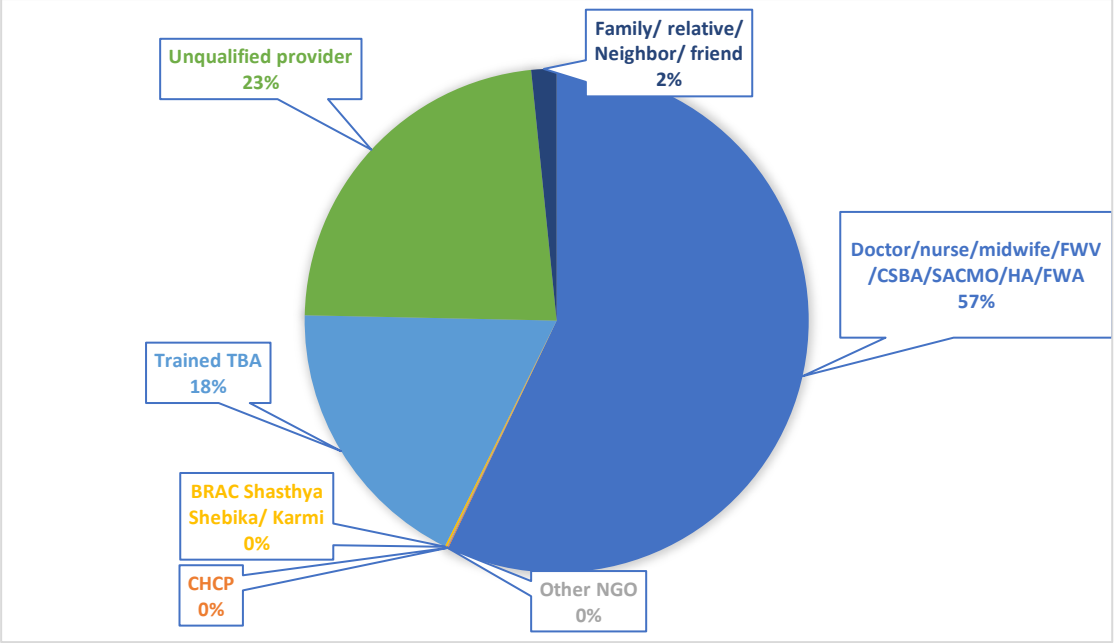


Figure 17: Percent distribution of women with less than 12 months old children according to the skilled assistance during the delivery in the endline (n=1,670) survey, 2022

Knowledge regarding danger signs related to childbirth among women and their husbands.

Table 35 shows how well women who had just given birth are aware of the risk indications associated with delivery. Women in *Kasba* (35.5%), at the end line, are the most likely to be aware of at least 3 potential danger signs among the 3 areas. *Sarail* (22.9%) has the lowest proportion. Also, in *Sarail* (40.5%) most of the women are unable to remember or do not know about the danger signs. Women who are aware of three or more danger signs of delivery in the endline had improved by 8.3% in *Kasba*, compared to the baseline, whereas those in the *Sarail* had decreased by 6.4%.

Table 35: Percent distribution of women with less than 12 months old children according to knowledge regarding danger signs related to childbirth during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)			Endline (2022)		
	0	1 and 2	3 or more	0*	1 and 2	3 or more
Age (women)						
15-19	6.8	59.8	33.3	36.1	41.4	22.5
20-24	4.9	64.2	30.9	29.0	44.8	26.1
25-29	3.9	61.8	34.3	23.2	46.5	30.3
30-34	7.4	65.1	27.4	18.9	50.6	30.5
35+	1.9	65.7	32.4	25.0	41.1	33.9
Education (women)						
No education	5.1	67.2	27.7	45.3	43.6	11.1
Primary incomplete	5.5	64.4	30.1	30.8	49.7	19.5
Primary complete[1]	3.5	65.9	30.6	33.7	45.2	21.0

Secondary incomplete	5.4	63.6	30.9	24.8	44.5	30.7
Secondary complete or higher[2]	4.9	58.4	36.7	16.0	45.0	39.1
Upazila						
Sarail	1.8	68.9	29.3	40.5	36.6	22.9
Kasba	10.4	62.4	27.2	15.4	49.1	35.5
Bijoynagar	2.8	58.8	38.4	25.4	49.9	24.7
Wealth quintile						
Lowest	2.6	64.2	33.2	17.9	51.6	30.5
Second	5.9	64.1	30.0	37.9	43.7	18.4
Middle	6.6	67.5	25.9	29.0	44.3	26.7
Fourth	5.1	64.1	30.8	26.7	43.7	29.6
Highest	4.8	56.8	38.5	24.3	42.5	33.2
Total	**5.0**	**63.4**	**31.7**	**27.1**	**45.2**	**27.7**

* Includes do not know/ cannot remember
[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 36 shows how well the husbands are aware of the danger signs associated with delivery. When compared to the baseline, the percentage of spouses in *Kasba* who reports three or more danger signs is lowered by 2.8%, unlike the mothers where the proportion increased in the endline. In *Sarail* and *Bijoynagar*, the percentages dropped from baseline to endline: 15.3% and 25.5 %, respectively among the spouses. Also, in the endline a good proportion of the husbands were either unaware or were unable to remember about the danger signs in 3 sub districts.

Table 36: Percent distribution of husbands of women with less than 12 months old children according to their (husbands) knowledge regarding danger signs related to childbirth during the baseline (n=701) and the endline (n=1,650) survey, 2022

	Baseline (2018)			Endline (2022)		
	0	**1 and 2**	**3 or more**	**0***	**1 and 2**	**3 or more**
Age (husband)						
15-19	33.3	66.7	0.0	60.0	40.0	0.0
20-24	4.6	69.2	26.2	47.0	43.5	9.5
25-29	6.1	64.6	29.3	47.1	40.0	12.9
30-34	8.8	66.5	24.7	50.6	39.0	10.5
35-39	8.0	64.5	27.5	42.8	46.4	10.8
40-44	5.3	63.2	31.6	43.1	43.1	13.8
45+	1.6	67.2	31.1	49.6	37.4	13.0
Education (husband)						
No education	6.3	65.6	28.1	66.4	30.8	2.9
Partial incomplete	4.3	68.8	26.8	49.1	41.7	9.3
Primary complete[1]	9.4	63.8	26.8	44.9	46.2	8.9
Secondary incomplete	4.1	70.6	25.3	43.3	43.8	13.0

Secondary complete or higher[2]	11.3	55.7	33.0	29.5	44.5	26.0
Upazila						
Sarail	4.6	72.1	23.3	57.9	34.2	8.0
Kasba	17.6	64.1	18.3	37.5	47.1	15.5
Bijoynagar	2.8	60.5	36.7	45.7	43.1	11.2
Wealth quintile						
Lowest	7.3	62.9	29.8	35.8	53.9	10.3
Second	5.5	66.7	27.9	60.1	30.3	9.6
Middle	6.6	69.3	24.1	50.5	41.3	8.3
Fourth	5.8	72.8	21.4	43.9	41.8	14.2
Highest	8.8	56	35.2	44.6	40.0	15.5
Total	**7.3**	**62.9**	**29.8**	**46.9**	**41.5**	**11.6**

* Includes do not know/ cannot remember.
[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Medical emergencies during childbirth and care seeking practices.

When women were surveyed, we asked if they had experienced any medical emergencies, such as blurred vision and a severe headache, convulsions or unconsciousness, high blood pressure, excessive vaginal bleeding, the delivery of non-head parts of the baby, labour pain that lasted longer than 12 hours, retained placenta, or oedema of the hands, feet, or body. The percentage of women experienced at least one medical emergencies or complication during their pregnancies was higher during the endline compared to the baseline (21% vs. 26%) **(Figure 18).** Similar to the complications during pregnancy, the proportion of women reported to have suffered from at least one problem or complication during their last childbirth was found highest in the *Sarail* area (39%) followed by *Kasba* (21%) and *Bijoynagar* (17%) reported by the mother's. The proportion of women with at least one medical emergency increased sharply in *Sarail* (from 11% to 39%) and whereas this proportion was sharply decreased among the women from *Bijoynagar* (from 32% to 17%). In *Kasba*, the situation was almost similar.

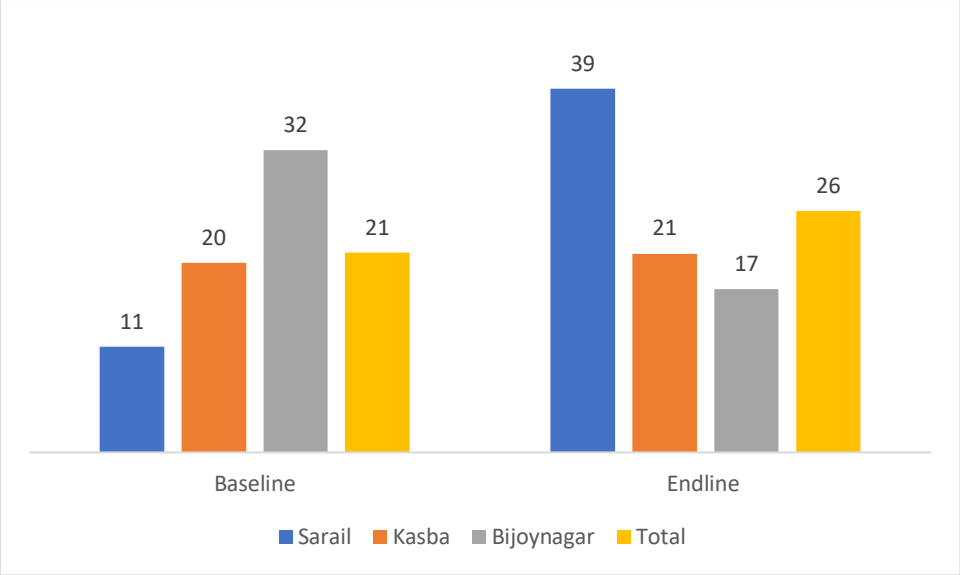


Figure 18: Percent distribution of women with less than 12 months old children who have reported at least one complication/medical emergencies during childbirth in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Figure 19 indicates the proportion of women who had this emergency and sought medical attention. As can be seen in **Figure 19**, *Sarail* (96 %) exhibits the greatest level of care-seeking for medical crises during the endline and the proportion of women who sought care increased overall in all three study areas compared to the baseline.

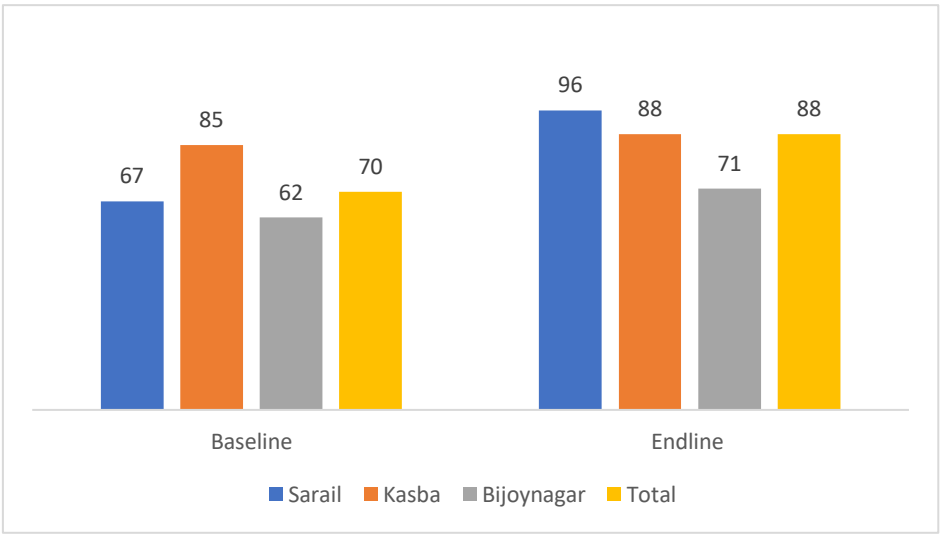


Figure 19: Percent distribution of women with less than 12 months old children who had at least one complication during childbirth according to the care seeking practice (seek care) for medical emergencies during the baseline (n=290) and the endline (n=428) survey, 2022

Table 37 shows the locations where women experiencing medical emergencies during childbirth went to seek medical attention. Private clinics were the primary provider of emergency treatment during the baseline in all three sub districts. Although there was a

decrease in the proportion of women among *Kasba* (87% vs. 76.9%) and *Sarail* (88.2% vs 53.7%) who reported taking care from private clinics during emergency while the proportion increased in *Bijoynagar* (68.1% vs. 73.5%); from baseline to the endline. *Kasba* had the greatest percentage of women who went to a private clinic in an emergency situation during childbirth of the three sub districts studied at the endline. Women staying at home rose in *Kasba* (3.9% vs 15.4%) and *Sarail* (0 % vs 26.3 %) but decreased in *Bijoynagar* during an emergency scenario (18.7% vs 5.9%).

Table 37: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during childbirth according to the care seeking practice (place) during baseline (n=202) and the endline (n=377) survey, 2022

	Baseline (2018)							Endline (2022)					
Indicators	DH/ MCWC	UHC	FWC	Private clinic	NGO	Home	Others	DH/ MCWC	UHC	FWC	Private clinic	NGO	Home
Age (women)													
15-19	8.0	0.0	0.0	80.0	0.0	12.0	0.0	1.3	1.3	5.2	64.9	6.5	20.8
20-24	5.5	1.4	4.1	74.0	0.0	13.7	1.4	4.0	2.4	3.2	63.2	9.6	17.6
25-29	3.6	1.8	1.8	85.5	1.8	5.5	0.0	2.0	4.1	2.0	67.4	6.1	18.4
30-34	13.3	3.3	0.0	73.3	0.0	10.0	0.0	6.1	4.1	0.0	67.4	2.0	20.4
35+	0.0	5.3	5.3	84.2	0.0	5.3	0.0	7.1	0.0	7.1	42.9	14.3	28.6
Education (women)													
No education	0.0	0.0	7.7	76.9	0.0	15.4	0.0	11.1	0.0	5.6	44.4	5.6	33.3
Partial incomplete	10.5	0.0	5.3	52.6	0.0	26.3	5.3	6.3	8.3	2.1	56.3	8.3	18.8
Primary complete[1]	3.4	6.9	6.9	75.9	0.0	6.9	0.0	2.3	2.3	1.1	53.9	6.7	33.7
Secondary incomplete	9.2	2.3	0.0	78.2	1.1	9.2	0.0	2.6	0.7	5.8	66.9	8.4	15.6
Secondary complete or higher[2]	1.9	0.0	1.9	90.7	0.0	5.6	0.0	2.9	4.4	0.0	79.4	5.9	7.4
Upazila													
Sarail	2.9	5.9	0.0	88.2	2.9	0.0	0.0	2.4	2.9	1.0	53.7	13.7	26.3
Kasba	5.2	2.6	1.3	87.0	0.0	3.9	0.0	4.8	1.9	1.0	76.9	0.0	15.4
Bijoynagar	7.7	0.0	4.4	68.1	0.0	18.7	1.1	4.4	2.9	13.2	73.5	0.0	5.9
Wealth quintile													
Lowest	7.1	0.0	3.6	67.9	3.6	14.3	3.6	4.4	2.2	1.1	57.1	8.8	26.4
Second	9.3	2.3	2.3	76.7	0.0	9.3	0.0	5.5	1.4	4.1	56.2	4.1	28.8
Middle	2.3	4.7	0.0	74.4	0.0	18.6	0.0	4.0	4.0	7.9	60.5	11.8	11.8
Fourth	2.4	0.0	7.3	85.4	0.0	4.9	0.0	1.4	4.2	1.4	68.1	5.6	19.4
Highest	8.5	2.1	0.0	85.1	0.0	4.3	0.0	1.5	1.5	1.5	80.0	6.2	9.2
Total	**5.9**	**2**	**2.5**	**78.7**	**0.5**	**9.9**	**0.5**	**3.5**	**2.7**	**3.2**	**63.7**	**7.4**	**19.6**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 38 lists the medical professional's women may turn to in case of an emergency during childbirth. Compared to the intervention areas more women from *Bijoynagar* (91.2%) sought care from medically trained providers. Only 58.1% of the women in *Sarail* sought medical

attention from medically trained providers for medical emergencies during the childbirth. Among the medically trained providers, qualified doctor was the major source for the women to seek care for emergencies. Among the three subdistricts *Kasba* (72.1%) had the highest, whereas *Sarail* (46.8%) had the lowest proportion of women who sought care for medical emergencies during childbirth.

Table 38: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during childbirth according to the care seeking practice (care provider) during the endline (n=377) survey, 2022

Indicators	Medically trained provider						Non medically trained provider				
	Qualified doctor	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	BRAC Shasthya Shebika/ Karmi	Trained TBA	Unqualified provider	Family / relative/ Neighbor/ friend	Total
Age (women)											
15-19	55.8	10.4	1.3	3.9	0.0	71.4	0.0	6.5	16.9	5.2	28.6
20-24	60.0	9.6	0.0	3.2	0.8	73.6	0.0	6.4	17.6	2.4	26.4
25-29	60.2	8.2	0.0	3.1	0.0	71.4	1.0	8.2	14.3	5.1	28.6
30-34	59.2	8.2	0.0	0.0	2.0	69.4	0.0	8.2	20.4	2.0	30.6
35+	42.9	3.6	0.0	10.7	0.0	57.1	0.0	7.1	35.7	0.0	42.9
Education (women)											
No education	33.3	5.6	0.0	0.0	5.6	44.5	0.0	11.1	38.9	5.6	55.6
Partial incomplete	54.2	6.3	0.0	4.2	0.0	64.6	2.1	8.3	18.8	6.3	35.4
Primary complete[1]	43.8	10.1	1.1	2.3	0.0	57.3	0.0	9.0	30.3	3.4	42.7
Secondary incomplete	60.4	9.1	0.0	5.2	0.7	75.3	0.0	7.1	14.9	2.6	24.7
Secondary complete or higher[2]	79.4	8.8	0.0	1.5	0.0	89.7	0.0	2.9	4.4	2.9	10.3
Upazila											
Sarail	46.8	9.3	0.0	1.5	0.5	58.1	0.5	11.7	23.4	6.3	42.0
Kasba	72.1	9.6	0.0	1.0	0.0	82.7	0.0	2.9	14.4	0.0	17.3
Bijoynagar	69.1	5.9	1.5	13.2	1.5	91.2	0.0	0.0	8.8	0.0	8.8
Wealth quintile											
Lowest	56.0	6.6	0.0	1.1	0.0	63.7	1.1	9.9	19.8	5.5	36.3
Second	54.8	4.1	0.0	1.4	1.4	61.6	0.0	9.6	27.4	1.4	38.4
Middle	50.0	9.2	1.3	9.2	1.3	71.1	0.0	5.3	22.4	1.3	29.0
Fourth	59.7	12.5	0.0	4.2	0.0	76.4	0.0	4.2	15.3	4.2	23.6
Highest	70.8	12.3	0.0	1.5	0.0	84.6	0.0	6.2	4.6	4.6	15.4
Total	**57.8**	**8.8**	**0.3**	**3.5**	**0.5**	**70.8**	**0.3**	**7.2**	**18.3**	**3.5**	**29.2**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Postnatal care (PNC) for women

Postnatal care (PNC) is a vital aspect of healthy pregnancy and new-born health. Postnatal exams allow for the evaluation and treatment of delivery concerns, as well as the counselling of mothers on how to care for themselves and their baby. A significant number of maternal and new-born fatalities occur during the first twenty-four hours after birth. Within twenty-four hours after birth, the World Health Organization (WHO) advises that mothers get a postnatal

health examination. Moreover, the first two days after birth are crucial for both mothers and infants.

Providers of postnatal care (PNC) for women

Table 39 offers a complete description of the PNC care received by women from all providers during both the baseline and endline periods. The percentage of women who did not obtain any PNC had declined dramatically from baseline to endline, with *Kasba* (38.6%) having the biggest proportion of women who didn't receive any PNC during the endline survey and *Sarail* (18.6%) had the lowest. In each of the three sub districts, the number of patients obtaining PNC care has climbed dramatically. In *Sarail*, the most of women get at least one PNC care visit (40.5%), while 33% get at least three PNC care visits. On the hand women who received at least 3 PNC was more in *Kasba* (39.5%) and *Bijoynagar* (41.1%). Women who delivered the baby through C-section, are more likely to take at least three PNCs, according to the study. Also at least three PNCs taken by women was found among majority of women with completed secondary or higher education (58%).

Table 39: Percent distribution of women with less than 12 months old children according to their status of PNC from any provider during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)				Endline (2022)			
Indicators	**None**	**1 PNC**	**2 PNC**	**>=3 PNC**	**None**	**1 PNC**	**2 PNC**	**>=3 PNC**
Age (women)								
15-19	92.4	3.8	1.5	2.3	24.6	28.9	6.8	39.6
20-24	87.4	5.8	3.6	3.2	31.8	24.2	5.8	38.2
25-29	91.1	4.2	2.9	1.8	32.2	22.8	4.6	40.4
30-34	92.1	3.3	2.8	1.9	29.2	32.2	5.2	33.5
35+	86.1	8.3	2.8	2.8	36.3	29.8	2.4	31.5
Education (women)								
No education	91.2	1.5	2.9	4.4	43.6	39.3	4.3	12.8
Partial incomplete	93.2	4.1	1.4	1.4	42.6	27.2	4.1	26.0
Primary complete[1]	93.9	2.6	1.7	1.7	29.4	36.6	4.9	29.1
Secondary incomplete	90.3	5.3	3.2	1.2	31.6	23.2	4.9	40.3
Secondary complete or higher[2]	81.8	8.4	4.5	5.2	18.2	16.0	7.8	58.0
Type of childbirth								
Normal or others	92.9	4.8	1.2	1.2	43.0	47.0	4.6	5.5
C-Section	79.4	8.1	6.3	6.3	9.6	2.8	3.1	84.5
Place of childbirth								
At home	94.4	3.4	1.5	0.7	37.5	30.2	3.6	28.8
Health center	81.5	7.6	5.4	5.4	14.9	11.8	6.4	66.9
Upazila								
Sarail	91.4	1.8	2.0	4.8	18.6	40.5	7.9	33.0

Kasba	97.3	1.1	1.1	0.4	38.6	17.3	4.6	39.5
Bijoynagar	80.0	11.9	5.9	2.2	34.8	20.7	3.4	41.1
Wealth quintile								
Lowest	95.3	1.1	2.6	1.1	26.1	32.6	7.9	33.4
Second	93.0	2.9	1.8	2.2	36.1	32.7	3.1	28.1
Middle	90.5	4.7	1.8	2.9	37.7	23.7	3.9	34.7
Fourth	87.5	7.0	4.4	1.1	27.8	22.5	4.8	44.9
Highest	81.3	9.2	4.4	5.1	25.8	19.5	6.9	47.9
Total	**89.5**	**5.0**	**3.0**	**2.5**	**30.7**	**26.2**	**5.3**	**37.8**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 40 shows details of the PNC care received by women from medically trained providers during both the baseline and endline periods. The proportion of women who received more than 3 PNC care from MTP was found highest among the women from *Bijoynagar* (39.5%) and the lowest among the women from *Sarail* (30.6%). The proportion of women who received at least 1 PNC care from MTP was found the highest among the women from *Kasba* (51.6%) and the lowest among the women from *Sarail* (35.5%). The highest increase in the PNC care (at least 3) received by the women from the MTP from baseline to endline was noticed among the women from *Bijoynagar* (38%) and the lowest among the women from *Sarail* (26%). But the proportion of women who took at least 1 PNC had increased in *Kasba* by 51.6% from baseline to endline.

Table 40: Percent distribution of women with less than 12 months old children according to their status of PNC from MTPs during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)					**Endline (2022)**				
	No PNC *	**1 PNC from MTP**	**2 PNC from MTP**	**≥3 PNC from MTP**	**At least 1 PNC from MTP**	**No PNC**	**1 PNC from MTP**	**2 PNC from MTP**	**≥3 PNC from MTP**	**At least 1 PNC from MTP**
Age (women)										
15-19	93.9	3.0	1.5	1.5	6	24.6	14.3	5.7	36.4	56.4
20-24	90.2	4.0	2.6	3.2	9.8	31.8	8.7	3.4	36.3	48.4
25-29	92.7	2.9	2.9	1.6	7.4	32.2	8.7	3.2	39.0	50.9
30-34	94.4	2.3	1.9	1.4	5.6	29.2	12.9	3.4	31.8	48.1
35+	89.8	6.5	1.9	1.9	10.3	36.3	8.1	2.4	30.7	41.2
Education (women)										
No education	94.9	0.0	2.2	2.9	5.1	43.6	7.7	1.7	11.1	20.5
Partial incomplete	95.2	2.7	0.7	1.4	4.8	42.6	6.5	1.8	24.3	32.6
Primary complete[1]	95.2	1.7	1.3	1.7	4.7	29.4	11.0	3.8	26.8	41.6
Secondary incomplete	93.0	3.3	2.6	1.1	7	31.6	11.6	3.3	38.0	52.9

Secondary complete or higher[2]	83.9	7.3	3.8	4.9	16	18.2	8.8	6.2	57.3	72.3
Type of childbirth										
Normal or others	97.4	1.5	0.7	0.3	2.5	43.0	15.6	2.1	3.0	20.7
C-Section	79.9	7.9	6.0	6.3	20.2	9.6	2.4	3.0	83.0	88.4
Place of childbirth										
At home	97.9	1.2	0.7	0.2	2.1	37.5	9.6	2.2	26.4	38.2
Health center	81.9	7.4	5.3	5.4	18.1	14.9	9.5	5.6	65.9	81
Upazila										
Sarail	92.1	1.5	1.8	4.6	7.9	18.6	9.0	3.8	30.6	43.4
Kasba	97.6	1.1	0.9	0.4	2.4	38.6	12.0	4.3	37.7	54
Bijoynagar	86.1	7.8	4.6	1.5	13.9	34.8	9.6	2.9	39.5	52
Wealth quintile										
Lowest	97.4	0.4	1.5	0.7	2.6	26.1	14.7	4.7	31.4	50.8
Second	96.0	1.1	1.1	1.8	4	36.1	8.0	1.5	26.0	35.5
Middle	92.0	3.6	1.8	2.6	8	37.7	8.1	2.7	32.3	43.1
Fourth	90.8	4.8	3.7	0.7	9.2	27.8	9.6	3.6	43.1	56.3
Highest	83.2	7.7	4.0	5.1	16.8	25.8	10.5	5.7	46.7	62.9
Total	**91.9**	**3.5**	**2.4**	**2.2**	**8.1**	**30.7**	**10.2**	**3.7**	**35.9**	**49.8**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.
*No PNC includes No PNC and PNC from non-medically trained provider.

Table 41 shows details of the type of provider for the first PNC among women during the endline period. Half of the women from both *Kasba* and *Bijoynagar* received their PNC from medically trained providers. In all the sub districts qualified doctors were seen providing most PNC care to women among the medically trained providers followed by the nurse/midwife. Qualified doctors providing PNC care to women was found highest among the women from *Kasba* (40.2%) and lowest among the women from *Bijoynagar* (35.9%). In *Sarail* it was found that 38% women took their first PNC from non-medically trained providers which was the highest among the three subdistricts.

Table 41: Percent distribution of women with less than 12 months old children according to the type of provider for the first PNC during the endline (n=1,670) survey, 2022

	Endline (2022)											
	Medically trained provider (MTP)						**Non medically trained provider**					**No PNC**
	Qualified doctor	**Nurse / Midwife**	**Paramedic/ MA/ SACMO**	**FWV**	**CSBA/ HA/ FWA**	**Total**	**BRAC Shasthya Shebika/ Karmi**	**Trained TBA**	**Unqualified provider**	**Family/ relative/ Neighbor/ friend**	**Total**	
Age (women)												
15-19	40.7	12.1	0.7	2.9	0.0	56.4	0.4	4.6	12.9	1.1	18.9	24.6
20-24	37.7	8.1	0.0	2.3	0.3	48.4	0.7	7.1	11.8	0.3	19.8	31.8

	Endline (2022)											
	Medically trained provider (MTP)						Non medically trained provider					No PNC
	Qualified doctor	Nurse / Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	BRAC Shasthya Shebika/ Karmi	Trained TBA	Unqualified provider	Family/ relative/ Neighbor/ friend	Total	
25-29	39.5	9.9	0.0	1.2	0.2	50.9	0.5	3.2	12.8	0.5	16.9	32.2
30-34	33.9	9.9	0.4	3.0	0.9	48.1	0.9	6.0	14.6	1.3	22.8	29.2
35+	30.7	8.1	0.0	2.4	0.0	41.1	0.0	4.8	17.7	0.0	22.6	36.3
Education (women)												
No education	10.3	8.6	0.0	0.9	0.9	20.5	0.9	6.0	27.4	1.7	35.9	43.6
Partial incomplete	24.3	6.5	0.0	1.8	0.0	32.6	1.2	6.5	16.6	0.6	24.9	42.6
Primary complete[1]	29.1	9.8	0.3	1.7	0.6	41.5	0.6	7.8	19.3	1.4	29.1	29.4
Secondary incomplete	40.1	9.5	0.3	2.9	0.1	52.9	0.3	4.7	10.3	0.3	15.5	31.6
Secondary complete or higher[2]	59.0	11.1	0.0	2.0	0.3	72.3	0.7	3.6	5.2	0.0	9.4	18.2
Upazila												
Sarail	36.8	5.4	0.0	1.1	0.2	43.4	1.4	8.7	26.7	1.3	38.0	18.6
Kasba	40.2	12.1	0.0	1.6	0.0	53.9	0.2	1.6	5.5	0.2	7.5	38.6
Bijoynagar	35.9	10.8	0.5	4.0	0.7	51.9	0.0	6.0	7.0	0.4	13.3	34.8
Wealth quintile												
Lowest	38.1	10.0	0.0	2.6	0.0	50.7	0.3	5.9	16.1	0.9	23.2	26.1
Second	26.6	7.3	0.6	0.6	0.3	35.5	1.2	7.3	18.4	1.5	28.4	36.1
Middle	29.6	9.6	0.3	3.3	0.3	43.1	0.6	5.7	12.6	0.3	19.2	37.7
Fourth	47.0	7.5	0.0	1.2	0.6	56.3	0.0	4.2	11.4	0.3	15.9	27.8
Highest	46.4	12.9	0.0	3.3	0.3	62.9	0.6	3.9	6.9	0.0	11.4	25.8
Total	**37.6**	**9.5**	**0.2**	**2.2**	**0.3**	**49.8**	**0.5**	**5.4**	**13.1**	**0.6**	**19.6**	**30.7**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Timing of the first PNC visit for women.

For women who had recently given birth, the date of their first postnatal care visit is shown in **Table 42.** Among the three surveyed sub districts, *Sarail* had the largest percentage of women receiving PNC care within 0-24 hours following birth (80.9 %). In *Bijoynagar* (64.3%), the percentage was higher than the women from *Kasba* (52.3%). Women taking PNC from health facilities was found highest within 24 hours after the delivery (80.8%). Also, women who underwent caesarean section, the PNC was found highest within 24 hours after the delivery (84.5%).

Table 42: Percent distribution of women with less than 12 months old children according to the timing of the first PNC (from any providers) during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)					Endline (2022)				
	No PNC	**0-24hrs**	**25-48hrs**	**49-72hrs**	**72hrs +**	**No PNC**	**0-24hrs**	**25-48hrs**	**49-72hrs**	**72hrs +**
Age (women)										
15-19	92.4	5.3	1.5	0	0.8	24.6	70.7	1.1	0.4	3.2
20-24	87.9	8.1	0.6	0.6	2.8	31.8	64.8	0.3	0.2	2.9
25-29	90.8	5	0.3	1.8	2.1	32.2	64.7	0.5	0.2	2.4
30-34	92.6	4.2	0.5	0.5	2.3	29.2	67.0	0.0	0.4	3.4
35+	85.2	8.3	0.9	1.9	3.7	36.3	61.3	0.0	0.0	2.4
Education (women)										
No education	91.2	5.8	1.5	0	1.5	43.6	51.3	0.9	0.9	3.4
Partial incomplete	93.2	4.1	0.7	0.7	1.4	42.6	55.6	0.0	0.6	1.2
Primary complete[1]	93.4	3.5	0.4	0.4	2.2	29.4	68.6	0.6	0.0	1.4
Secondary incomplete	91	5.4	0.4	1.2	1.9	31.6	64.3	0.4	0.3	3.4
Secondary complete[2] or higher	81.5	11.9	0.7	1.4	4.5	18.2	77.5	0.3	0.0	3.9
Type of childbirth										
Normal or others	94.5	2.2	0.6	0.2	2.4	43.0	55.1	0.1	0.6	1.2
C-Section	79.2	15.3	0.5	2.5	2.5	9.6	84.5	0.2	0.0	5.7
Place of childbirth										
At Home	94.7	2.0	0.7	0.2	2.4	37.5	57.8	0.4	0.5	3.8
Health Center	81.3	13.6	0.4	2.1	2.5	14.9	80.8	0.5	0.0	3.9
Upazila										
Sarail	91.4	7.3	0.4	0.0	0.9	18.6	80.9	0.2	0.4	0.0
Kasba	97.6	1.5	0.0	0.0	0.9	38.6	52.3	0.4	0.2	8.6
Bijoynagar	80.3	10.2	1.3	2.8	5.4	34.8	64.3	0.7	0.2	0.0
Wealth quintile										
Lowest	95.3	2.6	0.4	0.0	1.8	26.1	69.8	0.3	0.3	3.5
Second	93.0	4.4	0.7	0.4	1.5	36.1	59.6	0.6	0.3	3.4
Middle	90.1	6.9	0.0	0.7	2.2	37.7	59.3	0.0	0.0	3.0
Fourth	88.3	5.9	1.5	1.5	2.9	27.8	68.9	1.2	0.3	1.8
Highest	81.7	12.1	0.4	2.2	3.7	25.8	71.3	0.0	0.3	2.7
Total	**89.7**	**6.4**	**0.6**	**1.0**	**2.4**	**30.7**	**65.8**	**0.4**	**0.2**	**2.9**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

As shown in **Table 43,** the first PNC visit was conducted by a medically trained provider. In all the surveyed sub districts most of the women took first PNC from medically trained provider within 24 hours of the delivery of the new-born. In *Kasba* (38.6%) the proportion of women not taking PNC from a MTP was the highest among the 3 subdistricts However, the percentage of women who did not take PNC from MTP at baseline had decreased significantly during the endline. The PNC obtained within 24 hours after delivery, from MTP shows an improvement of 35.8%, 45.5%, and 43.9% among the women from *Sarail*, *Kasba*, and *Bijoynagar* correspondingly.

Table 43: Percent distribution of women with less than 12 months old children according to the timing of the first PNC (from MTPs) during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)					Endline (2022)				
	No PNC*	PNC from MTP 0-24hrs	PNC from MTP 25-48hrs	PNC from MTP 49-72hrs	PNC from MTP 72hrs+	No PNC	PNC from MTP 0-24hrs	PNC from MTP 25-48hrs	PNC from MTP 49-72hrs	PNC from MTP 72hrs+
Age (women)										
15-19	93.9	4.5	0.8	0.0	0.8	24.6	52.9	1.1	0.4	2.1
20-24	90.2	7.4	0.2	0.6	1.7	31.8	46.0	0.2	0.2	2.1
25-29	92.7	4.2	0.3	1.6	1.3	32.2	48.7	0.2	0.0	1.9
30-34	94.4	3.7	0.0	0.5	1.4	29.2	45.5	0.0	0.0	2.6
35+	89.8	5.6	0.0	1.9	2.8	36.3	38.7	0.0	0.0	2.4
Education (women)										
No education	94.9	4.4	0.7	0.0	0.0	43.6	18.0	0.9	0.0	1.7
Partial incomplete	95.2	3.4	0.0	0.7	0.7	42.6	32.0	0.0	0.0	0.6
Primary complete[1]	95.2	2.6	0.0	0.4	1.7	29.4	40.1	0.3	0.0	1.2
Secondary incomplete	93.0	5.1	0.2	1.1	0.7	31.6	49.9	0.3	0.3	2.5
Secondary complete[2] or higher	83.9	10.1	0.3	1.4	4.2	18.2	68.4	0.3	0.0	3.6
Type of childbirth										
Normal or others	97.4	1.2	0.2	0.1	1.1	43.0	19.3	0.1	0.3	1.0
C-Section	79.9	14.8	0.2	2.5	2.5	9.6	83.9	0.2	0.0	4.3
Place of childbirth										
At Home	97.9	0.8	0.2	0.1	0.9	37.5	35.1	0.1	0.3	2.8
Health Center	81.9	13.2	0.2	2.1	2.5	14.9	77.7	0.5	0.0	2.8
Upazila										
Sarail	92.1	7.3	0.4	0.0	0.2	18.6	43.1	0.2	0.2	0.0
Kasba	97.6	1.5	0.0	0.0	0.9	38.6	47.0	0.4	0.2	6.4
Bijoynagar	86.1	7.6	0.2	2.6	3.5	34.8	51.5	0.4	0.0	0.0
Wealth quintile										
Lowest	97.4	1.8	0.4	0.0	0.4	26.1	48.4	0.0	0.0	2.4
Second	96.0	3.3	0.0	0.4	0.4	36.1	32.4	0.6	0.0	2.5
Middle	92.0	5.8	0.0	0.7	1.5	37.7	41.0	0.0	0.0	2.1
Fourth	90.8	4.8	0.4	1.5	2.6	27.8	53.6	0.9	0.3	1.5
Highest	83.2	11.7	0.4	1.8	2.9	25.8	60.2	0.0	0.3	2.4
Total	**91.9**	**5.5**	**0.2**	**0.9**	**1.5**	**30.7**	**47.2**	**0.3**	**0.1**	**2.2**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.
*No PNC includes No PNC and and PNC from non-medically trained provider.

Places of postnatal care (PNC) for women

Table 44 represents the place for the first PNC among women with recent childbirth. In the event of first PNC, the private clinic was the major source of treatment in all three sub districts, with *Sarail* (45.8%) having the lowest percentage of women who sought aid from the private clinic. *Sarail* (44%) has a far higher percentage of women who stayed at home during the post-

natal period than the other sub districts. Considering the number of women who had received at least one PNC as denominator, the percentages are provided in annex (see Table 88).

Table 44: Percent distribution of women with less than 12 months old children according to the place of the first PNC for women during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)							Endline (2022)							
	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Public CC	Private clinic	NGO	Home	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Public CC	Private clinic	NGO	Home	No PNC for mothers
Age (women)															
15-19	1.5	0.0	0.0	0.0	4.5	0.0	1.5	1.8	1.1	3.9	0.0	47.5	1.8	19.3	24.6
20-24	0.9	0.0	0.0	0.0	9.4	0.0	1.7	2.4	0.5	2.4	0.0	41.6	2.4	18.9	31.8
25-29	1.0	0.0	0.0	0.0	7.1	0.0	1.0	2.4	1.5	1.5	0.0	43.8	1.0	17.7	32.2
30-34	0.5	0.0	0.0	0.0	4.7	0.0	2.3	1.3	0.9	3.4	0.0	39.9	0.9	24.5	29.2
35+	0.0	0.0	0.9	0.0	11.1	0.0	2.8	1.6	0.8	2.4	0.0	36.3	3.2	19.4	36.3
Education (women)															.
No education	0.7	0.0	0.0	0.0	5.8	0.0	2.2	1.7	0.0	0.9	0.0	18.0	2.6	33.3	43.6
Partial incomplete	0.7	0.0	0.7	0.0	3.4	0.0	2.1	2.4	2.4	1.2	0.0	24.9	2.4	24.3	42.6
Primary complete[1]	0.0	0.0	0.0	0.0	4.8	0.0	1.7	2.0	2.0	1.4	0.0	34.3	1.7	29.1	29.4
Secondary incomplete	0.5	0.0	0.0	0.0	6.9	0.0	1.6	1.4	0.3	4.1	0.0	45.8	1.6	15.2	31.6
Secondary complete[2] or higher	2.4	0.0	0.0	0.0	14.7	0.0	1.4	3.9	0.7	1.6	0.0	63.2	1.6	10.8	18.2
Upazila															.
Sarail	0.4	0.0	0.0	0.0	7.3	0.0	0.9	1.4	1.1	0.5	0.0	37.3	5.2	35.9	18.6
Kasba	0.9	0.0	0.0	0.0	1.3	0.0	0.2	2.9	1.1	1.8	0.0	47.1	0.2	8.4	38.6
Bijoynagar	1.3	0.0	0.2	0.0	14.3	0.0	3.9	2.0	0.5	5.4	0.0	43.1	0.0	14.2	34.8
Wealth quintile															.
Lowest	0.7	0.0	0.0	0.0	2.6	0.0	1.5	1.5	2.1	2.9	0.0	40.8	2.4	24.3	26.1
Second	0.4	0.0	0.4	0.0	4.0	0.0	2.2	2.5	0.3	1.8	0.0	30.9	1.5	26.9	36.1
Middle	0.4	0.0	0.0	0.0	8.8	0.0	0.7	2.1	0.9	3.3	0.0	35.3	1.8	18.9	37.7
Fourth	0.7	0.0	0.0	0.0	8.4	0.0	2.6	2.1	0.3	1.2	0.0	50.6	1.8	16.2	27.8
Highest	2.2	0.0	0.0	0.0	14.7	0.0	1.5	2.4	0.9	3.6	0.0	54.8	1.5	11.1	25.8
Total	**0.9**	**0.0**	**0.1**	**0.0**	**7.7**	**0.0**	**1.7**	**2.1**	**0.9**	**2.6**	**0.0**	**42.5**	**1.8**	**19.5**	**30.7**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Knowledge regarding danger signs related to post-natal period among women and their husbands.

Table 45 displays understanding of postnatal period danger signs among women from the baseline to the endline. Overall, about 5 in 10 women were able to report 1-2 of the danger signs in all the subdistricts. The number of women reporting at least three danger signs fell by

33.4% from the baseline to the endline in *Bijoynagar*. On the other hand, the intervention subdistricts, *Kasba* and *Sarail* had decreased of 0.9% and 18%, respectively.

Table 45:Percent distribution of women with less than 12 months old children according to the knowledge regarding danger signs related to post-natal period in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)			Endline (2022)		
	0	**1 and 2**	**3 or more**	**0***	**1 and 2**	**3 or more**
Age (women)						
15-19	6.8	54.5	38.6	45.0	43.6	11.4
20-24	6.8	55.7	37.5	33.1	51.8	15.2
25-29	3.4	55.8	40.8	26.4	51.8	21.8
30-34	5.1	62.8	32.1	26.2	52.4	21.5
35+	3.7	54.6	41.7	25.8	56.5	17.7
Education (women)						
No education	4.4	60.6	35.0	50.4	45.3	4.3
Partial incomplete	6.8	56.2	37.0	38.5	51.5	10.1
Primary complete[1]	4.8	58.1	37.1	37.8	51.0	11.2
Secondary incomplete	6.5	54.8	38.7	29.6	51.2	19.2
Secondary complete[2] or higher	3.1	57.3	39.5	20.2	51.5	28.3
Upazila						
Sarail	1.5	59.7	38.8	44.0	45.2	10.8
Kasba	10.4	60.8	28.8	18.8	53.4	27.9
Bijoynagar	4.1	49.5	46.4	33.2	53.9	13.0
Wealth quintile						
Lowest	4.7	56.6	38.7	26.4	55.1	18.5
Second	6.6	57.5	35.9	42.2	43.1	14.7
Middle	7.3	59.9	32.8	32.0	52.7	15.3
Fourth	5.1	56.8	38.1	29.9	51.8	18.3
Highest	2.9	52.4	44.7	29.3	51.2	19.5
Total	**5.3**	**56.6**	**38.0**	**31.9**	**50.8**	**17.3**

*Includes do not know/ cannot remember.
[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

During the baseline and the endline, the husband's understanding of the danger signals of the postnatal period is shown in **Table 46.** *Kasba* (12.4%) had the highest percentage of husbands who were able to report at least three of the postnatal period risk signs. *Sarail* had the lowest proportion (2.7%). Most of the spouses in the three subdistricts claimed that they were unaware of or unable to recall the warning signs of the postnatal period. From the baseline to the endline in *Bijoynagar*, the percentage of spouses reporting at least three danger signs decreased by

41.4%. A fall of 14.4% was recorded in *Kasba*, while a decrease of 30.9% was recorded in *Sarail*, among the husbands.

Table 46: Percent distribution of husbands of women with less than 12 months old children according to their (husbands) knowledge regarding danger signs related to post-natal period in the baseline (n=701) and the endline (n=1,650) survey, 2022

	Baseline (2018)			Endline (2022)		
	0	**1 and 2**	**3 or more**	**0***	**1 and 2**	**3 or more**
Age (husbands)						
15-19	33.3	33.3	33.3	60.0	40.0	0.0
20-24	6.2	50.8	43.1	57.7	35.1	7.1
25-29	5.5	56.1	38.4	57.2	34.9	7.9
30-34	9.8	54.6	35.6	58.2	36.1	5.7
35-39	8.7	58.7	32.6	49.7	43.7	6.6
40-44	7.9	52.6	39.5	49.7	41.9	8.4
45+	4.9	49.2	45.9	52.5	40.3	7.2
Education (husbands)						
No education	8.1	57.5	34.4	74.4	24.7	0.9
Partial incomplete	8.0	52.9	39.1	56.5	37.5	6.0
Primary complete[1]	9.4	52.8	37.8	56.1	37.3	6.7
Secondary incomplete	2.9	60.6	36.5	48.5	44.0	7.5
Secondary complete[2] or higher	12.3	45.3	42.5	36.7	48.4	15.0
Upazila						
Sarail	5.3	61.1	33.6	68.6	28.7	2.7
Kasba	19.0	54.2	26.8	44.2	43.5	12.4
Bijoynagar	3.8	49.0	47.2	51.8	42.4	5.8
Wealth quintile						
Lowest	9.3	52.7	38.0	46.7	46.1	7.3
Second	6.7	56.4	37.0	67.3	28.2	4.5
Middle	6.6	57.7	35.8	59.3	36.1	4.6
Fourth	4.9	58.3	36.9	51.8	40.0	8.2
Highest	11.0	47.3	41.8	49.1	40.6	10.3
Total	**7.7**	**54.6**	**37.7**	**54.9**	**38.2**	**7.0**

*Includes do not know/ cannot remember

1 Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Medical emergencies during post-natal and care seeking practices.

When the mother is healthy, she is able to provide the best care for the baby. As part of the survey, we asked women if they had ever experienced any of the following symptoms after giving birth: blurred vision, severe headache, convulsions/eclampsia/unconsciousness, high blood pressure, excessive bleeding, retention of the placenta, foul-smelling discharge with fever, or oedema of the hand/foot/body after giving birth, to understand about their practice for care seeking in emergency situation.

Overall, 17% of the women experienced at least one medical emergencies or complication during their post-natal period in the endline which was same as the baseline **(Figure 20).** The proportion of women reported to have suffered from at least one problem or complication during their last pregnancy was found highest among the women from *Kasba* area (20%) followed by *Sarail* (17%) and *Bijoynagar* (14%). The proportion of women with at least one medical emergency decreased in *Kasba* whereas this proportion was increased in *Sarail*.

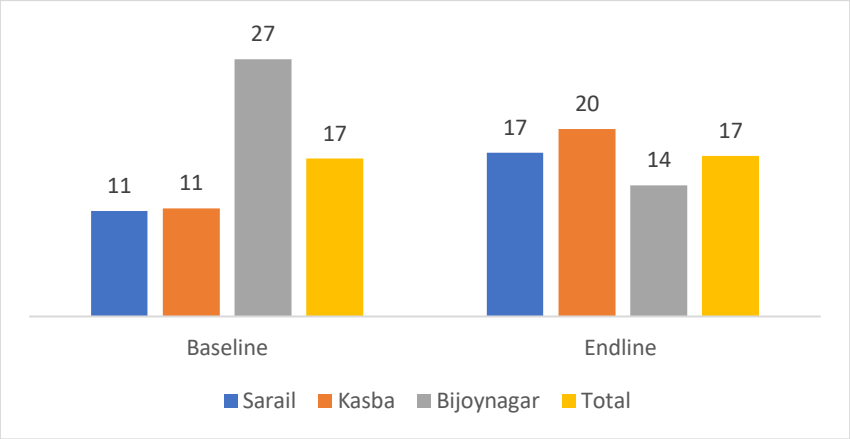


Figure 20: Percent distribution of women with less than 12 months old children who have reported at least one complication/medical emergencies during post-natal period in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Figure 21 displays how women in the three subdistricts handle emergency situations in the post-natal period. Out of the 281 women experiencing medical emergencies during pregnancy, 224 (80%) sought treatment from a health care provider which is higher compared to the baseline (65%). In general, the women of the *Sarail* area sought health care for post-natal complications in the highest proportions compared to those who resided in *Kasba* and *Bijoynagar* areas.

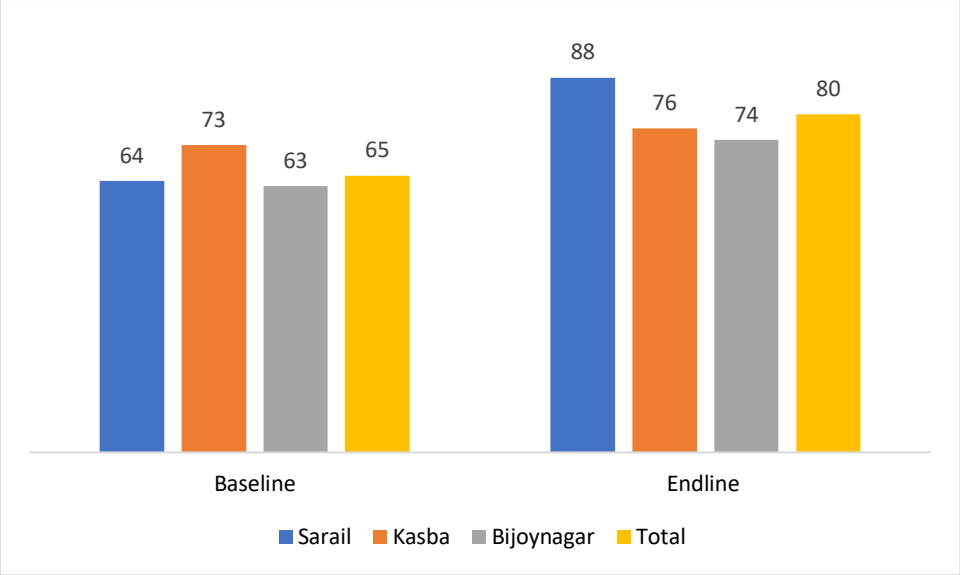


Figure 21: Percent distribution of women with less than 12 months old children who had at least one complication during pregnancy according to the care seeking practice (seek care) for medical emergencies during the baseline (n=147) and the endline (n=224) survey, 2022

Table 47 represents the care seeking practice among the women in the survey subdistricts during the postpartum period in case of any emergencies. In the event of a mother's postpartum emergency, the private clinic was the major source of treatment in all three sub districts, with *Kasba* (73.8%) having the lowest percentage of women who sought aid from the private clinic. *Bijoynagar* (8.9%) had the lowest percentage of women staying at home during an emergency scenario than the other sub districts. Considering all respondents (n=1,670), only 10.4% women sought care for medical emergencies from private clinic during post-natal period in the endline (see annex **Table 89**).

Table 47: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during post-natal period according to the care seeking practice (place) during baseline (n=147) and the endline (n=224) survey, 2022

	Baseline (2018)							Endline (2022)						
	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Private clinic	NGO	Home	Others	Public-DH/ MCWC	Public-UHC	Public – UH& FWC	Private clinic	NGO	Home	Others (CC)
Age (women)														
15-19	11.8	0.0	0.0	82.4	5.9	0.0	11.8	2.9	0.0	8.8	70.6	2.9	14.7	0.0
20-24	4.2	0.0	2.1	75.0	16.7	2.1	4.2	6.3	0.0	5.1	76.0	3.8	6.3	2.5
25-29	5.0	5.0	2.5	75.0	12.5	0.0	5.0	0.0	1.7	1.7	83.1	0.0	11.9	1.7
30-34	3.8	0.0	0.0	92.3	3.8	0.0	3.8	2.7	2.7	2.7	78.4	0.0	13.5	0.0
35+	6.3	0.0	6.3	75.0	12.5	0.0	6.3	0.0	0.0	0.0	85.7	0.0	7.1	7.1
Education (women)														
No education	10.0	0.0	10.0	70.0	10.0	0.0	10.0	0.0	0.0	6.7	80.0	0.0	6.7	6.7
Partial incomplete	5.9	0.0	5.9	76.5	5.9	5.9	5.9	4.8	0.0	4.8	61.9	4.8	23.8	0.0
Primary complete[1]	0.0	3.4	3.4	79.3	13.8	0.0	0.0	2.5	0.0	0.0	70.0	5.0	20.0	2.5

	Baseline (2018)							Endline (2022)						
	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Private clinic	NGO	Home	Others	Public-DH/ MCWC	Public-UHC	Public – UH& FWC	Private clinic	NGO	Home	Others (CC)
Secondary incomplete	6.7	1.7	0.0	80.0	11.7	0.0	6.7	2.0	1.0	6.1	82.7	1.0	5.1	2.0
Secondary complete[2] or higher	6.5	0.0	0.0	80.6	12.9	0.0	6.5	6.1	2.0	2.0	81.6	0.0	8.2	0.0
Upazila														
Sarail	6.3	3.1	0.0	90.6	0.0	0.0	6.3	1.2	1.2	1.2	80.7	4.8	10.8	0.0
Kasba	10.8	2.7	2.7	78.4	5.4	0.0	10.8	6.0	1.2	3.6	73.8	0.0	10.7	4.8
Bijoynagar	2.6	0	2.6	74.4	19.2	1.3	2.6	1.8	0.0	8.9	80.4	0.0	8.9	0.0
Wealth quintile														
Lowest	6.9	0.0	3.4	72.4	13.8	3.4	6.9	0.0	0.0	6.7	73.3	2.2	17.8	0.0
Second	8.0	0.0	0.0	84.0	8.0	0.0	8.0	9.8	0.0	4.9	61.0	2.4	14.6	7.3
Middle	0.0	6.7	0.0	73.3	20.0	0.0	0.0	2.4	0.0	2.4	90.2	0.0	2.4	2.4
Fourth	0.0	0.0	5.9	82.4	11.8	0.0	0.0	2.0	2.0	2.0	82.4	3.9	7.8	0.0
Highest	13.8	0.0	0.0	82.8	3.4	0.0	13.8	2.2	2.2	4.4	82.2	0.0	8.9	0.0
Total	**5.4**	**1.4**	**2**	**78.9**	**11.6**	**0.7**	**5.4**	**3.1**	**0.9**	**4.0**	**78.0**	**1.8**	**10.3**	**1.8**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 48 indicates the provider from whom the women sought treatment for medical emergencies during postpartum period. During the emergency time, women who sought care from medically qualified providers was the greatest across the 3 studied sub-districts, in comparison to the non-medically trained providers. Among women seeking treatment from medically trained providers, the care seeking from qualified physicians was the primary percentage, with women from *Sarail* (67.5%) being the greatest. About one third of the women in the 3 sub districts sought care from non-medically trained providers during medical emergency. Considering all respondents (n=1,670), only 9.3% women sought care for medical emergencies from MTPs during post-natal period in the endline (see annex **Table 90**).

Table 48: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during post-natal period according to the care seeking practice (care providers) during the endline (n=224) survey, 2022

	Medically trained provider (MTP)						Non-medically trained provider			
	MBBS doctor	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	Trained TBA	Unqualified provider	Family/ relative/ Neighbour/ friend	Total
Age (women)										
15-19	61.8	8.8	0.0	5.9	2.9	**79.4**	5.9	14.7	0.0	**20.6**
20-24	62.0	2.5	0.0	2.5	1.3	**68.4**	1.3	29.1	1.3	**31.7**
25-29	62.7	5.1	0.0	1.7	0.0	**69.5**	0.0	30.5	0.0	**30.5**
30-34	62.2	0.0	2.7	0.0	0.0	**64.9**	0.0	35.1	0.0	**35.1**
35+	71.4	0.0	0.0	0.0	0.0	**71.4**	0.0	28.6	0.0	**28.6**

	Medically trained provider (MTP)						Non-medically trained provider			
	MBBS doctor	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	Trained TBA	Unqualified provider	Family/ relative/ Neighbour/ friend	Total
Education (women)										
No education	53.3	0.0	0.0	0.0	6.7	**60.0**	0.0	40.0	0.0	**40.0**
Partial incomplete	47.6	0.0	4.8	0.0	0.0	**52.4**	4.8	42.9	0.0	**47.6**
Primary complete[1]	42.5	2.5	0.0	0.0	0.0	**45.0**	2.5	52.5	0.0	**55.0**
Secondary incomplete	67.4	6.1	0.0	5.1	0.0	**78.6**	1.0	19.4	1.0	**21.4**
Secondary complete[2] or higher	79.6	2.0	0.0	0.0	2.0	**83.7**	0.0	16.3	0.0	**16.3**
Upazila										
Sarail	67.5	1.2	0.0	0.0	1.2	**69.9**	3.6	25.3	1.2	**30.1**
Kasba	61.9	4.8	1.2	2.4	0.0	**70.2**	0.0	29.8	0.0	**29.8**
Bijoynagar	57.1	5.4	0.0	5.4	1.8	**69.7**	0.0	30.4	0.0	**30.4**
Wealth quintile										
Lowest	51.1	4.4	2.2	4.4	0.0	**62.2**	4.4	33.3	0.0	**37.8**
Second	56.1	0.0	0.0	2.4	2.4	**61.0**	0.0	39.0	0.0	**39.0**
Middle	56.1	4.9	0.0	2.4	0.0	**63.4**	0.0	34.2	2.4	**36.6**
Fourth	72.6	2.0	0.0	0.0	2.0	**76.5**	2.0	21.6	0.0	**23.5**
Highest	75.6	6.7	0.0	2.2	0.0	**84.5**	0.0	15.6	0.0	**15.6**
Total	**62.8**	**3.6**	**0.5**	**2.2**	**0.9**	**70.0**	**1.4**	**28.3**	**0.5**	**30.1**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Results (4): Knowledge, awareness, Capacity, and utilization of newborn and child Health

Key findings

Postnatal care (PNC) for newborn

- Overall, 67.2% of the babies received at least one PNC after birth. The highest PNC visits among the new-borns were found in *Sarail* (82.5%) and the lowest was found in *Kasba* (40.2%).
- MTP was responsible for the majority of PNC care among the newborn who had their PNC visits. In *Sarail,* non-medically trained practitioner conducted over half of all PNC visits.
- Among the three subdistricts, the *Kasba* (59.8%) had the highest percentage of babies without PNC visits. However, this proportion had decreased by 35.6% from the baseline to the endline. The PNC visits for the newborn occurred during the first 24 hours.
- Throughout the endline, the proportion of PNC visits for the new-borns had increased in all sub districts. During endline, there was an increase of 36.6%, 30.3% and 42.9% in private clinic usages for PNC visit in *Sarail*, *Kasba* and *Bijoynagar*, respectively from baseline.
- Overall, 9 out of 10 children were ever breastfed reported by the mothers. The highest proportion was among *Sarail* (96.4%) and the lowest from *Bijoynagar* (86%). Overall, 89.2% of the children were provided with colostrum by the mother. However, 33.4% of the babies were given prelacteal feeding and overall, 48.3% of the babies were given additional food or drinks with in the six months of their birth.
- The most common foods or drinks provided to the children 24 hours before the survey were breastmilk (97.2%), plain water (38.2%), infant formula (17.2%) and thin semolina or suji (12.2%). The proportion of infant formula offered to the children was highest among the children from the *Sarail* (18.3%). Besides, about 1 in 10 children were provided vitamin or medicine syrup in the last 24 hours prior to the interview.

- The most common source of information regarding breastfeeding or supplementary feeding were heard by the mothers from the neighbours (48.8%), followed by doctor, healthcare provider, or nurse (38%).
- Formula milk was provided to 8.7% of the infants within 30 days of life. Overall, 15.1% of the children < 1 years consumed iron drops or tablets, including Monimix or any other sprinkles, 24 hours prior to the interview.

Cord care

- Most common form of instrument used to cut the cord was blade (not from delivery kit) and the highest reported use of blade was found in the *Sarail* (46.9%). About 48.9% mothers were not aware of what instruments were used to cut their babies cord.
- In most of the cases, nothing (47.8%) was applied to the cord after cutting it among the non-institutional births.

Newborn care practices: Timing of first bath

- Overall, most of the newborn were bathed after the first 72 hours of their birth (47.6%), which is the recommended practice in Bangladesh.

Essential newborn care

- Cords were cut using a safe delivery kit or boiling blade in 76.1% of deliveries. About 55% of mothers in each subdistrict said that neither anything nor only chlorhexidine was administered to the newborn's cords after they were cut. Among all the sub districts, newborn's who had all the essential newborn care was next to nil.

Danger signs related to newborn

- Overall, 47.1% women knew about at least 3 danger signs related to newborn during endline, which was 13% more than the baseline. However, knowledge related to danger sign of neonate among husbands reduces from baseline to endline. Most of the husbands (40.5%) knew about 1 - 2 signs during endline, which was 62.2% during the baseline.

Medical emergencies of neonates during childbirth and care seeking practices

- The newborn experienced at least one medical emergencies or complication during childbirth in the endline which was slightly higher than the baseline (baseline: 50.0% vs. endline: 55.0%).
- The proportion of women who reported that their newborn suffered from at least one medical emergency during childbirth, increased in all three study areas during endline compared to baseline.

- In general, the proportion of women from all three study areas who sought health care for their neonate medical emergencies increased in the endline compared to the baseline. Majority (9 out of 10) of the mothers reported in the sub districts getting neonatal emergency care from a private facility.
- *Sarail* (72.4%) and *Bijoynagar* (70.1%) had the highest percentages of neonates seeking treatment from non-medically trained providers reported by the women. Whereas in *Kasba*, the majority of women (54.0%) sought emergency neonatal care from a qualified doctor at the endline.

Vaccination status of the children

- Overall, 83% of children aging less than 1 year received at least one dose of any kind of vaccines. Among vaccinated children 47% had the vaccine cards, proportion was highest in *Bijoynagar* (63%) and lowest in *Sarail* (18%).

The basic characteristics of the enrolled 2,184 infants and child below the age of 1 year is given in **Table 49**. Out of 2,184 enrolled infants and children, 1,151 (52.7%) were males, and the majority (51.2%) were aged between 28 days to 6 months. Among the enrolled infants and children only 7.5% were new-borns, i.e., age <28 days.

Table 49: Basic characteristics of less than 12 months old children enrolled in the endline survey (n=2,184), 2022

	Endline (2022)			
Characteristics	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
Child age categories	n=721	n=725	n=738	n=2,184
<28 days	7.6	8.3	6.5	7.5
28 days-6 months	51.0	51.0	51.5	51.2
6 months-12 months	41.3	40.7	42.0	41.4
Sex of the child				
Male	54.2	51.5	52.3	52.7
Female	45.8	48.6	47.7	47.3

Postnatal care (PNC) for newborn

The postnatal period, typically defined as the first 42 days after birth, is particularly a vulnerable time for both the mothers and their newborn because they are at a considerable risk of mortality during this period. Appropriate and timely PNC has the ability to reduce

preventable newborn deaths. In this segment we will discuss about the provider, place and timing of the first PNC visits. **Figure 22** shows the proportion of newborn who received PNC after their birth. Overall, 67.2% of the babies received PNC after birth. The highest PNC visits among the newborn were found among the newborn from *Sarail* (82.5%) and the lowest was found among the newborn from *Kasba* (40.2%).

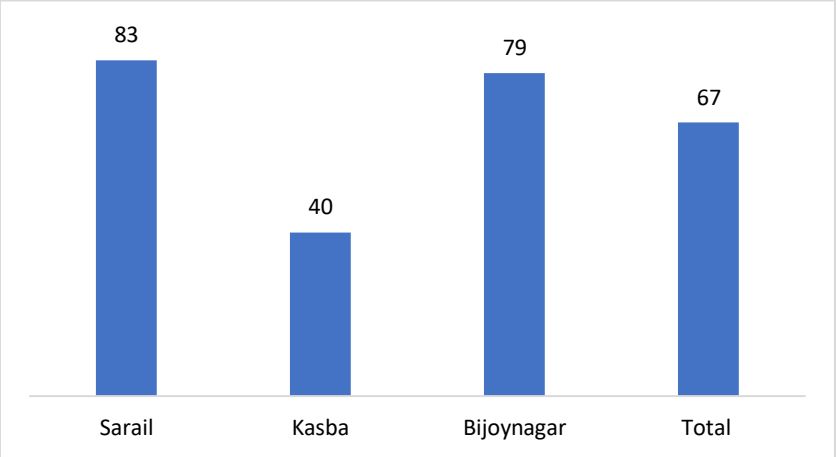


Figure 22: Percent distribution of the less than 12 months old children according to the PNC visit for the newborn reported by mothers (n=1,670) during the endline survey, 2022

Providers of postnatal care (PNC) for newborn

Table 50 displays the type of provider for the first PNC during the endline among those who took the PNC. Out of the three subdistricts examined, MTP is responsible for the vast majority of PNC care among the newborn who had their PNC visits done, with newborn from *Kasba* (87.6%) having the highest proportion. Even the newborn from the non-intervention area, *Bijoynagar*, had a higher percentage of PNC care received from MTP (65.2%) than new-born from *Sarail* (53.5%). But if we see the overall percentage of the newborn PNC visit (**Table 51**) 59.8% of the PNC visits did not take place in *Kasba*, which is alarming. In *Sarail* non-medically trained practitioner conducted over half of all PNC visits. Three out of four mothers with no formal education got their newborn first PNC visit from a non-medically trained provider, while almost 9 out of 10 women who completed secondary education or had higher education took the first PNC visit from a MTP among the three sub districts. Considering all respondents (N=1,670), according to the women, 43.7% newborn get their first PNC (newborn) from MTPs during in the endline (see annex **Table 91**).

Table 50: Percent distribution of less than 12 months old children by type of provider for the first PNC (newborn) among all newborn who received at least one PNC (newborn) (n=1,123), reported by mothers during the endline survey, 2022

	Medically trained provider (MTP)						Non-medically trained provider				
	MBBS doctor	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	Trained TBA	Unqualified provider	BRAC Shasthya Shebika/ Karmi	Family/ relative/ Neighbor/ friend	Total
Age (women)											
15-19	47.6	17.2	1.5	3.9	0.0	**70.1**	8.8	20.1	0.5	0.5	**29.9**
20-24	53.2	7.1	0.3	3.2	0.3	**64.0**	16.0	18.2	1.0	0.7	**36.0**
25-29	53.9	11.0	0.0	1.5	0.0	**66.3**	10.3	22.0	0.7	0.7	**33.7**
30-34	43.9	12.9	0.0	5.2	1.9	**63.9**	11.6	21.9	1.3	1.3	**36.1**
35+	42.4	5.9	0.0	5.9	0.0	**54.1**	11.8	34.1	0.0	0.0	**45.9**
Education (women)											
No education	16.7	6.9	0.0	1.4	0.0	**25.0**	18.1	51.4	1.4	4.2	**75.0**
Partial incomplete	37.3	11.8	0.0	3.9	0.0	**52.9**	15.7	29.4	2.0	0.0	**47.1**
Primary complete[1]	42.7	8.4	0.4	2.1	1.3	**54.8**	13.8	28.5	0.8	2.1	**45.2**
Secondary incomplete	52.1	11.7	0.4	4.2	0.0	**68.5**	12.9	18.2	0.4	0.0	**31.5**
Secondary complete[2] or higher	71.6	11.2	0.5	3.3	0.5	**87.0**	6.1	6.1	0.9	0.0	**13.0**
Upazila											
Sarail	43.9	7.9	0.0	1.3	0.4	**53.5**	11.4	31.9	1.8	1.5	**46.5**
Kasba	69.8	13.8	0.4	3.6	0.0	**87.6**	3.1	8.9	0.4	0.0	**12.4**
Bijoynagar	46.8	11.8	0.7	5.5	0.5	**65.2**	18.2	16.4	0.0	0.2	**34.8**
Wealth quintile											
Lowest	49.6	12.9	0.4	3.5	0.0	**66.4**	10.3	22.4	0.4	0.4	**33.6**
Second	37.4	5.7	0.5	1.4	0.0	**45.0**	17.1	34.1	1.9	1.9	**55.0**
Middle	39.3	13.5	0.9	4.4	0.9	**59.0**	15.7	24.0	0.9	0.4	**41.1**
Fourth	62.3	9.0	0.0	2.7	0.9	**74.9**	9.0	15.3	0.0	0.9	**25.1**
Highest	61.8	11.4	0.0	4.8	0.0	**78.1**	10.1	11.0	0.9	0.0	**21.9**
Total	**50.2**	**10.6**	**0.4**	**3.4**	**0.4**	64.9	**12.4**	**21.2**	**0.8**	**0.7**	**35.1**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Timing of the first PNC visit for newborn.

At the baseline and the endline of the study, the first PNC visits for newborn in each of the three sub districts are shown in **Table 51.** Among the three sub districts, the *Kasba* (59.8%) had the highest percentage of babies without PNC visits. However, this proportion has decreased by 35.6% from the baseline to the endline, which is a promising sign indeed. From the baseline to the endline, the *Sarail* and *Bijoynagar* had the same percentage of reduction (about 50%). In all three sub districts, the bulk of PNC visits for the new-borns occured during the first 24 hours following the baby's delivery, with new-born's from *Sarail* (79.8%) having

the greatest percentage of such visits. *Bijoynagar*, on the other hand, has made the most progress from the baseline to the endline (64.6%) regarding newborn PNC care with in first 24 hours.

Table 51: Percent distribution of women with less than 12 months old children according to timing of the first PNC (newborn) visit during baseline (n=1,367) and endline (n=1,670) survey, 2022

	Baseline (2018)					Endline (2022)					
	No PNC	**0-24hrs**	**25-48hrs**	**49-72hrs**	**72hrs+**	**No PNC**	**0-24hrs**	**25-48hrs**	**49-72hrs**	**72hrs+**	**Cannot remember**
Age (women)											
15-19	78.8	12.9	1.5	1.5	5.3	27.1	68.2	1.8	0.7	1.1	1.1
20-24	80.4	11.9	1.9	0.8	5.1	34.5	61.5	2.4	0.2	0.8	0.7
25-29	83.0	9.4	2.1	1.3	4.2	33.9	62.2	1.7	0.2	1.0	1.0
30-34	83.3	10.7	0.9	0.5	4.7	33.5	61.4	1.7	0.0	1.3	2.2
35+	77.8	13.9	0.9	1.9	5.6	31.5	62.1	4.0	0.8	1.6	0.0
Education (women)											
No education	75.2	19.0	0.0	1.5	4.4	38.5	58.1	2.6	0.9	0.0	0.0
Partial incomplete	86.3	7.5	2.1	0.7	3.4	39.6	56.2	0.6	0.0	1.8	1.8
Primary complete[1]	80.8	9.2	1.7	2.2	6.1	31.1	64.8	1.7	0.6	1.2	0.6
Secondary incomplete	83.5	10.2	0.9	0.9	4.6	32.2	63.3	2.5	0.3	1.1	0.7
Secondary complete[2] or higher	77.3	13.3	3.8	0.3	5.2	30.0	64.8	2.6	0.0	0.7	2.0
Type of childbirth											
Normal or others	83.3	10.7	0.0	1.2	4.8	35.8	61.0	1.5	0.6	1.0	0.1
C-Section	75.5	16.0	2.5	1.2	4.9	26.3	68.8	2.6	0.0	0.4	2.0
Place of childbirth											
At home	83.9	8.9	1.4	0.9	4.8	33.5	62.6	1.7	0.4	0.9	0.9
Health center	76.8	15	2.1	1.2	4.9	26.4	66.9	3.3	0.3	0.8	2.3
Upazila											
Sarail	72.9	22.5	1.5	1.3	1.8	17.5	79.8	1.4	0.2	0.5	0.5
Kasba	95.4	1.5	0.4	0.4	2.2	59.8	34.5	2.3	0.2	2.1	1.1
Bijoynagar	75.5	9.8	3.0	1.3	10.4	20.7	74.4	2.7	0.5	0.4	1.3
Wealth quintile											
Lowest	81.4	11.3	1.5	1.1	4.7	32.0	63.1	2.4	0.3	2.1	0.3
Second	83.5	10.3	0.7	1.8	3.7	35.5	60.6	2.1	0.0	0.6	1.2
Middle	82.5	9.5	1.8	1.8	4.4	31.4	64.4	2.4	0.6	0.3	0.9
Fourth	80.2	11.7	1.8	0.0	6.2	33.2	62.6	1.2	0.0	1.2	1.8
Highest	78.4	13.6	2.6	0.4	5.1	31.7	63.5	2.7	0.6	0.9	0.6
Total	81.2	11.3	1.7	1.0	4.8	32.8	62.8	2.2	0.3	1.0	1.0

[1] Primary complete is defined as completing grade 5.

[2] Secondary complete is defined as completing grade 10.

Places of postnatal care (PNC) for newborn

Place of PNC visits for new-borns are shown in **Table 52.** *Kasba* (59.9%) had the largest proportion of babies without PNC care among the three sub districts studied during the Endline. The newborn from *Kasba* had the lowest proportion of PNC visit from a private clinic (30.5%) during the endline. However, throughout the endline, the proportion of PNC visits for the new-borns had increased in all sub districts. There had been an increase of 36.6%, 30.3% and 42.9% in private clinic usages for PNC visit in *Sarail*, *Kasba* and *Bijoynagar*, respectively among the newborn.

Table 52: Percent distribution of less than 12 months old children according to their place of the first PNC (newborn) reported by mothers, in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)							Endline (2022)						
	Public-DH/ MCWC	Public-UHC	Public-UH& FWC	Public-CC	Private hospital	NGO	Home	DH/ MCWC	Public-UHC	Public-FWC	Public -CC	Private clinic	NGO	Home
Age (women)														
15-19	0.8	0.0	0.0	0.8	13.6	NI	6.1	1.4	1.4	3.6	0.0	40.7	2.5	23.2
20-24	0.9	0.0	0.4	0.0	12.5	NI	5.8	1.9	0.3	2.1	0.0	36.1	2.4	22.6
25-29	0.8	0.0	0.0	0.0	12.3	NI	3.9	1.9	1.2	1.5	0.0	37.8	1.2	22.5
30-34	1.4	0.0	0.0	0.0	7.4	NI	7.9	0.4	0.9	3.9	0.0	34.8	1.3	25.3
35+	0.0	0.9	0.0	0.0	10.2	NI	11.1	2.4	0.0	4.8	0.0	29.8	2.4	29.0
Education (women)														
No education	2.2	0.0	0.0	0.0	10.2	NI	12.4	0.9	0.0	0.9	0.0	13.7	2.6	43.6
Partial incomplete	0.7	0.0	0.0	0.0	5.5	NI	7.5	2.4	1.8	1.8	0.0	24.9	1.8	27.8
Primary complete[1]	0.4	0.4	0.0	0.0	11.4	NI	7.0	1.4	1.2	1.7	0.0	31.4	1.4	31.7
Secondary incomplete	0.5	0.0	0.2	0.2	10.5	NI	5.1	1.4	0.3	3.8	0.0	39.0	2.2	21.1
Secondary complete[2] or higher	1.4	0.0	0.3	0.0	17.5	NI	3.5	2.6	1.3	2.0	0.0	52.1	2.0	10.1
Upazila														
Sarail	0.9	0.2	0.0	0.0	13.2	NI	12.8	1.6	1.1	0.5	0.0	36.6	5.8	36.9
Kasba	0.2	0.0	0.0	0.2	4.0	NI	0.2	1.4	0.5	1.6	0.0	30.5	0.0	6.1
Bijoynagar	1.5	0.0	0.4	0.0	17.4	NI	5.2	2.0	0.7	5.8	0.0	42.9	0.2	27.8
Wealth quintile														
Lowest	1.1	0.0	0.0	0.0	8.0	NI	9.5	1.5	1.2	2.9	0.0	35.2	2.4	24.9
Second	0.7	0.4	0.0	0.0	7.7	NI	7.7	2.1	0.6	1.5	0.0	24.5	1.2	34.6
Middle	0.4	0.0	0.7	0.0	11.7	NI	4.7	1.5	0.6	2.7	0.0	33.8	2.7	27.3
Fourth	1.1	0.0	0.0	0.4	12.8	NI	5.5	1.8	0.6	2.1	0.0	43.4	1.8	17.1
Highest	1.1	0.0	0.0	0.0	17.6	NI	2.9	1.5	0.9	3.9	0.0	46.1	1.8	14.1
Total	**0.9**	**0.1**	**0.1**	**0.1**	**11.6**	NI	**6.1**	**1.7**	**0.8**	**2.6**	**0.0**	**36.7**	**2.0**	**23.5**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.
NI= No information.

Infant and Young Child Feeding (IYCF)

Overall, 9 out of 10 children were ever breastfed reported by the mothers. The highest proportion of children ever breastfeed belong from *Sarail* (96.4%) and the lowest proportion of such children were from *Bijoynagar* sub districts (86%). Overall, 88% of the children were breastfeed by their mothers within 24 hours of their birth. This proportion was found highest among the children from *Bijoynagar* (93.4%). Overall, 89.2% of the children were provided with colostrum by the mother. This proportion was lowest among the babies from *Bijoynagar* (80%). However, 33.4% of the babies were given prelacteal feeding; the proportion of which was highest among the babies from the *Sarail* (34.4%). Moreover, it was found that, overall, 48.3% of the babies were given additional food or drinks with in the 6 months of their birth. The highest proportion of such child belong from *Bijoynagar* (65%). **Table 53** below provides more details on early initiation of breastfeeding, colostrum feeding, prelacteals, and early weaning.

Table 53: Percent distribution of the status of breastfeeding, pre-lacteals, and early weaning of the less than 12 months old children (n=2,184) in the endline survey, 2022

	Endline (2022)			
Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
Ever breastfed	96.4	93.8	86.0	92.0
Started breastfeeding within 24 hours of birth	86.1	84.3	93.4	88.0
Gave colostrum	93.8	93.9	80.0	89.2
Prelacteals given	34.4	31.9	33.9	33.4
Food or drink within six months after birth	40.5	38.9	65.0	48.3

Table 54 lists the details on 24 hours' dietary recall of the <1 years old children enrolled in the survey. The most common foods or drinks provided to the children 24 hours before the survey were breastmilk (97.2%), plain water (38.2%), infant formula (17.2%) and thin semolina or suji (12.2%). However, the proportion of children who were given only water were highest among the children from *Bijoynagar* (46.1%) and lowest in the children's from *Kasba* (29.9%). The proportion of infant formula offered to the children was highest among the children from the *Sarail* (18.3%) and lowest among the children from *Kasba* (15.4%). Besides, about 1 in 10 children were provided vitamin or medicine syrup in the last 24 hours prior to the interview. The proportion of such children was highest in *Bijoynagar* (13.6%) and lowest in *Kasba* (3.6%)

Table 54: Percent distribution of less than 12 months old children according to their dietary intake for 24 hours preceding the survey reported by parents (n=2,184) during the endline survey, 2022

	Endline (2022)			
Child diet	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
Breastmilk	96.4	97.1	98.0	97.2
Only water	38.6	29.9	46.1	38.2
Sugar water	1.2	0.0	1.5	0.9
Infant formula (i.e., cerelac, lactogen)	18.3	15.4	17.8	17.2
Tinned, powder	0.8	3.6	3.3	2.6
Juice, juice drink, green coconut	1.0	1.0	1.2	1.1
Yogurt	0.0	0.1	0.0	0.0
Oral rehydration solution (ORS)	0.3	0.0	0.4	0.2
Thin soup	0.1	0.1	0.0	0.1
Thin semolina (suji)	10.8	14.9	11.0	12.2
Vitamin/drop of medicine/syrup	10.5	3.6	13.6	9.2
Fresh animal milk (cow, goat, sheep, buffalo)	7.4	3.4	4.6	5.1

Table 55 below provides the information on the messages heard, seen, or read by the parents within one month prior to the survey. The most common source of information or messages regarding breastfeeding or supplementary heard by the parents was from the neighbours (48.8%), followed by doctor, healthcare provider, or nurse (38%). The parents who received the information from the doctor, healthcare provider, or nurse; such parents' proportion was found highest among the parents from *Kasba* (48.8%) and lowest from the parents from *Bijoynagar* (27.6%). Besides, 23% of the parents said they received messages from television and only 0.6% from newspapers.

Table 55: Percent distribution of less than 12 months old children according to the exposure to the messages related to breastfeeding or supplementary feeding heard, seen, or read by the parents (n=2,184) during the endline survey, 2022

	Endline (2022)			
Sources of messages	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
Radio	0.0	0.0	0.0	0.0
Television	35.9	7.4	23.6	23.7
Newspaper	2.2	0.0	0.0	0.6
Mobile telephone	10.9	5.9	10.3	9.6
Doctor/health worker/nurse	38.0	64.7	27.6	38.0
Poster/leaflet/billboard	2.2	1.5	0.0	0.9
Neighbour	41.3	25.0	62.1	48.8
Others	1.1	2.9	3.5	2.7

Table 56 provides details on the timeline of starting various food and drink items for the children. Most of the children started eating or drinking the common food or drink items such as water (47.6%), suji or smashed rice (32.6%), Solid food such as rice, wheat, puffed rice/flattened rice (29.5%), semisolid foods such as smashed rice (28.5%), egg (24.7%) within 1-12 months age of the children. Formula milk was provided to 8.7% of the infants within 30 days of life.

Table 56: Percent distribution of less than 12 months old children according to the time of starting different foods to them (n=2,184) during the endline survey, 2022

	Endline (2022)			
Different food items	**0-30 days**	**1-12 months**	**Not yet given**	**Do not know**
Water	1.6	47.6	50.8	0.0
Liquids without breast milk sugar, glucose, tea, fruit juice etc.	1.9	17.4	80.6	0.0
Cow/goat/buffalo milk	1.8	15.3	82.8	0.1
Tinted, powder milk, infant formula i.e., cerelac, lactogen	8.7	21.9	69.3	0.0
Suji, smashed rice	1.3	32.6	66.0	0.0
Semi solid foods smashed rice, hotchpotch, smashed potato, ripe banana, smashed	1.2	28.5	70.1	0.1
Solid food rice, wheat, puffed rice/flattened rice etc.	1.2	29.5	69.2	0.0
Fish	1.3	19.2	79.4	0.0
Meat chicken, beef, mutton etc.	1.3	15.9	82.7	0.0
Egg	1.2	24.7	74.0	0.0
Pluses lentil, peas, peas dal etc.	1.1	23.1	75.7	0.0
Green leafy vegetables	1.3	19.0	79.7	0.0
Snacks *chanachur*, Chips, biscuit, nuts etc.	1.2	21.2	77.5	0.0
Monimix, Micronutrient powder	1.6	2.2	96.1	0.0

The median (interquartile range/IQR) of the number of eating solid, semi-solid, or soft foods other than water prior to 24 hours of the interview was 1(2) times. Overall, 15.1% of the children < 1 years consumed iron drops or tablets, including Monimix or any other sprinkles, 24 hours prior to the interview, with the highest proportion in *Bijoynagar* (23.3%) and lowest in the *Kasba* (10.5%) area. The proportion of children ever taking food mixed with sprinkles such as Monimix is low (1.1%) among this population. **Table 57** provides more details on the status of the supplementary or complementary food given to the children.

Table 57: Percent distribution of less than 12 months old children according to the status of supplementary or complementary foods or nutrients given to them (n=2,184) during the endline survey, 2022

	Endline (2022)			
Indicators	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
Times of eating solid, semi-solid, or soft foods in the preceding 24 hours [Median (IQR)]	1.1 (2)	0.8 (1)	1.1 (2)	1.0 (2)
Took iron drops or tablets including sprinkles/Monimix in the preceding 24 hours	11.4	10.5	23.3	15.1
Consumed food with added nutrient powder or sprinkles/Monimix in last 7 days	0.4	1.7	1.2	1.1
Consumed food with added nutrient powder or sprinkles/Monimix ever	1.3	2.1	1.4	1.6

Essential newborn care

Cutting the umbilical cord with clean instruments, caring for the baby's cord, delaying the bathing of the baby for hypothermia prevention, and ensuring that baby remains warm are the focuses of the new-born primary care. Immediately within minutes after birth baby should be dried and ensuring skin to skin contact with the mother's chest, and not be bathed in the initial 24 hours of birth to reduce the chances of lowering of baby's body temperature (15). Essential newborn care practices are recommended by the National Neonatal Health Strategy and Guidelines for Bangladesh which are cutting the cord of the baby with a clean instrument, drying the baby immediately (within 5 min) after birth for preventing heat loss from the baby's body, delaying 72 hours from the birth to wash the baby and starting breast feeding within 1 hour of the birth (11,16). In this segment we will be discussing about the essential newborn care elements in non-institutional setting similar to BDHS 2017-18, but we will only consider the home deliveries.

Cord care

Table 58 displays the types of instruments used to cut the umbilical cord in non-institutional delivery during the endline in the study areas. Most common (38.6%) instrument used was blade (not from delivery kit) to cut the cord and the highest reported use of blade was found in the *Sarail* subdistrict (46.9%). But overall use of blades from delivery kit was only 3%. However, about 48.9% mothers could not report about the instruments used to cut their baby's cord. The proportion of women who could not report about the instruments used to cut their

child's cord was highest (71.3%) among women completed at least secondary education and lowest (25.6%) among women with no education.

Table 58: Percent distribution of less than 12 months old children according to the type of instrument used to cut the umbilical cord in non-institutional birth (n=739) during the endline survey, 2022

Indicators	Endline (2022)						
	Blade from delivery kit	Blade from other source	Scissors	Knife	Bamboo strips/leaves	Other	Do not know
Age (women)							
15-19	2.1	36.4	8.2	0.0	0.0	0.0	53.2
20-24	4.0	36.1	9.5	0.0	0.0	0.0	50.3
25-29	2.7	37.5	10.2	0.0	0.2	0.0	49.4
30-34	2.6	45.9	9.9	0.0	0.0	0.0	41.6
35+	1.6	45.2	9.7	0.0	0.0	0.0	43.6
Education (women)							
No education	0.9	70.1	3.4	0.0	0.0	0.0	25.6
Partial incomplete	1.2	56.2	7.1	0.0	0.0	0.0	35.5
Primary complete[1]	3.5	49.6	11.0	0.0	0.0	0.0	36.0
Secondary incomplete	3.2	34.9	9.5	0.0	0.1	0.0	52.3
Secondary complete[2] or higher	3.9	13.0	11.7	0.0	0.0	0.0	71.3
Upazila							
Sarail	1.3	46.9	13.2	0.0	0.0	0.0	38.7
Kasba	5.2	31.8	4.6	0.0	0.2	0.0	58.2
Bijoynagar	2.5	37.1	10.8	0.0	0.0	0.0	49.6
Wealth quintile							
Lowest	2.9	42.5	13.2	0.0	0.0	0.0	41.4
Second	2.5	52.6	4.6	0.0	0.3	0.0	40.1
Middle	2.1	45.2	9.6	0.0	0.0	0.0	43.1
Fourth	3.9	30.8	11.4	0.0	0.0	0.0	53.9
Highest	3.6	21.9	8.7	0.0	0.0	0.0	65.9
Total	**3.0**	**38.6**	**9.5**	**0.0**	**0.1**	**0.0**	**48.9**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 59 displays the proportion of different materials applied after cutting the umbilical cord during the non-institutional birth at the endline period. In most of the cases nothing was applied to the cord after cutting it in all three subdistricts among the non-institutional births. The highest proportion was recorded in the *Bijoynagar* (47.8%) subdistrict among. Most common thing applied to the cord in all three subdistricts were oil and highest application of oil was reported among the babies born in *Bijoynagar* (27.5%).

Table 59: Percent distribution of less than 12 months old children according to the materials used after cutting the umbilical cord in non-institutional birth (n= 739) during the endline 2022

	Endline (2022)							
Indicators	**Antibiotic[1]**	**Antiseptic**	**Any kind of oil**	**Vermillion (Shidur)**	**Boric powder**	**Other[2]**	**Do not know**	**Nothing applied to the cord**
Age (women)								
15-19	6.0	5.2	30.2	0.0	1.7	0.0	12.1	44.8
20-24	6.3	8.9	22.9	0.4	2.2	3.3	12.2	43.9
25-29	3.4	12.5	21.6	0.0	3.4	2.8	8.5	47.7
30-34	3.4	7.7	21.4	0.0	1.7	2.6	6.0	57.3
35+	3.4	3.4	25.4	0.0	1.7	5.1	8.5	52.5
Education (women)								
No education	3.5	4.7	27.9	0.0	1.2	7.0	9.3	46.5
Partial incomplete	6.1	2.0	20.2	0.0	3.0	7.1	8.1	53.5
Primary complete[3]	4.0	12.5	23.0	0.0	3.0	2.0	9.0	46.5
Secondary incomplete	5.1	7.5	25.7	0.3	2.4	0.7	11.0	47.3
Secondary complete[4] or higher	6.5	16.1	16.1	0.0	0.0	1.6	12.9	46.8
Upazila								
Sarail	7.6	8.3	19.0	0.4	3.1	3.5	10.7	47.4
Kasba	3.3	10.3	25.7	0.0	0.9	1.4	12.2	46.3
Bijoynagar	3.0	7.2	27.5	0.0	2.5	3.0	7.2	49.6
Wealth quintile								
Lowest	4.9	12.8	19.5	0.0	1.2	1.8	7.3	52.4
Second	3.2	4.8	28.0	0.0	2.7	4.2	11.1	46.0
Middle	3.0	6.0	30.5	0.0	1.8	3.0	8.4	47.3
Fourth	8.0	12.0	17.6	0.8	4.0	0.8	11.2	45.6
Highest	7.5	8.5	18.1	0.0	2.1	3.2	13.8	46.8
Total	**4.9**	**8.5**	**23.7**	**0.1**	**2.3**	**2.7**	**10.0**	**47.8**

[1]Antiseptic includes antiseptic solution and gentian violet.
[2] Other includes spirit/alcohol, chewed rice, turmeric juice/powder, ginger juice, gentian violet, talcum powder, and "other." cow dung, ash.
[3]Primary complete is defined as completed 5 years of education.
[4]Secondary complete is defined as completed education of 10 years.

Newborn care practices: Timing of first bath

Table 60 provides details on the timing of the first bath after delivery of the babies with the history of non-institutional birth. Overall, most of the newborn (47.6%) were bathed after the first 72 hours of their birth, which is the recommended practice in Bangladesh. Among them, the highest proportion (72.4%) of newborn being bathed 72 hours after birth was reported among the newborn in the *Kasba* subdistrict. Mothers who completed at least secondary education reported bathing the newborn 72 hours later of their birth more commonly (64.5%) compared to their counterparts. .

Table 60: Percent distribution of less than 12 months old children according to the time of first bath after the delivery with history of non-institutional birth (n=739) reported by the mothers during the endline survey, 2022

	Endline (2022)						
Indicator	**0-5 hours**	**6-11 hours**	**12-23 hours**	**24-71 hours**	**72+ hours**	**Baby not bathed**	**Do not know/ cannot remember**
Age (women)							
15-19	30.2	1.7	1.7	11.2	51.7	1.7	1.7
20-24	38.8	2.2	0.7	11.4	44.3	0.7	1.9
25-29	34.7	1.1	0.6	8.5	52.8	1.7	0.6
30-34	45.3	2.6	0.0	6.8	43.6	0.9	0.9
35+	40.7	0.0	0.0	10.2	47.5	0.0	1.7
Education (women)							
No education	46.5	1.2	0.0	11.6	39.5	0.0	1.2
Partial incomplete	40.4	3.0	2.0	7.1	44.4	0.0	3.0
Primary complete[1]	38.5	1.5	1.0	10.5	45.0	2.0	1.5
Secondary incomplete	35.3	2.1	0.3	10.6	49.3	1.4	1.0
Secondary complete[2] or higher	29.0	0.0	0.0	6.5	64.5	0.0	0.0
Upazila							
Sarail	40.8	1.7	0.7	5.9	49.5	0.7	0.7
Kasba	17.8	0.0	0.0	7.0	72.4	1.9	0.9
Bijoynagar	51.7	3.4	1.3	17.4	22.9	0.9	2.5
Wealth quintile							
Lowest	32.9	0.6	0.6	5.5	57.3	1.8	1.2
Second	47.6	3.2	0.5	10.1	38.1	0.5	0.0
Middle	38.3	3.0	0.6	12.0	43.1	0.0	3.0
Fourth	33.6	0.8	1.6	10.4	49.6	1.6	2.4
Highest	29.8	0.0	0.0	12.8	55.3	2.1	0.0
Total	**37.6**	**1.8**	**0.7**	**9.9**	**47.6**	**1.1**	**1.4**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Essential newborn care

The fundamental newborn care practice among mothers who gave birth outside of a hospital facility (home) is shown in **Table 61**. Births outside hospitals were 739 in total, including 289 in *Sarail*, 214 in *Kasba*, and 236 in *Bijoynagar*. Cords were cut using a safe delivery kit or boiling blade in 76.1% of deliveries. Babies born in *Bijoynagar* had the greatest prevalence (80.5%) while those born in *Sarail* had the lowest (71.3%). Only 16.8% of infants from *Kasba* were reported to have chlorhexidine administered to their cords after they were cut. About 55% of mothers in each sub district said that either nothing or only chlorhexidine was administered to the newborn's cords after they were cut. *Sarail*, out of the three districts, had the greatest percentage (18.7%) of newborn that were dried within 5 minutes after delivery. 72.4% of

newborn in *Kasba* were given a bath after three days of their birth, which was the highest proportion among the 3 subdistricts. The highest proportion of babies who were breastfed (22.9%) immediately after the birth (within an hour after delivery), were from *Bijoynagar*. Among all the subdistricts, newborn who had all the essential newborn care was next to zero.

Table 61: Percent distribution of less than 12 months old children according to the receiving elements of essential newborn care after the delivery with the history of non-institutional birth (n=739) reported by the mothers during the endline survey, 2022

	Endline (2022)						
Indicator	Used safe delivery kit/bag or boiled blade During delivery	Applied chlorhexidine after umbilical cord was cut and tied	Nothing applied to the umbilical cord or only chlorhexidine applied	Dried within 0-4 minutes after birth	Delayed bathing	Immediate breastfeeding	All essential newborn care practices[1]
Age (women)							
15-19	70.7	12.1	52.6	12.9	51.7	19.0	0.0
20-24	70.5	13.3	52.8	10.3	44.3	16.2	0.7
25-29	80.1	11.4	55.7	15.9	52.8	13.6	0.6
30-34	83.8	8.6	63.3	9.4	43.6	16.2	0.0
35+	84.8	3.4	55.9	15.3	47.5	18.6	0.0
Education (women)							
No education	79.1	7.0	52.3	16.3	39.5	15.1	1.2
Partial incomplete	79.8	5.1	55.6	21.2	44.4	15.2	0.0
Primary complete[2]	75.5	13.5	58.0	11.0	45.0	20.0	0.5
Secondary incomplete	77.7	11.3	54.5	10.6	49.3	15.1	0.3
Secondary complete or higher[3]	59.7	17.7	54.8	4.8	64.5	12.9	0.0
Upazila							
Sarail	71.3	8.7	55.4	18.7	49.5	12.5	0.7
Kasba	77.6	16.8	55.1	6.1	72.4	14.0	0.5
Bijoynagar	80.5	8.9	55.5	10.2	22.9	22.9	0.0
Wealth quintile							
Lowest	78.1	13.4	61.6	9.8	57.3	22.0	0.0
Second	78.8	9.0	51.9	12.2	38.1	13.2	0.0
Middle	79.6	11.4	55.7	17.4	43.1	16.2	1.2
Fourth	72.8	12.8	55.2	13.6	49.6	16.0	0.8
Highest	64.9	8.5	51.1	6.4	55.3	12.8	0.0
Total	**76.1**	**11.1**	**55.4**	**12.3**	**47.6**	**16.2**	**0.4**

[1] All essential newborn care includes use of clean delivery kit/bag or boiled blade, nothing applied to cord or only chlorhexidine applied, dried within 5 minutes after birth, bathing delayed until 72 hours or more, and immediate breastfeeding.
[2]Primary complete is defined as completed 5 years of education.
[3]Secondary complete is defined as completed education of 10 years.

Knowledge regarding danger signs related to newborn among women and their husbands.

Knowledge about the danger sign of newborn health can help reduce many deaths. In this survey we inquired about the knowledge of both the mother and the father about the danger signs of newborn within one month of the birth. Danger signs included convulsions, fever, feeding difficulties, too small baby, jaundice, swollen abdomen, unconsciousness, pus or redness of the umbilical stump, eyes, or skin; bleeding, diarrhoea, ulcers, or thrush. **Table 62** shows how well-informed mothers were about potential danger indications for their babies. among the three subdistricts, Women in *Kasba*, were the most aware of the warning indicators. 58.8% of women in *Kasba* were aware of at least three potential danger signs. In contrast, just 38.7% of women in *Bijoynagar* were familiar with more than three of the signs, making it the district with the lowest percentage of this knowledge. There had been a 32.9% increase in the percentage of mothers from *Kasba* who knew more than three of the danger signs of neonatal health from baseline to endline.

Table 62: Percent distribution of women with less than 12 months old children according to the knowledge regarding danger signs related to newborn reported by the women during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

	Baseline (2018)			Endline (2022)		
	0	**1 and 2**	**3 or more**	**0***	**1 and 2**	**3 or more**
Age (women)						
15-19	2.3	65.2	32.6	22.1	36.4	41.4
20-24	3.4	62.8	33.8	19.8	32.9	47.3
25-29	2.4	62.6	35.1	16.7	34.9	48.4
30-34	4.2	63.7	32.1	16.3	31.8	51.9
35+	0.9	61.1	38.0	21.0	33.9	45.2
Education (women)						
No education	1.5	65.0	33.6	27.4	29.1	43.6
Partial incomplete	5.5	62.3	32.2	26.6	27.8	45.6
Primary complete[1]	1.3	64.6	34.1	20.2	37.5	42.4
Secondary incomplete	3.3	62.7	33.9	17.3	35.2	47.5
Secondary complete[2] or higher	2.8	61.5	35.7	14.7	31.9	53.4
Upazila						
Sarail	1.1	66.3	32.6	30.6	25.8	43.6
Kasba	5.8	68.4	25.9	10.4	30.9	58.8
Bijoynagar	2.0	54.4	43.6	16.2	45.1	38.7
Wealth quintile						
Lowest	4.0	60.9	35.0	12.3	32.3	55.4
Second	1.8	62.6	35.5	27.5	34.6	37.9
Middle	2.2	65.3	32.5	16.5	36.5	47.0
Fourth	4.4	65.9	29.7	18.3	33.2	48.5

	Baseline (2018)			Endline (2022)		
	0	1 and 2	3 or more	0*	1 and 2	3 or more
Highest	2.2	60.1	37.7	21.0	32.9	46.1
Total	**2.9**	**63.0**	**34.1**	**19.0**	**33.9**	**47.1**

*Includes do not know/ cannot remember.
[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 63 displays the knowledge of the danger signs related to the newborn among the husbands both in the baseline and the endline. Nearly one in every three spouses in each of the sub-districts are familiar with three or more warning indicators. Only the husbands in *Kasba* had a 25.3% increase of knowledge from the baseline to the endline in terms of knowing at least three of the warning signals of neonatal health.

Table 63: Percent distribution of husbands of women with less than 12 months old children according to their (husbands) knowledge regarding danger signs related to newborn in the baseline (n=701) and the endline (n=1,650) survey, 2022

Indicators	Baseline (2018)			Endline (2022)		
	0	1 and 2	3 or more	0*	1 and 2	3 or more
Age (husband)						
15-19	0.0	100.0	0.0	40.0	20.0	40.0
20-24	6.2	56.9	36.9	24.3	41.4	34.3
25-29	3.7	56.1	40.2	27.5	39.2	33.3
30-34	2.6	64.4	33.0	28.7	38.5	32.8
35-39	3.6	67.4	29.0	22.6	41.9	35.5
40-44	2.6	60.5	36.8	21.6	44.3	34.1
45+	1.6	65.6	32.8	23.7	41.7	34.5
Education (husband)						
No education	2.5	62.5	35.0	33.5	39.0	27.5
Partial incomplete	3.6	61.6	34.8	27.8	40.7	31.5
Primary complete[1]	1.6	56.7	41.7	26.7	42.7	30.6
Secondary incomplete	3.5	64.1	32.4	22.3	38.3	39.5
Secondary complete[2] or higher	5.7	66.0	28.3	17.4	42.0	40.6
Upazila						
Sarail	1.1	60.7	38.2	36.4	30.2	33.3
Kasba	11.8	76.5	11.8	21.5	41.5	37.1
Bijoynagar	0.7	55.9	43.4	19.0	49.6	31.3
Wealth quintile						
Lowest	3.4	60.0	36.6	18.7	44.1	37.2
Second	4.8	59.4	35.8	26.8	41.1	32.1
Middle	2.9	68.6	28.5	32.1	38.9	29.0
Fourth	2.9	60.2	36.9	25.5	40.3	34.2
Highest	1.1	64.8	34.1	25.2	37.9	37.0
Total	**3.3**	**62.2**	**34.5**	**25.6**	**40.5**	**33.9**

*Includes do not know/ cannot remember.
[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Medical emergencies of neonates during childbirth and care seeking practices

In the survey we asked about whether the newborn baby suffered from health-related problems within 1 month of birth. We asked about convulsions, fever; difficulty in sucking or during feeding, difficulty during breathing; did the baby felt cold; suffered from yellow colouration of the body (Jaundice); swollen abdomen; unconsciousness; redness and/or pus coming from the umbilical stump and the eyes or skin; bleeding; diarrhoea; thrush and ulcers (white patches in mouth), no urination or defecation; or was the baby born early or small in size. Also, we inquired if care was sought during this emergency.

Overall, reported by mothers, 55% of their newborn experienced at least one medical emergencies or complication during childbirth in the endline which is slightly higher than the baseline (baseline: 50% vs. endline: 55%) **(Figure 23).** The proportion of women who reported that their newborn has suffered from at least one problem or complication was highest in the *Bijoynagar* area (59%) followed by *Kasba* (54%) and *Sarail* (52%). The proportion of women reported that their newborn suffered with at least one medical emergency during childbirth increased in all three study areas during endline compared to baseline.

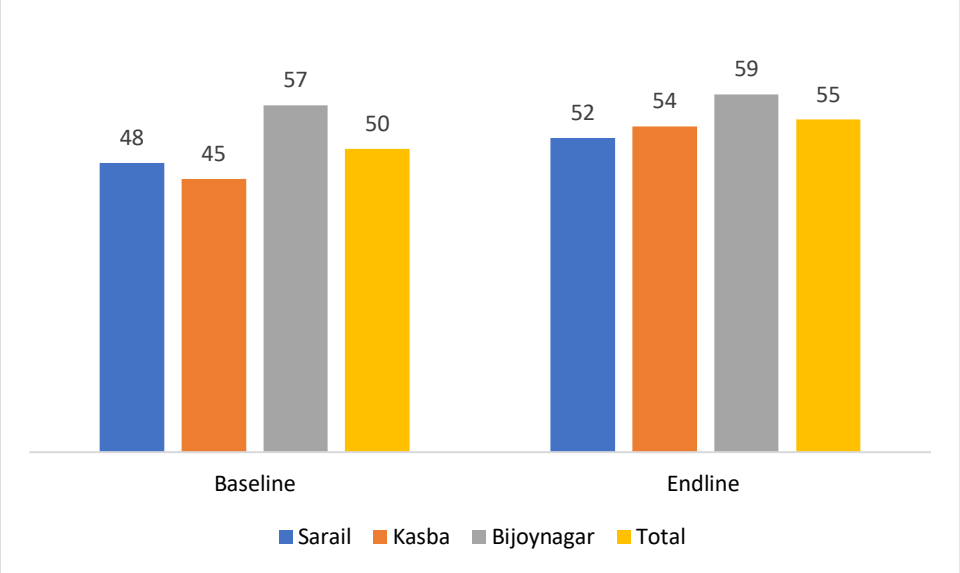


Figure 23: Percent distribution of women with less than 12 months old children who have reported at least one complication/medical emergencies of their neonates during childbirth in the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Out of the 917 women who reported at least one neonate complication during childbirth, 892 (97%) sought treatment from a health care provider for their child which was higher compared to the baseline (84%). The care seeking practice for medical emergencies among women in the

study sites is given in **Figure 24**. In general, the proportion of women of all three study areas sought health care for their neonates' medical emergencies increased in the endline compared to the baseline.

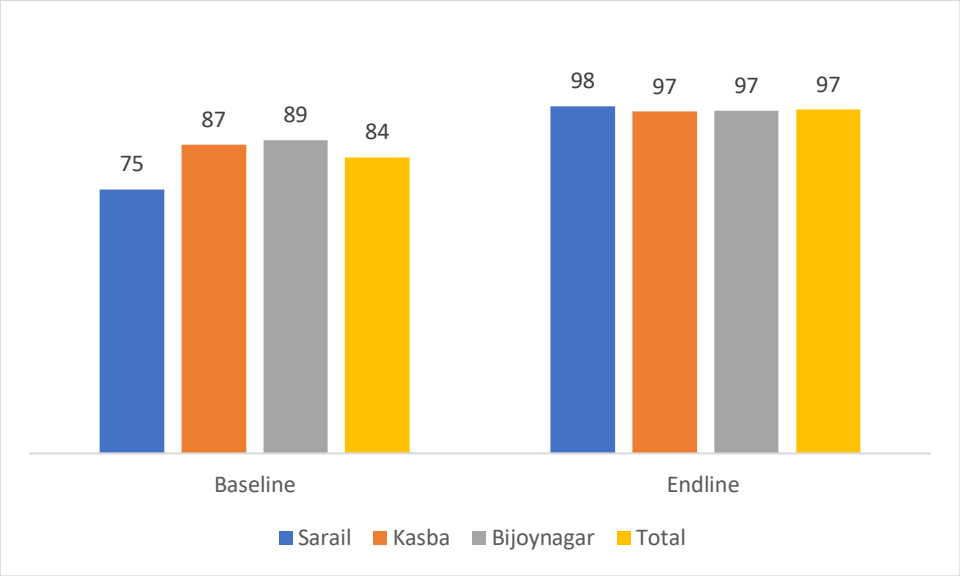


Figure 24: Percent distribution of women with less than 12 months old children who have reported at least one complication/medical emergencies of their neonates during childbirth according to the care seeking practice (seek care) for medical emergencies for their neonates in the baseline (n=685) and the endline (n=917) survey, 2022

Table 64 provides information reported by the women about seeking help for neonates in an emergency situation after delivery. Almost majority (9 out of 10) of the mothers reported getting neonatal emergency care from a private facility. During the baseline, private clinics were the principal source of emergency healthcare in the three subdistricts. We also analysed the care seeking place for medical complications of newborn considering all respondents (n=1,670) (see annex Table 93).

Table 64: Percent distribution of women with less than 12 months old children who have reported at least one complication/medical emergencies of their neonates during childbirth according to the care seeking practice (place) for medical emergencies for their neonates in the baseline (n=574) and the endline (n=892) survey, 2022

	Baseline (2018)							Endline (2022)						
Indicators	**Public-DH/ MCWC**	**Public-UHC**	**Public-UH& FWC**	**Public-CC**	**Private clinic**	**Home**	**NGO**	**Public-DH/ MCWC**	**Public-UHC**	**Public-UH& FWC**	**Public-CC**	**Private clinic**	**Home**	**NGO***
Age (women)														
15-19	2.9	0.0	0.0	0.0	92.6	4.4	NI	0.7	2.6	0.7	0.0	94.2	1.3	0.7
20-24	5.1	4.7	0.5	0.0	85.6	4.2	NI	1.8	1.2	0.9	1.5	92.4	0.9	1.2

	Baseline (2018)							Endline (2022)						
Indicators	**Public-DH/ MCWC**	**Public-UHC**	**Public-UH& FWC**	**Public-CC**	**Private clinic**	**Home**	**NGO**	**Public-DH/ MCWC**	**Public-UHC**	**Public-UH& FWC**	**Public-CC**	**Private clinic**	**Home**	**NGO***
25-29	5.2	7.1	0.0	0.6	83.9	3.2	NI	1.9	2.8	0.0	2.4	90.1	2.4	0.5
30-34	2.1	7.3	0.0	0.0	84.4	6.3	NI	0.8	3.9	1.6	0.8	92.2	0.8	0.0
35+	2.5	5.0	0.0	2.5	82.5	7.5	NI	1.6	3.1	0.0	0.0	93.8	1.6	0.0
Education (women)														
No education	10.6	10.6	0.0	2.1	72.3	4.3	NI	0.0	3.2	0.0	1.6	92.1	1.6	1.6
Partial incomplete	3.2	4.8	0.0	0.0	87.3	4.8	NI	1.2	2.3	0.0	1.2	95.4	0.0	0.0
Primary complete[1]	2.9	1.9	0.0	0.0	88.3	6.8	NI	3.2	2.1	1.6	1.1	90.9	1.1	0.0
Secondary incomplete	4.5	6.2	0.4	0.0	85.6	3.3	NI	1.0	2.0	0.8	1.5	92.1	2.0	0.5
Secondary complete or higher[2]	2.5	4.2	0.0	0.8	87.3	5.1	NI	1.3	3.1	0.0	0.6	92.5	0.6	1.9
Upazila														
Sarail	7.4	4.9	0.0	0.0	82.1	5.6	NI	1.8	3.9	0.4	0.0	90.5	1.8	1.8
Kasba	1.7	11.2	0.6	0.6	84.3	1.7	NI	1.4	1.7	1.0	3.4	90.0	2.1	0.3
Bijoynagar	3.8	0.9	0.0	0.4	88.9	6.0	NI	1.3	1.6	0.6	0.3	95.9	0.3	0.0
Wealth quintile														
Lowest	5.1	5.1	0.0	0.8	85.6	3.4	NI	1.1	2.7	1.1	0.0	91.9	2.7	0.5
Second	4.3	5.1	0.0	0.0	83.8	6.8	NI	1.7	2.8	0.6	3.9	89.4	1.1	0.6
Middle	6.0	4.3	0.9	0.0	84.6	4.3	NI	1.1	1.6	1.6	1.1	92.1	1.6	1.1
Fourth	2.4	4.8	0.0	0.0	85.5	7.3	NI	1.9	3.1	0.0	1.2	92.6	1.2	0.0
Highest	3.1	7.1	0.0	1.0	88.8	0.0	NI	1.7	1.7	0.0	0.0	95.4	0.0	1.2
Total	**4.2**	**5.2**	**0.2**	**0.3**	**85.5**	**4.5**	**NI**	**1.5**	**2.4**	**0.7**	**1.2**	**92.2**	**1.4**	**0.7**

*In endline we also took information for NGO

[1]Primary complete is defined as completed 5 years of education.

[2]Secondary complete is defined as completed education of 10 years.

Table 65 provides information on seeking help for neonates in an emergency situation after delivery. In *Kasba*, the majority of women (54 %) sought emergency neonatal care from a MBBS doctor at the endline. *Sarail* (24.4%) and *Bijoynagar* (28.7%), on the other hand, had the lowest percentages of women who sought medical attention. *Sarail* (72.4%) and *Bijoynagar* (70.1%) had the highest percentages of patients who sought treatment from non-medically trained providers. Overall, in respect to the educational status, the proportion of women who sought help from the non-medically trained providers decreased as the educational level increased. We also analysed the provider they sought care for medical complications of newborn considering all respondents (n=1,670) (see annex **Table 94**).

Table 65: Percent distribution of women with less than 12 months old children who have reported at least one complication/medical emergencies of their neonates during childbirth according to the care seeking practice (care providers) for medical emergencies for their neonates in the endline (n=892) survey, 2022

	Medically trained provider (MTP)						Non-medically trained provider			
	MBBS doctor	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	CHCP	Unqualified provider	Family/ relative/ Neighbor/	Total
Age (women)										
15-19	31.6	0.0	0.0	0.0	1.9	33.6	0.0	66.5	0.0	66.5
20-24	38.9	0.3	0.3	0.9	0.3	40.7	0.3	59.0	0.0	59.3
25-29	36.8	0.5	0.0	0.5	0.5	38.2	0.0	61.8	0.0	61.8
30-34	29.7	0.0	0.0	1.6	0.0	31.3	0.8	68.0	0.0	68.8
35+	35.9	1.6	0.0	1.6	0.0	39.1	0.0	59.4	1.6	60.9
Education (women)										
No education	14.3	0.0	0.0	1.6	0.0	15.9	0.0	84.1	0.0	84.1
Partial incomplete	17.2	1.2	0.0	2.3	0.0	20.7	0.0	79.3	0.0	79.3
Primary complete[1]	28.3	0.0	0.5	0.0	1.1	29.9	0.0	70.1	0.0	70.1
Secondary incomplete	40.8	0.3	0.0	0.5	0.8	42.4	0.5	57.1	0.0	57.7
Secondary complete[2] or higher	49.7	0.6	0.0	1.3	0.0	51.6	0.0	47.8	0.6	48.4
Upazila										
Sarail	24.4	0.4	0.0	2.1	0.7	27.6	0.0	72.1	0.4	72.4
Kasba	54.0	0.7	0.0	0.0	0.3	55.0	0.3	44.7	0.0	45.0
Bijoynagar	28.7	0.0	0.3	0.3	0.6	29.9	0.3	69.8	0.0	70.1
Wealth quintile										
Lowest	33.2	0.5	0.0	1.1	0.5	35.3	0.5	64.1	0.0	64.7
Second	29.4	0.0	0.0	1.1	0.6	31.1	0.6	67.8	0.6	68.9
Middle	30.7	0.0	0.5	0.5	0.0	31.8	0.0	68.3	0.0	68.3
Fourth	41.0	0.6	0.0	0.6	1.2	43.5	0.0	56.5	0.0	56.5
Highest	44.8	0.6	0.0	0.6	0.6	46.5	0.0	53.5	0.0	53.5
Total	**35.6**	**0.3**	**0.1**	**0.8**	**0.6**	**37.4**	**0.2**	**62.3**	**0.1**	**62.6**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Vaccination status of the children

Figure 25 compared between the three study sites vaccine coverage. Overall, 83% of children aging less than 1 year received at least one dose of any kind of vaccines. The proportion of such children was highest in the *Kasba* area (87%) and lowest in the *Sarail* area (76%). Among those who received any of the vaccines (N=1,807), 47% had the vaccine cards. Availability of vaccine cards was highest in the *Bijoynagar* (63%) and lowest in *Sarail* (18%). (Data not presented in the table).

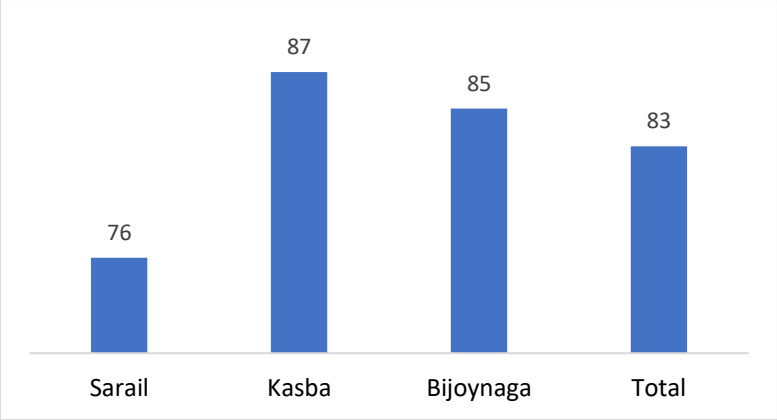


Figure 25: Vaccination status of less than 12 months old children (n=2,184) during the endline survey, 2022

Table 66 provides the percentage of children given individual doses of the vaccines available in the Expanded Programme on Immunization (EPI). Overall, 99.4% of the children received one dose of BCG vaccine, with full coverage (100%) in both *Sarail* and *Kasba* and lowest in *Bijoynagar* (98.7%). Overall, the eligible child who received first, 2nd and 3rd doses of PENTA vaccine was respectively 39.4%, 37.2%, and 32.2%. first, 2nd and 3rd doses of Oral Polio Vaccine (OPV) was received by 39.6%, 37.8%, and 33.0% of the eligible children, respectively. Overall, 38.6%, 36.4%, and 36.4% of the eligible children received first, 2nd, and 3rd doses of Pneumococcal Conjugate Vaccine (PCV).

Table 66: Percent distribution of women with less than 12 months old children who received at least one vaccine according to their status of individual vaccine doses during the endline (n=1,807) survey, 2022

Vaccine doses	Eligible age	*Sarail*	*Kasba*	*Bijoynagar*	Total
BCG1	0 days	100.0	100.0	98.7	99.4
Penta1	6 weeks	14.7	46.4	56.8	39.4
Penta2	10 weeks	14.0	40.0	57.2	37.2
Penta3	14 weeks	13.4	32.6	50.0	32.2
OPV1	6 weeks	15.3	46.2	56.8	39.6
OPV2	10 weeks	13.8	41.2	58.1	37.8
OPV3	14 weeks	13.4	33.6	51.3	33.0
PCV1	6 weeks	15.1	44.4	56.0	38.6
PCV2	10 weeks	13.8	38.3	56.8	36.4
PCV3	14 weeks	12.4	31.8	50.3	31.7
IPV1	6 weeks	14.7	44.1	55.1	38.0
IPV2	14 weeks	8.2	31.0	50.3	30.1
MR1	9 months	16.4	24.2	40.9	26.7

Results (5): Knowledge, awareness and perception regarding MNH rights

Key findings

- **MNH rights awareness:** The general awareness regarding MNH rights was highest in *Kasba* (94.8%) followed by *Sarail* and *Bijoynagar*. Awareness about MNH rights had declined from the baseline to the endline *Sarail* and *Bijoynagar* but increased in *Kasba* by 20.7% among the mothers. The same trend was observed among the husbands as well.
- **Awareness about access to MNH services:** Around 65.0% of the women were aware of their rights related to access to MNH services. This was significantly higher compared to the baseline (40.1%). From baseline to endline, knowledge about access to MNH services has increased across all the areas for the husbands of the women too.
- **Respectful maternity care:** The percentage of women indicating that they should have a right to respectful treatment from health service providers, had significantly increased from baseline to endline (*Sarail*: from 14.1% to 95.7%; *Kasba*: from 10.0% to 96.3%).
- **Domestic violence:** Only 1.7% of women were aware of their rights related to be-free from domestic violence which was higher in baseline (11.1%). Among the husbands the proportion decreased from 9.8% to 2.3% during the endline.
- **Source of knowledge about the MNH services:** The main source of MNH knowledge was from the family members for both women (75.6%) and their husbands (67.2%).
- **Duty-bearers regarding women MNH rights:** Both in baseline and endline, majority of the women reported husbands as the primary duty-bearers of the MNH rights and the proportion even increased during the endline survey (70.5% vs. 87.6%) compared to baseline.

Among the four priority areas of the WHO IFC framework, one of the important areas is the increasing awareness of the rights, needs and potential problems related to the MNH. During the survey, we assessed the knowledge of the MNH rights of both the women and their

husbands, their source of acquiring this knowledge, and their perceptions regarding who should be responsible for upholding these rights, which will be discussed in this segment.

Knowledge regarding MNH rights among women and husbands.

Table 67 reveals the level of familiarity that women have with their rights about the MNH. The general awareness regarding MNH rights was highest in *Kasba* (94.8%) followed by *Sarail* and *Bijoynagar*. While the percentage of women who were aware of their MNH rights had declined in *Sarail* and *Bijoynagar*, the percentage of women in *Kasba* who reported on their rights had increased by 20.7% from the baseline to the endline. Around 65.0% of the women were aware of their rights related to access to MNH services. This was significantly higher compared to the baseline (40.1%). The percentage of women indicating that they should have a right to respectful treatment from health service providers, had significantly increased from baseline to endline (*Sarail*: from 14.1% to 95.7%; *Kasba*: from 10.0% to 96.3%)). The percentage of improvement among the women from *Sarail* and *Kasba* are 25 % and 21% respectively. The proportion of women who aware of their rights related to family planning was increased from 11.0% in baseline to 15.5% during the endline. Women were not much aware about their right to be free from domestic violence. The situation gets even worse during endline. Only 1.7% of women were aware of their rights related to be-free from domestic violence which was higher in baseline (11.1%).

Table 67: Percent distribution of the women with less than 12 months old children according to their knowledge regarding MNH rights during the baseline (n=1,367) and the endline (n=1,670) survey, 2022 (unprompted)

	Baseline (2018)							Endline (2022)						
Indicators	**General awareness regarding MNH rights**	**Access to MNH Service**	**Making decisions to seek health services**	**Getting Respectful care from health service provider**	**Gather information from health service provider**	**Family planning**	**Free from domestic violence**	**General awareness regarding MNH rights**	**Access to MNH Service**	**Making decisions to seek health services**	**Getting Respectful care from health service provider**	**Gather information from health service provider**	**Family planning**	**Free from domestic violence**
Age (women)														
15-19	80.3	44.7	17.4	12.1	11.4	12.1	13.6	71.4	67.5	8.5	81.4	12.0	8.0	1.0
20-24	77.0	40.6	19.8	15.3	8.7	11.7	12.3	75.8	65.1	11.7	83.6	10.2	18.3	2.1
25-29	70.7	39.0	23.0	13.6	11.0	10.7	11.0	74.3	65.2	9.8	83.3	11.7	14.0	1.3
30-34	73.5	38.1	22.8	11.2	6.5	8.4	9.3	76.4	67.4	7.9	83.3	12.4	18.0	2.8
35+	72.2	39.8	13.9	6.5	9.3	12.0	6.5	77.4	54.2	10.4	80.7	9.4	17.7	0.0
Education (women)														
No education	67.9	38.0	17.5	10.9	4.4	5.1	8.8	59.0	55.1	4.4	76.1	11.6	2.9	0.0
Partial incomplete	70.5	31.5	19.9	5.5	8.2	6.2	8.9	71.6	55.4	3.3	82.8	3.3	12.4	0.8
Primary complete	74.2	37.1	19.2	10.0	5.7	7.4	8.7	68.9	61.9	6.7	79.8	8.8	8.8	0.4
Secondary incomplete	75.6	38.8	20.2	13.4	10.4	14.6	11.8	76.4	66.1	9.5	82.2	10.2	16.5	1.8

Indicators	Baseline (2018)							Endline (2022)						
	General awareness regarding MNH rights	Access to MNH Service	Making decisions to seek health services	Getting Respectful care from health service provider	Gather information from health service provider	Family planning	Free from domestic violence	General awareness regarding MNH rights	Access to MNH Service	Making decisions to seek health services	Getting Respectful care from health service provider	Gather information from health service provider	Family planning	Free from domestic violence
Secondary complete or higher	78.3	50.3	23.8	20.3	12.9	11.9	14.0	86.0	72.4	18.9	90.6	18.6	24.2	3.4
Upazila														
Sarail	77.1	44.7	19.2	14.1	5.7	9.0	11.5	74.2	69.7	4.9	95.7	16.8	7.0	0.5
Kasba	74.1	30.8	12.8	10.0	13.1	10.2	12.2	94.8	51.8	5.7	96.3	10.6	25.4	0.4
Bijoynagar	72.7	44.7	29.3	15.4	9.1	13.7	9.8	55.5	81.5	24.7	56.6	4.6	9.7	5.5
Wealth quintile														
Lowest	73.0	33.2	20.4	7.3	5.5	5.8	10.6	81.5	59.0	5.4	86.2	12.6	7.9	1.1
Second	74.0	39.2	19.0	11.7	7.0	11.4	10.3	67.0	60.7	6.9	78.6	8.7	12.8	0.0
Middle	71.9	40.5	19.0	16.4	9.1	10.2	8.0	71.3	72.3	11.8	78.1	9.2	12.2	2.5
Fourth	74.0	41.8	19.8	12.5	11.4	12.1	12.1	77.5	64.9	12.4	85.3	10.4	18.9	2.7
Highest	80.2	45.8	24.2	17.9	13.6	15.4	14.7	77.0	68.5	14.0	85.9	14.0	25.7	2.0
Total	74.6	40.1	20.5	13.2	9.3	11.0	11.1	**74.9**	**65.0**	**10.1**	**82.9**	**11.1**	**15.5**	**1.7**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Table 68 illustrates the proportion of knowledge among the spouses on the MNH rights. Similar to the women, most of the spouses also knew about the women right to MNH service. The spouses in the *Kasba* were most knowledgeable among the three subdistricts (93.6%). Compared to the baseline to endline improvement found in *Bijoynagar* (40.9%) in the knowledge of the husbands about the women right to respectful care from health service provider, husbands from both the intervention area the *Sarail* (85.6 %) and the *Kasba* (88.4 %) has a two-fold increase. Majority of the husbands in the three sub districts consider access to MNH service as one of the key MNH rights. From baseline to the endline the biggest progress related awareness about access to MNH service as MNH rights, reported by the husbands was noticed in *Bijoynagar* (33%). In *Sarail* and the *Kasba* the percentage of improvement was 30.4 % and 21.7% respectively among the husbands.

Table 68: Percent distribution of the husbands of women with less than 12 months old children according to their (husband) knowledge regarding MNH rights during the baseline (n=701) and the endline (n=1,650) survey, 2022

Indicators	Baseline (2018)							Endline (2022)						
	In general awareness regarding MNH rights	Access to MNH service	Making decisions to seek health services	Getting respectful care from health service	Gather information from health service provider	Family planning	Free from domestic violence	In general awareness regarding MNH rights	Access to MNH service	Making decisions to seek health services	Getting respectful care from health service	Gather information from health service provider	Family planning	Free from domestic violence
Age (husband)														

15-19	66.7	66.7	33.3	33.3	0.0	0.0	0.0	80.0	75.0	25.0	80.0	0.0	0.0	0.0
20-24	86.2	55.4	23.1	24.6	1.5	4.6	6.2	77.5	67.9	9.2	82.8	9.2	7.6	5.3
25-29	85.4	43.3	22.0	12.2	8.5	14.0	10.4	77.8	65.9	8.6	85.9	10.8	13.5	1.5
30-34	79.9	36.1	22.7	13.9	9.3	8.8	7.2	72.9	66.5	11.7	82.2	10.8	14.7	1.3
35-39	81.2	40.6	22.5	8.7	6.5	10.1	13.0	76.2	67.2	9.9	82.8	11.9	13.0	3.6
40-44	76.3	42.1	21.1	13.2	9.2	11.8	14.5	77.8	64.6	13.1	88.0	12.3	14.6	2.3
45+	78.7	37.7	27.9	4.9	4.9	9.8	8.2	66.2	65.2	5.4	74.1	9.8	13.0	1.1
Education (husband)														
No education	73.8	30.6	15.0	6.9	6.9	7.5	5.6	57.9	62.9	5.9	72.5	5.9	5.5	0.5
Partial incomplete	81.9	34.8	21.7	15.2	5.1	8.0	10.1	71.8	61.9	5.2	79.2	2.6	9.0	1.9
Primary complete[1]	81.1	38.6	25.2	12.6	6.3	9.4	12.6	77.5	63.1	6.7	84.0	8.6	11.5	1.3
Secondary incomplete	84.7	49.4	20.0	15.3	5.3	12.9	10.6	80.0	70.3	9.1	87.5	8.4	11.9	3.8
Secondary complete[2] or higher	87.7	56.6	37.7	14.2	16.0	14.2	11.3	89.3	70.9	21.5	92.5	25.9	25.5	3.6
Upazila														
Sarail	84.7	41.2	18.7	9.9	3.4	6.9	10.7	75.6	71.6	1.9	95.5	14.0	6.3	1.2
Kasba	82.4	32.7	11.1	6.5	9.8	5.2	3.9	93.6	54.4	6.6	94.9	11.8	20.2	1.2
Bijoynagar	78.0	46.2	32.9	18.5	9.8	16.1	12.2	56.5	79.2	26.3	59.4	5.1	10.6	5.8
Wealth quintile														
Lowest	73.7	34.1	20.0	10.2	7.8	9.8	8.3	74.9	63.7	8.1	78.3	10.9	4.8	0.8
Second	79.4	38.8	19.4	17.0	6.1	7.3	12.7	72.3	63.4	5.4	84.2	7.0	7.8	2.1
Middle	85.4	38.0	28.5	14.6	9.5	7.3	6.6	70.4	62.7	8.3	81.5	7.0	16.7	1.3
Fourth	89.3	50.5	25.2	10.7	4.9	9.7	10.7	81.2	73.9	9.0	89.4	13.1	14.2	3.7
Highest	87.9	57.1	24.2	9.9	8.8	22.0	12.1	77.3	67.1	18.8	82.7	15.7	22.0	3.5
Total	**81.5**	**41.4**	**22.8**	**12.7**	**7.4**	**10.3**	**9.8**	**75.2**	**66.3**	**10.0**	**83.2**	**10.9**	**13.1**	**2.3**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Source of knowledge regarding MNH rights among women and their husbands.

Table 69 represents the source of knowledge regarding the MNH rights among the women during the endline in all the surveyed subdistricts. The most common source of knowledge among the women was their family members (75.6%), followed by neighbours and friends (37.8%). The proportion of women reported the family members as their source of knowledge, was found to be the highest among the women from the *Sarail* area (78.7%) and the lowest among the women from *Kasba* (71.6%).

Table 69: Percent distribution of women with less than 12 months old children according to the source of knowledge regarding MNH rights among them during the endline (n=1,670) survey, 2022

	Endline (2022)														
Indicators	Book/ Newspaper	Radio/ Television	Self	Billboard	Poster	Leaflet	Courtyard meeting	Health related meeting in	Counselling with Govt Health	Counselling with BRAC health	Counselling with health workers of	Family members	Internet/ social media	Neighbour/ Friend	Others	Do not know

Age (women)																
15-19	4.4	4.0	12.3	0.0	0.0	0.0	2.6	0.0	5.7	3.5	0.4	75.0	3.1	31.1	0.0	4.8
20-24	6.6	7.3	12.4	0.0	0.0	0.0	4.4	0.6	5.4	4.4	1.4	78.0	8.5	37.6	0.4	2.7
25-29	2.0	8.7	13.4	0.0	0.0	0.0	3.5	1.5	9.0	6.1	0.6	77.3	7.6	38.7	0.9	1.2
30-34	2.1	6.7	12.9	0.0	0.0	0.0	5.2	0.5	10.8	5.2	2.1	70.6	4.6	41.8	1.6	2.6
35+	1.0	4.0	17.0	0.0	0.0	1.0	4.0	1.0	7.0	5.0	0.0	68.0	1.0	43.0	0.0	2.0
Education (women)																
No education	1.1	1.1	5.6	0.0	0.0	0.0	0.0	0.0	5.6	4.5	0.0	73.0	0.0	34.8	0.0	5.6
Partial incomplete	0.7	4.3	7.9	0.0	0.0	0.0	2.1	0.7	3.6	7.1	1.4	75.0	0.7	37.1	2.1	4.3
Primary complete[1]	0.4	3.3	13.0	0.0	0.0	0.0	2.2	1.1	6.5	4.3	0.7	74.4	1.4	39.0	0.4	3.6
Secondary incomplete	3.5	6.2	13.3	0.0	0.0	0.0	5.8	0.5	6.7	4.8	1.5	76.2	4.8	37.3	0.7	2.2
Secondary complete or higher[2]	11.5	14.8	17.3	0.0	0.0	0.4	4.0	1.1	11.5	4.3	0.4	76.6	19.1	38.9	0.0	0.7
Upazila																
Sarail	2.6	5.3	2.5	0.0	0.0	0.0	1.1	1.3	6.8	6.6	1.3	78.7	4.9	39.7	1.1	5.8
Kasba	3.0	6.5	24.3	0.0	0.0	0.2	9.1	0.0	6.3	5.2	0.6	71.6	7.2	34.9	0.2	0.7
Bijoynagar	8.3	9.9	11.5	0.0	0.0	0.0	0.0	1.0	9.6	1.3	1.3	77.1	7.0	39.5	0.3	0.3
Wealth quintile																
Lowest	4.1	5.1	18.0	0.0	0.0	0.0	7.8	0.7	5.8	6.5	1.0	73.5	2.0	40.8	0.7	1.7
Second	2.0	3.9	5.8	0.0	0.0	0.0	3.1	0.0	4.7	5.5	1.6	80.5	2.3	35.8	0.4	2.3
Middle	3.5	6.1	18.4	0.0	0.0	0.0	1.2	1.2	8.1	3.5	0.4	73.6	3.8	36.0	0.8	2.3
Fourth	4.6	6.3	8.4	0.0	0.0	0.0	2.8	1.8	9.8	5.6	1.8	72.3	6.3	40.4	0.7	4.9
Highest	5.9	12.2	13.9	0.0	0.0	0.4	4.5	0.0	7.7	3.1	0.4	78.4	16.4	35.5	0.4	1.7
Total	**4.1**	**6.8**	**13.0**	**0.0**	**0.0**	**0.1**	**4.0**	**0.7**	**7.2**	**4.8**	**1.0**	**75.6**	**6.3**	**37.8**	**0.6**	**2.6**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 70 represents the source of knowledge regarding the MNH rights among the husbands during the endline in the surveyed subdistricts. The most common source of knowledge for the husbands was their family members (67.2%), followed by neighbours and friends (36.5%), which was similar to the source of knowledge reported by the women. Husbands reporting about the family members as their source of knowledge, was highest among the husbands from the *Sarail* area (77.6%) and lowest among the husbands from *Kasba* (59.2%).

Table 70: Percent distribution of husbands of women with less than 12 months old children according to their (husbands) source of knowledge regarding MNH rights (n=1,650) during the endline survey, 2022 (multiple answers)

	Endline (2022)															
	Book/ Newspaper	Radio/ Television	Self	Billboard	Poster	Leaflet	Courtyard meeting	Health related meeting in community	Counselling with Govt. Health worker during home	Counselling with BRAC health workers	Counselling with health workers of other NGOs	Family members	Internet/ social media	Neighbour/ Friend	Others	Do not Know
Age (husbands)																
15-19	0.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	25.0	50.0	0.0	25.0
20-24	3.6	10.1	12.2	0.0	0.0	0.0	0.0	2.2	4.3	0.0	0.7	66.9	15.8	30.9	0.0	4.3
25-29	4.2	13.1	12.5	0.0	0.0	0.3	0.3	0.3	6.1	1.1	0.3	71.9	15.6	36.2	0.8	2.5
30-34	6.1	15.6	14.2	0.0	0.0	0.0	0.3	0.3	4.9	1.2	0.0	69.9	18.8	35.8	0.6	3.2
35-39	5.8	20.7	18.2	0.4	0.0	0.4	0.0	0.4	8.4	1.8	1.5	62.2	15.3	36.7	0.7	1.1
40-44	4.1	15.7	15.7	0.0	0.7	0.7	0.0	1.4	7.5	4.1	0.7	61.2	10.9	38.8	0.7	3.4
45+	3.9	16.5	18.5	1.0	0.0	0.0	0.0	1.0	7.8	1.0	0.0	65.1	4.9	42.7	0.0	1.9

Education (husbands)																
No education	1.6	10.3	11.1	0.0	0.4	0.4	0.0	0.4	2.8	2.4	0.8	67.9	4.4	40.9	0.4	7.1
Partial incomplete	2.3	15.2	11.7	0.0	0.0	0.0	0.0	0.6	2.3	1.8	0.0	74.9	7.6	39.2	1.2	1.2
Primary complete[1]	2.1	12.4	17.4	0.0	0.0	0.3	0.3	0.0	3.5	1.5	0.3	70.0	8.8	35.3	0.6	2.1
Secondary incomplete	3.4	14.3	15.4	0.6	0.0	0.0	0.0	0.9	8.0	1.1	0.9	63.4	17.4	35.4	0.6	2.3
Secondary complete[2] or higher	15.4	26.5	16.5	0.0	0.0	0.4	0.4	1.5	13.9	0.8	0.4	63.1	35.4	33.5	0.4	0.8
Upazila																
Sarail	2.3	7.7	4.0	0.0	0.2	0.0	0.0	0.0	5.4	2.1	0.6	77.6	9.8	45.3	1.3	5.4
Kasba	5.2	16.5	27.4	0.2	0.0	0.4	0.4	0.2	4.8	1.3	0.0	59.2	20.1	31.6	0.0	1.5
Bijoynagar	8.5	26.5	12.2	0.3	0.0	0.3	0.0	2.4	10.4	0.6	1.2	63.4	15.6	30.2	0.3	0.3
Wealth quintile																
Lowest	4.3	16.7	16.3	0.4	0.0	0.4	0.4	0.4	5.0	2.3	1.2	65.1	10.5	41.5	0.4	3.1
Second	2.5	8.8	16.3	0.4	0.4	0.4	0.4	0.0	3.9	1.4	0.7	68.9	9.2	38.5	0.0	4.2
Middle	2.3	14.0	11.4	0.0	0.0	0.0	0.0	1.5	6.4	0.8	0.8	70.8	11.4	30.7	1.5	1.1
Fourth	6.4	16.3	19.7	0.0	0.0	0.3	0.0	0.7	8.8	1.7	0.0	62.7	18.3	37.3	0.3	3.1
Highest	8.8	22.0	10.3	0.0	0.0	0.0	0.0	0.7	7.3	1.1	0.0	68.9	25.6	34.4	0.7	1.8
Total	**4.9**	**15.5**	**14.9**	**0.2**	**0.1**	**0.2**	**0.2**	**0.7**	**6.3**	**1.5**	**0.5**	**67.2**	**15.1**	**36.5**	**0.6**	**2.7**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Perception regarding who are the duty- bearers regarding their MNH rights among women.

Table 71 represents the perception among the women regarding the duty bearers of their MNH rights. Both in baseline and endline, majority of the women reported husbands as the primary duty-bearers of the MNH rights and the proportion even increased during the endline survey (70.5% vs. 87.6%) compared to baseline. The highest proportion of women reported this, belong from *Bijoynagar* (94%) followed by *Kasba* (93.1%). The proportion of the women who thought that household members are the duty-bearer in the MNH rights was the highest from *Kasba* (83.9%) and the lowest was in *Sarail* (44.6%). But the community as the duty-bearers of MNH rights was reported near to zero in all the subdistricts. Only 1.3% of the women during endline thought that community should have a responsibility for the MNH rights, which was much higher during the baseline (66.9%). Interestingly, the proportion of women who considered government as the duty-bearer of the MNH rights decreased dramatically (from 69.5 in baseline to 12.4% in endline). A shift of the perception involving the household members and husband as the duty-bearers of the MNH rights was well noticed in *Kasba* among the women.

Table 71: Percent distribution of women with less than 12 months old children according to the perception about who are the duty- bearers regarding their MNH rights (n=1,670) during the endline survey, 2022 (multiple answer)

	Baseline (2018)	**Endline (2022)**

	Government / Ministry of health	Husbands	Household Members	Community	Government / Ministry of health	Husbands	Household Members	Community
Age (women)								
15-19	68.9	68.9	68.2	66.7	11.4	81.6	68.0	1.3
20-24	72.1	72.6	72.3	69.4	12.4	87.5	67.8	1.5
25-29	68.6	69.9	68.8	67	12.8	89.5	63.1	0.3
30-34	68.4	71.2	70.2	66	12.9	88.7	51.6	2.6
35+	63	63	61.1	55.6	13.0	93.0	55.0	1.0
Education (women)								
No education	60.6	61.3	60.6	57.7	10.1	78.7	37.1	0.0
Partial incomplete	69.2	70.5	69.9	65.1	10.0	82.9	45.7	1.4
Primary complete[1]	62	63.8	62.4	59	9.4	83.8	56.0	0.7
Secondary incomplete	69.4	70.3	69.2	66.3	10.7	89.5	68.8	1.2
Secondary complete[2] or higher	80.1	80.8	80.8	79.7	21.2	92.5	76.6	2.5
Upazila								
Sarail	65.4	66.5	65.6	62.6	13.6	78.2	44.6	0.9
Kasba	64.8	65.7	65.3	64.8	12.8	93.1	83.9	2.2
Bijoynagar	78.1	79.2	78.1	73.1	9.9	94.0	60.2	0.3
Wealth quintile								
Lowest	64.6	66.4	65	60.2	12.6	91.2	67.0	0.7
Second	67.4	68.5	67.8	64.5	11.3	85.2	55.6	0.0
Middle	68.2	69	67.9	66.8	9.6	89.3	57.5	2.7
Fourth	70.7	71.8	71.1	69.6	12.3	82.8	63.5	1.8
Highest	76.6	76.9	76.9	73.3	16.0	89.2	72.1	1.4
Total	69.5	70.5	69.7	66.9	**12.4**	**87.6**	**63.4**	**1.3**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Results (6): Women empowerment and decision making related to MNH care

Key findings

- **Decision making regarding family planning:** About 68.9% women and their husbands jointly took decision regarding family planning. This practice was highest in *Kasba* (72.1%) and lowest in *Sarail* (63.2%).
- **Decision making regarding BPCR practices:** The decision about the identification of the delivery place was mainly made jointly by women and their husbands. In *Sarail*, women play a significant part in making choice about selecting the delivery place (women alone making decision:35.6% and women consulting with her husband 37.6%).
    - In the *Kasba* (43.1%) and *Bijoynagar* (53%), the mothers-in-law had a major role in the selection of the birth attendants.
    - In *Kasba*, husbands (52.5%) were more likely to engage in saving money. However, the couples from *Sarail* (42.5%) and *Bijoynagar* (49.6%) were more likely to engage in saving money.
    - In *Kasba* (67.2%) and *Bijoynagar* (40%), the husbands had a major role in deciding on transportation arrangements but in *Sarail*, couples (37.5%) played the major role.
    - The husbands made the majority of the decisions about blood donation arrangements. The couples from *Sarail* (50%) and *Kasba* (58.6%) decided to designate a hospital in advance in the event of any issues.
- **Decision making regarding antenatal care:** Considering educational attainments, the lowest proportion of women who made decisions individually about ANC was observed among women who completed secondary or had a higher education compared to their counterparts. . In all the subdistricts, husbands were the major decision makers mostly decided about ANC care. This trend was observed more in *Kasba* (46.4%) subdistrict.

- **Decision making regarding the place of delivery:** In all the study areas, mainly husbands (42.8%) decided on the hospital delivery of the baby, which was true even for the women with the highest level of education (41.0%).
- **Decision making regarding medical emergency of the neonate:** In most of the cases, the husbands of the women decided where to take care of and which medicine to buy across all the areas.
- **Women's earning status:** Only 8.4% of women were involved in income-generating activities outside of the household. Where the lowest proportion was observed in *Kasba* (3.6%) among all the areas.

This segment explores women empowerment in terms of their involvements regarding the decision making about the use of family planning method, BPCR related issues, regarding her antenatal care, regarding selecting the hospital facility for delivering the baby, involvement in decision making for medical emergencies of their neonate, their freedom of movement and earing status. Finding out this fact is essential as empowerment of the women (individual) can lead to improvement in the maternal and newborn health.

Decision making about family planning.

Table 72 displays the women's involvement in the decision making related to the use of family planning methods. Overall, in most cases the decision regarding the usage of the family planning methods was taken jointly by the women with their husbands (68.9%). This proportion was highest among the women residing in *Kasba* (72.1%) and lowest among the women from *Sarail* (63.2%). Moreover, women who individually made this decision was found to be 22.8%, reported by the women. Data on family planning or decision regarding family planning were not collected during baseline.

Table 72: Percent distribution of women with less than 12 months old children according to the decision making related to using or not using family planning method reported by the women (n=1,670) during the endline survey, 2022

Indicators	Self	Husband	Jointly with husband	Jointly with other family members	Others[1]
Age (women)					
15-19	21.4	8.6	66.4	2.1	1.4
20-24	20.7	4.8	71.6	1.8	1.1
25-29	24.5	5.8	67.1	2.4	0.2

Indicators	Self	Husband	Jointly with husband	Jointly with other family members	Others[1]
30-34	27.5	3.0	67.8	0.9	0.9
35+	22.6	4.8	69.4	0.8	2.4
Education (women)					
No education	35.0	10.3	54.7	0.0	0.0
Partial incomplete	23.1	8.9	66.3	1.8	0.0
Primary complete[2]	23.3	4.0	69.7	2.0	0.9
Secondary incomplete	21.9	4.5	70.3	2.2	1.1
Secondary complete or higher[3]	19.5	5.5	71.7	1.3	2.0
Upazila					
Sarail	26.9	8.1	63.2	1.1	0.7
Kasba	18.0	4.6	72.1	3.8	1.4
Bijoynagar	23.6	3.6	71.4	0.5	0.9
Wealth quintile					
Lowest	22.9	5.0	65.7	3.8	2.6
Second	22.3	8.3	67.9	0.9	0.6
Middle	22.2	6.3	69.8	0.9	0.9
Fourth	21.9	4.2	71.6	2.1	0.3
Highest	24.9	3.6	69.8	1.2	0.6
Total	**22.8**	**5.5**	**68.9**	**1.8**	**1.0**

[1]Other includes jointly with relative/ friends, jointly with BRAC Shasthya Shebika, jointly with BRAC Shasthya Karmi, jointly with trained traditional birth attendant, jointly with traditional birth attendant, with another NGO worker, jointly with MBBS doctor , FWV/FWA and others (specify)
[2] Primary complete is defined as completed 5 years of education.
[3]Secondary complete is defined as completed education of 10 years.

Decision making related to BPCR.

The decision makers regarding the BPCR are listed in **Table 73** and **Table 74.** In the survey, we aimed to find out the individuals who had a crucial role in making choices on the BPCR procedures. In all the 3 surveyed subdistricts, women reported that the decision about the place for the delivery was mainly decided jointly as a couple (highest in *Kasba*: 56.8%). In *Sarail*, women play a significant part in making choice about selecting the place of delivery and the percentage of women who made this decision alone was 35.6% and women took decision after consulting with their husband was (37.6%).

On the other side, in the *Kasba* (43.1%) and *Bijoynagar* (53.0%), the mothers-in-law had a significant role in the selection of the birth attendants. In *Sarail*, the proportion of mother/ mothers-in-law (33.2%) making decisions regarding identifying birth attendant was almost close to the proportion of the couples (35.3%) jointly taking the decision. When it comes to saving money, the husbands in *Kasba* (52.5%) were more likely to engage in BPCR practices,

but the couples from *Sarail* (42.5%) and *Bijoynagar* (49.6%) were more likely to engage in BPCR practices in regard to saving money. In *Kasba* (67.2%) and *Bijoynagar* (40%), the spouses had a major role in deciding on transportation arrangements. In all of the subdistricts, the spouses made the majority of the decisions about blood donation arrangements. The couples from *Sarail* (50.0%) and *Kasba* (58.6%) decided to designate a hospital in advance for the event of any issues.

Table 73: Percent distribution of women with less than 12 months old children according to the decision-making regarding BPCR practices (identifying place for delivery, identifying birth attendant, saving money) as reported by women (n=1,670) in the endline survey, 2022

Indicators	Identified place for delivery				Identified birth attendant				Saved money			
	Wife	Husband	Couple	Mother/ mother-In-Law	Wife	Husband	Couple	Mother/ mother-In-Law	Wife	Husband	Couple	Mother/ mother-In-Law
Age (women)												
15-19	12.9	8.4	26.8	52.0	4.1	5.4	21.8	68.7	3.4	29.9	41.9	24.8
20-24	17.4	12.4	37.5	32.7	8.7	6.8	29.3	55.2	2.3	40.3	39.9	17.4
25-29	23.1	11.9	48.5	16.6	17.3	11.1	36.3	35.4	4.1	45.6	44.4	5.9
30-34	22.0	15.3	57.3	5.3	25.6	13.6	43.2	17.6	5.5	37.4	52.8	4.4
35+	25.0	3.6	69.1	2.4	24.2	9.1	51.5	15.2	9.8	34.2	56.1	0.0
Education (women)												
No education	40.0	7.1	37.7	15.3	33.3	5.3	36.8	24.6	7.1	46.4	39.3	7.1
Partial incomplete	30.2	8.6	41.4	19.8	24.5	9.6	28.7	37.2	1.9	48.1	38.5	11.5
Primary complete[1]	27.7	6.4	40.5	25.5	19.8	4.0	31.1	45.2	7.2	36.9	43.2	12.6
Secondary incomplete	14.8	13.4	45.3	26.6	10.0	9.8	32.7	47.6	3.8	36.9	45.5	13.7
Secondary complete or higher[2]	7.9	14.9	45.9	31.4	3.3	11.6	38.1	47.0	1.8	40.4	44.4	13.5
Upazila												
Sarail	35.6	8.1	37.6	18.7	24.0	7.6	35.3	33.2	6.7	38.0	42.5	12.9
Kasba	5.4	12.7	56.8	25.1	5.1	9.6	42.2	43.1	0.9	52.5	38.5	8.1
Bijoynagar	17.0	12.9	38.6	31.6	13.9	8.7	24.5	53.0	4.4	29.0	49.6	17.0
Wealth quintile												
Lowest	20.0	10.0	47.4	22.6	12.5	8.0	40.9	38.6	3.9	42.5	40.2	13.4
Second	29.4	10.9	36.2	23.5	18.2	8.8	27.7	45.3	6.7	42.2	35.6	15.6
Middle	18.7	8.9	46.4	26.0	17.8	5.6	33.3	43.3	1.6	35.9	51.6	10.9
Fourth	13.7	16.1	41.4	28.9	11.6	10.6	29.5	48.3	4.5	40.1	40.8	14.7
Highest	16.0	10.6	46.5	27.0	8.6	10.2	35.0	46.2	3.5	36.2	48.9	11.5
Total	**19.3**	**11.4**	**43.5**	**25.8**	**13.5**	**8.7**	**33.3**	**44.5**	**3.9**	**39.1**	**44.1**	**13.0**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 74: Percent distribution of women with less than 12 months old children according to the decision-making regarding BPCR practices (arranging transport, arranging blood donor, identification of hospital for facing complication) as reported by women (n=1,670) in the endline, 2022

	Arranged transport				Arranged blood donor				Identified hospital for facing complication			
	Wife	**Husband**	**Couple**	**Mother/ Mother-In-Law**	**Wife**	**Husband**	**Couple**	**Mother/ Mother-In-Law**	**Wife**	**Husband**	**Couple**	**Mother/ Mother-In-Law**
Age (women)												
15-19	1.5	30.3	36.4	31.8	12.1	48.5	24.2	15.2	1.5	23.2	44.9	30.4
20-24	3.2	51.3	22.2	23.4	12.5	46.7	25.0	15.8	4.9	36.4	40.2	18.5
25-29	4.2	62.1	25.3	8.4	6.7	46.7	36.0	10.7	10.6	28.4	52.5	8.5
30-34	6.1	42.9	42.9	8.2	14.0	46.5	32.6	7.0	9.2	36.9	52.3	1.5
35+	4.0	36.0	60.0	0.0	5.9	35.3	52.9	5.9	19.4	22.2	55.6	2.8
Education (women)												
No education	15.0	45.0	40.0	0.0	30.0	50.0	10.0	10.0	21.7	13.0	56.5	8.7
Partial incomplete	3.1	46.9	34.4	15.6	11.8	52.9	29.4	5.9	14.3	23.8	47.6	14.3
Primary complete[1]	2.0	45.1	35.3	17.7	31.0	34.5	20.7	13.8	6.3	25.0	52.5	16.3
Secondary incomplete	3.9	48.6	29.3	18.2	10.7	45.5	31.4	12.4	6.4	38.4	40.6	14.6
Secondary complete[2] or higher	1.8	50.5	26.6	21.1	3.6	48.7	34.2	13.5	6.1	29.0	52.7	12.2
Upazila												
Sarail	7.3	35.4	37.5	19.8	18.7	34.1	33.0	14.3	10.6	28.8	50.0	10.6
Kasba	1.5	67.2	16.8	14.6	5.0	58.0	29.0	8.0	8.3	25.5	58.6	7.6
Bijoynagar	3.1	40.0	37.5	19.4	9.3	45.4	29.9	15.5	4.5	38.8	34.3	22.5
Wealth quintile												
Lowest	2.1	58.3	16.7	22.9	10.8	62.2	24.3	2.7	11.3	29.6	47.9	11.3
Second	1.6	59.0	24.6	14.8	21.2	36.4	24.2	18.2	15.4	29.2	44.6	10.8
Middle	3.9	38.5	43.6	14.1	8.2	51.0	24.5	16.3	6.5	31.5	48.9	13.0
Fourth	1.8	54.1	27.5	16.5	5.5	45.2	35.6	13.7	3.9	36.4	41.9	17.8
Highest	7.2	38.1	33.0	21.7	12.5	41.7	34.4	11.5	6.5	28.3	51.5	13.8
Total	**3.6**	**48.4**	**30.3**	**17.8**	**10.8**	**46.2**	**30.6**	**12.5**	**7.7**	**31.3**	**47.1**	**13.9**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Decision making regarding antenatal care (ANC)

All the subdistricts indicate that in most cases husbands made the decision on antenatal care, although the proportion of such couple in *Kasba* was the highest (46.4%). *Sarail* had the highest recorded proportion where husband and wives combinedly (36%) made the decision. Overall, the lowest proportion where women independently made the decision about the antenatal care was reported among those who completed their secondary education or had a higher education. Detailed information related to decision making about antenatal care is noted in **Table 75.**

Table 75: Percent distribution of women with less than 12 months old children according to the decision making related to antenatal care reported by the women (n=1,670) in the endline survey, 2022

Indicators	Women herself	Husband	Couple	Mother/ mother-in-law	Father/ father-in-law	Other members of the family	NA
Age (women)							
15-19	2.5	36.8	16.1	32.1	4.6	6.8	1.1
20-24	6.6	43.1	23.2	19.2	2.9	5.0	0.0
25-29	12.4	47.9	30.0	6.1	1.5	2.2	0.0
30-34	15.9	39.5	38.6	2.6	0.4	1.3	1.7
35+	14.5	39.5	40.3	3.2	0.0	2.4	0.0
Education (women)							
No education	17.1	41.0	28.2	5.1	0.9	6.0	1.7
Partial incomplete	9.5	50.3	26.0	8.3	3.0	3.0	0.0
Primary complete[1]	10.1	39.5	31.7	14.4	1.7	2.0	0.6
Secondary incomplete	8.8	43.4	25.6	15.5	2.5	3.8	0.4
Secondary complete[2] or higher	6.2	39.7	25.7	19.9	2.6	5.9	0.0
Upazila							
Sarail	8.5	37.8	36.0	11.4	3.4	2.9	0.0
Kasba	5.4	46.4	27.1	17.1	0.9	2.3	0.7
Bijoynagar	13.9	43.1	18.2	15.3	2.5	6.5	0.5
Wealth quintile							
Lowest	7.9	39.9	32.3	15.0	1.2	3.5	0.3
Second	11.3	46.2	25.1	10.7	3.4	3.1	0.3
Middle	9.6	44.9	24.0	14.4	0.9	5.4	0.9
Fourth	9.6	39.5	24.6	18.9	3.0	3.9	0.6
Highest	7.8	41.9	29.6	14.1	3.0	3.6	0.0
Total	**9.2**	**42.5**	**27.1**	**14.6**	**2.3**	**3.9**	**0.4**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Decision making related to place of delivery.

In the survey, related to the place of delivery we asked the respondents (women) about who made the decision regarding going to the hospital for delivering the baby, which is listed in **Table 76**. It was found that in most cases in all the 3 sub districts, husbands made the decision for hospital delivery of the baby, with women from *Kasba* (47.1%) reported that husbands made such decisions which was the highest. Even 41% women with the highest form of education were dependent upon their husband for taking decision regarding hospital delivery.

Table 76: Percent distribution of women with less than 12 months old children according to the decision making related to place of delivery (hospital facility) reported by the women (n=1,670) in the endline survey, 2022

Indicators	Women herself	Husband	Both	Mother/ mother-in-law	Father/ father-in-law	Other	NA
Age (women)							
15-19	1.8	35.7	15.0	32.9	5.4	8.6	0.7
20-24	6.1	42.7	22.3	20.0	3.6	5.3	0.0
25-29	11.4	49.9	29.1	5.8	1.5	2.4	0.0
30-34	13.7	40.3	40.3	3.0	0.4	0.4	1.7
35+	13.7	40.3	39.5	3.2	0.0	3.2	0.0
Education (women)							
No education	16.2	42.7	26.5	6.0	0.9	6.0	1.7
Partial incomplete	9.5	50.3	24.9	9.5	3.0	3.0	0.0
Primary complete[1]	8.1	39.5	30.8	15.6	2.0	3.5	0.6
Secondary incomplete	8.1	43.4	25.8	15.5	2.9	4.1	0.3
Secondary complete[2] or higher	5.5	41.0	24.4	19.9	3.3	5.9	0.0
Upazila							
Sarail	7.9	38.6	33.5	12.8	3.8	3.4	0.0
Kasba	4.5	47.1	27.3	16.6	1.4	2.3	0.7
Bijoynagar	12.6	42.7	18.7	15.7	2.7	7.2	0.4
Wealth quintiles							
Lowest	7.3	40.2	31.4	15.8	1.2	3.8	0.3
Second	10.1	46.8	24.5	12.2	3.7	2.5	0.3
Middle	9.0	43.7	24.3	15.0	1.2	6.3	0.6
Fourth	8.4	39.5	24.9	18.0	4.2	4.5	0.6
Highest	6.9	44.0	27.5	14.1	3.0	4.5	0.0
Total	**8.3**	**42.8**	**26.5**	**15.0**	**2.6**	**4.3**	**0.4**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Decision making regarding medical emergencies of their neonate.

Table 77 and Table 78 represents the proportion of women who reported about the decision makers during the emergency situation of the neonates. Regarding the neonatal medical emergencies whether to care for them at home, outside home from a health care provider, bringing what types of medicine, seeking care from any health facility or upazila health complex; in all situation's husbands were the primary decision makers in all the subdistricts reported by the women.

Table 77: Percent distribution of women with less than 12 months old children according to the decision making (person involved) regarding care seeking practice (providing care at home, outside home from any type of health care provider, what medicines are bought/used) for those women (n=1,670) who seek care for medical emergencies of their neonate during the endline survey, 2022

Indicators	If your child is sick, then who decides to provide care at home?					If your child is sick, then who decides to seek care outside home from any type of health care provider?					If your child is sick, then who decides what medicines are bought/used?				
	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family
Age (women)															
15-19	3.6	35.4	9.3	40.7	11.1	3.2	37.5	11.1	41.8	6.4	3.6	36.8	11.1	42.1	6.4
20-24	10.3	36.6	14.4	26.9	11.8	9.5	40.7	17.6	26.6	5.7	10.2	40.5	17.7	26.3	5.3
25-29	19.4	41.9	20.8	9.9	8.0	17.9	46.7	22.8	9.4	3.2	19.1	45.8	22.0	9.4	3.6
30-34	22.3	39.9	25.8	5.2	6.9	22.3	41.6	29.2	4.7	2.2	24.5	39.9	28.8	4.7	2.2
35+	21.0	33.9	33.1	4.0	8.1	16.9	39.5	38.7	4.0	0.8	19.4	37.9	37.9	4.0	0.8
Education (women)															
No education	19.7	39.3	23.1	11.1	6.8	19.7	40.2	25.6	11.1	3.4	19.7	40.2	24.8	12.0	3.4
Partial incomplete	17.2	45.6	17.8	12.4	7.1	14.8	47.3	21.3	11.8	4.7	15.4	48.5	20.1	11.2	4.7
Primary complete[1]	14.7	36.3	19.9	19.3	9.8	14.1	38.6	21.9	20.2	5.2	15.6	38.0	21.9	19.6	4.9
Secondary incomplete	13.6	38.9	16.4	21.0	10.1	12.1	43.7	20.1	20.6	3.6	13.4	42.1	20.0	21.0	3.6
Secondary complete[2] or higher	9.8	32.9	18.2	27.7	11.4	9.8	37.8	19.9	27.4	5.2	10.4	37.5	19.9	26.7	5.5
Upazila															
Sarail	16.0	35.5	19.5	20.2	8.8	13.5	37.5	26.0	18.4	4.7	13.9	37.5	25.1	18.9	4.7
Kasba	8.8	36.3	20.5	19.6	14.8	8.8	44.8	22.9	20.7	2.9	10.4	42.9	23.2	20.5	3.0
Bijoynagar	16.9	42.2	14.2	21.1	5.6	16.4	42.7	14.1	21.4	5.4	17.7	42.3	13.9	20.9	5.2
Wealth quintile															
Lowest	12.0	39.3	23.5	17.3	7.9	10.6	41.9	26.1	17.6	3.8	12.3	40.5	25.8	17.9	3.5
Second	15.3	39.8	15.6	19.6	9.8	14.7	44.3	17.4	19.9	3.7	15.9	42.8	18.4	19.6	3.4
Middle	15.3	41.9	18.3	17.7	6.9	12.9	43.4	21.3	17.7	4.8	13.2	44.3	19.8	17.4	5.4
Fourth	13.8	32.9	14.7	27.8	10.8	12.6	37.1	18.9	27.0	4.5	13.5	35.9	19.2	27.0	4.5
Highest	13.2	35.9	18.3	19.2	13.5	13.8	41.6	21.0	18.9	4.8	15.0	41.0	20.4	18.9	4.8
Total	**13.9**	**38.0**	**18.1**	**20.3**	**9.8**	**12.9**	**41.7**	**21.0**	**20.2**	**4.3**	**14.0**	**40.9**	**20.7**	**20.1**	**4.3**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 78: Percent distribution of women with less than 12 months old children according to the decision making (person involved) regarding care seeking practice (seeking care from any health facility, from Upazila Health Complex) for those women (n=1,670) who seek care for medical emergencies of their neonate during the endline, 2022

Indicators	If your child is sick, then who decides to seek care from any health facility?					If your child is sick, then who decides to seek care from Upazila Health Complex?				
	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family
Age (women)										
15-19	3.6	36.4	11.1	41.8	7.1	3.6	34.6	10.7	41.4	9.6
20-24	9.4	39.7	17.6	27.9	5.5	9.0	39.0	17.4	26.6	7.9
25-29	18.4	44.6	23.0	9.7	4.4	17.4	43.6	22.8	9.0	7.3
30-34	22.8	41.2	28.3	5.2	2.6	21.5	39.5	28.3	5.2	5.6
35+	17.7	39.5	37.1	4.0	1.6	16.9	37.9	36.3	4.0	4.8

Indicators	If your child is sick, then who decides to seek care from any health facility?					If your child is sick, then who decides to seek care from Upazila Health Complex?				
	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family	Women	Husband	Both of us	Mother/ Mother-In-Law	Other members of the family
Education (women)										
No education	19.7	40.2	24.8	12.0	3.4	18.8	38.5	24.8	12.0	6.0
Partial incomplete	16.0	46.8	20.7	11.8	4.7	14.8	46.8	20.1	11.2	7.1
Primary complete[1]	13.3	39.2	22.8	20.2	4.6	13.0	37.5	23.1	18.7	7.8
Secondary incomplete	12.6	41.4	19.9	21.8	4.4	11.9	40.4	19.3	21.4	7.0
Secondary complete[2] or higher	10.1	36.8	19.2	27.4	6.5	9.8	35.5	19.2	26.4	9.1
Upazila										
Sarail	13.3	37.5	25.2	19.3	4.7	13.3	37.1	25.8	18.6	5.2
Kasba	9.5	41.6	22.7	22.0	4.3	7.9	40.4	21.8	21.1	8.9
Bijoynagar	16.6	42.5	14.4	21.1	5.4	16.4	40.7	14.1	20.5	8.3
Wealth quintile										
Lowest	10.9	40.5	26.4	18.5	3.8	10.3	39.0	25.8	18.8	6.2
Second	14.4	43.4	18.4	20.5	3.4	13.5	42.8	17.4	19.0	7.3
Middle	13.8	42.5	20.1	17.7	6.0	13.5	42.2	19.5	17.4	7.5
Fourth	12.9	36.5	18.3	27.3	5.1	12.6	34.1	19.8	25.5	8.1
Highest	13.8	39.8	20.7	20.1	5.7	12.9	38.9	20.1	19.8	8.4
Total	**13.1**	**40.5**	**20.8**	**20.8**	**4.8**	**12.5**	**39.4**	**20.5**	**20.1**	**7.5**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Role of women in decision making regarding neonates during emergencies

Table 79 shows the baseline and endline decision-making roles of women in seeking care for a newborn during emergency. The proportion of women who were allowed to share their opinion freely, the proportion of women whose opinion was valued and the proportion of women who had the final say about the neonatal health care during emergencies were decreased significantly from 96.5%, 98.8% and 36.9% during baseline to 78.7%, 77.6% and 15.4% respectively during the endline. Regarding study areas, women lived in *Sarail* were more empowered regarding taking decision about their neonate health compared to other two subdistricts. The women from *Sarail* reported the greatest proportions among the subdistricts that they shared their opinion freely (80.9%), where women's opinion was respected (80.9%) and women from *Bijoynagar* reported the highest proportion where women had the final say in decision making (18%).

Table 79: Percent distribution of women with less than 12 months old children according to their role in decision making regarding care seeking practice for medical emergencies of their neonate in the baseline (n=574) and the endline (n=1670): Presented in percent distribution

Characteristics	Baseline (2018)			Endline (2022)		
	Women allowed to share her opinion freely	Women's opinion was valued (Important and somewhat important)	Women had the final say in decision making	Women allowed to share her opinion freely	Women's opinion was valued (Important and somewhat important)	Women had the final say in decision making
Age (women)						
15-19	94.1	97.1	32.4	87.5	87.5	6.1
20-24	96.3	99.1	32.6	81.1	80.2	13.1
25-29	96.1	98.7	38.7	77.7	76.8	17.2
30-34	99	100	44.8	66.5	64.4	26.6
35+	97.5	97.5	42.5	72.6	70.2	21.0
Education (women)						
No education	93.6	95.7	59.6	71.8	68.4	23.9
Partial incomplete	96.8	100	39.7	76.9	74.6	14.8
Primary complete[1]	97.1	99	47.6	80.4	79.5	15.3
Secondary incomplete	95.5	98.4	31.7	78.5	77.7	14.5
Secondary complete[2] or higher	99.2	100	28	80.8	80.5	14.7
Upazila						
Sarail	98.8	100	46.9	80.9	80.9	16.9
Kasba	94.4	97.8	26.4	77.1	76.4	11.3
Bijoynagar	96.6	98.7	38	78.0	75.5	18.0
Wealth quintile						
Lowest	94.9	97.5	52.5	76.0	75.4	13.5
Second	95.7	98.3	40.2	80.4	78.6	14.7
Middle	97.4	98.3	34.2	77.8	76.1	16.2
Fourth	97.6	100	37.1	80.8	80.2	15.0
Highest	96.9	100	17.3	78.4	77.9	17.7
Total	96.5	98.8	36.9	78.7	77.6	15.4

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Freedom to go to hospital or health centre.

Table 80 presents the proportion of women who were allowed to go to hospital or health cantre. Point to be noted that, during the baseline this question was not asked for any specific reason to go to hospital or health centre, it was more of in general visit for any MNH services whereas in the endline we asked this question specifically for the delivery of the baby during the endline. In *Sarail* (48.7%) and *Kasba* (46.3%) most of the women were allowed to go to any of the health facility for the delivery of the baby only with their husbands. While in *Bijoynagar* (35.7%) most women were allowed to go with others.

Table 80: Percent distribution of women with less than 12 months old children according to their freedom of movement regarding whether allowed going to hospital or health center during the baseline (n=1,367) and the endline (n=1,670) survey, 2022

Indicators	Baseline (2018)*				Endline (2022)**			
	Alone	With children	Cannot go alone or with children	With others	Alone or with children	Never allowed to go alone or with children	Only with husband	With others[3]
Age (women)								
15-19	22.0	53.8	20.5	3.8	2.5	8.2	29.3	60.0
20-24	23.4	45.8	25.7	5.1	6.1	9.5	35.5	48.9
25-29	27.7	50.8	18.6	2.9	15.7	6.8	44.6	32.9
30-34	28.4	56.3	13.5	1.9	18.5	5.6	46.8	29.2
35+	23.1	49.1	25.0	2.8	24.2	11.3	41.9	22.6
Education (women)								
No education	33.6	45.3	19.0	2.2	16.2	12.0	34.2	37.6
Partial incomplete	33.6	52.7	11.0	2.7	11.8	7.7	43.8	36.7
Primary complete[1]	32.8	45.0	17.9	4.4	13.5	7.8	42.9	35.7
Secondary incomplete	20.2	53.4	22.5	3.9	9.9	8.8	36.2	45.2
Secondary complete[2] or higher	21.0	47.6	27.6	3.8	8.1	6.2	39.1	46.6
Upazila								
Sarail	60.4	20.7	18.1	0.9	5.6	1.1	48.7	44.7
Kasba	4.2	65.5	26.8	3.5	6.4	1.4	46.3	45.9
Bijoynagar	11.3	63.3	18.9	6.5	20.9	22.2	21.3	35.7
Wealth quintile								
Lowest	35.8	48.5	13.1	2.6	8.8	4.7	46.6	39.9
Second	27.5	47.3	22.0	3.3	12.5	9.2	40.4	37.9
Middle	23.4	53.3	18.6	4.7	13.5	13.2	36.5	36.8
Fourth	19.4	54.6	23.4	2.6	9.9	7.8	36.2	46.1
Highest	20.1	45.8	28.9	5.1	10.2	6.3	33.8	49.7
Total	**25.2**	**49.9**	**21.2**	**3.7**	**11.0**	**8.2**	**38.7**	**42.1**

*For any MNH services
**Only for delivery of child
[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.
[3]With others include mother/mother in laws, father/father in laws and other family members.

Women's earning status.

In the survey we asked if the women were involved with any income generating work outside their household chores. **Figure 26** displays proportion of such women in the three subdistricts during the endline. Overall, 8.4% of the women were involved in the with work which generates earnings. Highest proportion of such women was reported in *Sarail* (16.6%), while lowest proportion of 3.6% of women who were earning was recorded in *Kasba*. Involvement

of the women with any income generating work according to the background characteristics of the respondent women is provided in annex (see Table 95).

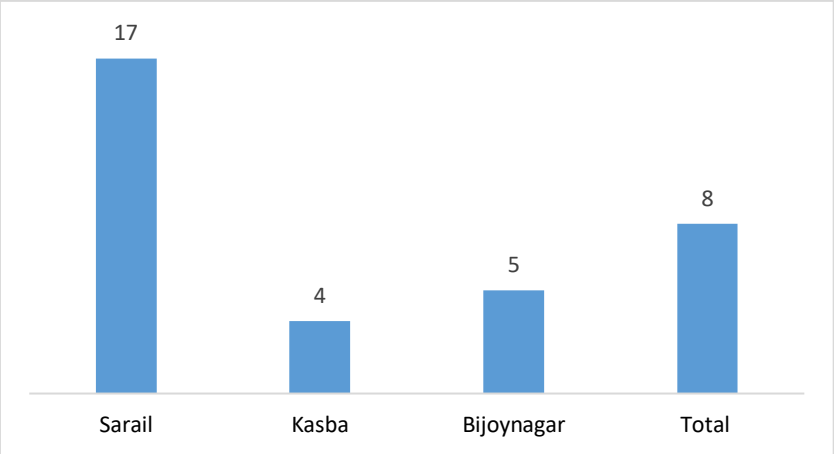


Figure 26: Percent distribution of women with less than 12 months old children according to their involvement with income generating work during the endline (n=1,670) survey, 2022

Results (7): Family participation and engagement

Key findings

- **The extent of help from the husband:** In 70.9% of cases husbands sufficiently helped the women regarding MNH issues.
- **The extent of help from the family members:** The family members helped the women with eating enough food, reducing workload, and taking proper rest were 92.7%, 91.1%, and 90.8%, respectively.
- **Taking care of the neonates:** Overall, 62.6% of women reported that family members helped in taking care of the neonates after the delivery.
- **Family member's involvement in early childhood development:** During the preceding three days of the interview date, 10%, 9%, 23%, and 79% of the family members read books, showed picture books together with the child, told stories, sang a song to the child, and took the child outside of the home, respectively.
- **Availability of newspapers and magazines at home:** No newspaper or magazine was available in about 98.6% of the households reported by the women from the three subdistricts.

Family care indicators

In this section, we discussed about the extent of help the pregnant women received from their husbands and other family members related to the MNCH issues, newspaper availability and the activities favouring child development.

Husbands' extent of help

Table 81 represents the extent of husbands' help reported by the women. Overall husband's sufficient involvement was 70.9% reported by the women from three sub-districts. This was highest in *Sarail* area (79.1%) and lowest in *Bijoynagar* (60%) according to the women statement.

Table 81: Percent distribution of women with less than 12 months old children according to their husband's extent of help for MNH issues reported by the women (n=1,670) during the endline survey, 2022

	Endline (2022)		
	Sufficient	**Not sufficient nor insufficient**	**Insufficient**
Age (women)			
15-19	70.4	25.0	4.6
20-24	68.9	24.5	6.6
25-29	75.1	18.4	6.5
30-34	71.2	21.0	7.7
35+	67.7	24.2	8.1
Education (women)			
No education	59.8	31.6	8.6
Partial incomplete	71.6	22.5	5.9
Primary complete[1]	67.7	25.4	6.9
Secondary incomplete	71.5	22.2	6.3
Secondary complete[2] or higher	76.9	16.9	6.2
Upazila			
Sarail	79.1	17.3	3.6
Kasba	73.6	21.8	4.6
Bijoynagar	60.0	28.7	11.4
Wealth quintile			
Lowest	73.6	20.5	5.9
Second	65.4	28.8	5.8
Middle	66.2	24.9	9.0
Fourth	75.8	19.8	4.5
Highest	73.4	19.2	7.5
Total	**70.9**	**22.6**	**6.5**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Help from other family members related to MNH.

Overall, women reported that they received help from the family members regarding eating enough food, in reducing workload and in taking proper rest was 92.7%, 91.1% and 90.8%,respectively before and after the delivery **(Table 82).** Regarding receiving help in eating enough food, the highest proportion of women was from *Kasba* (95.5%) and the lowest was in *Bijoynagar* (88.5%). The proportion of women lived in *Kasba* was highest (93.9%) in regard to the help they received in reducing their workload followed by women lived in *Sarail* (91.0%) and *Bijoynagar* (88.5%) respectively, and women from *Bijoynagar* reported the lowest

proportions. About 93% of the women residing in *Sarail* and *Kasba* subdistricts reported in receiving help from their family members related to taking proper rest. But after the delivery overall 62.6% women reported that their family members helped in taking care of the neonates. This proportion was highest among the women from *Kasba* (68.3%) and lowest among the women from *Sarail* (58.2%) subdistricts. Women having no education reported to receive less help from the family members related to eating enough food or reducing their workload or taking proper rest or taking care of the baby.

Table 82: Percent distribution of women with less than 12 months old children according to their report regarding the help received from the family members related to MNCH reported by the women (n=1,670) during the endline survey, 2022

	Endline (2022)			
	Before and after the delivery			**After the birth of the baby**
	Eating enough food	**Reducing workload**	**Proper rest**	**Taking care of the neonate**
Age (women)				
15-19	94.6	92.9	93.2	61.1
20-24	93.9	91.9	91.9	60.3
25-29	92.3	90.6	89.8	63.6
30-34	91.9	91.4	89.3	67.9
35+	85.5	84.7	85.5	64.6
Education (women)				
No education	84.6	83.8	82.9	51.5
Partial incomplete	90.5	88.8	87.6	69.1
Primary complete[1]	91.4	87.9	86.7	60.0
Secondary incomplete	93.7	92.3	92.3	63.7
Secondary complete[2] or higher	96.1	96.1	96.4	63.4
Upazila				
Sarail	94.1	91.0	93.0	58.2
Kasba	95.5	93.9	93.2	68.3
Bijoynagar	88.5	88.5	86.1	62.7
Wealth Quintile				
Lowest	93.8	91.5	90.6	67.9
Second	91.4	89.6	89.6	59.3
Middle	88.3	87.1	85.9	64.4
Fourth	95.2	93.4	94.0	63.1
Highest	94.6	94.0	93.7	58.1
Total	**92.7**	**91.1**	**90.8**	**62.6**

[1] Primary complete is defined as completing grade 5.
[2] Secondary complete is defined as completing grade 10.

Activities by the family members related to early childhood development.

Overall, 10%, 9%, 23%, and 79% of the parents read books or showed picture books together with the child, told stories, sang a song to the child, and took the child outside of the home respectively, in preceding three days of the interview date of the endline survey. The proportions of these activities favouring child development were highest in the *Sarail* area (except reading books or look at picture books) compared to *Kasba* and *Bijoynagar* area. **Figure 27** below shows the child developmental activities by the family members in the study area.

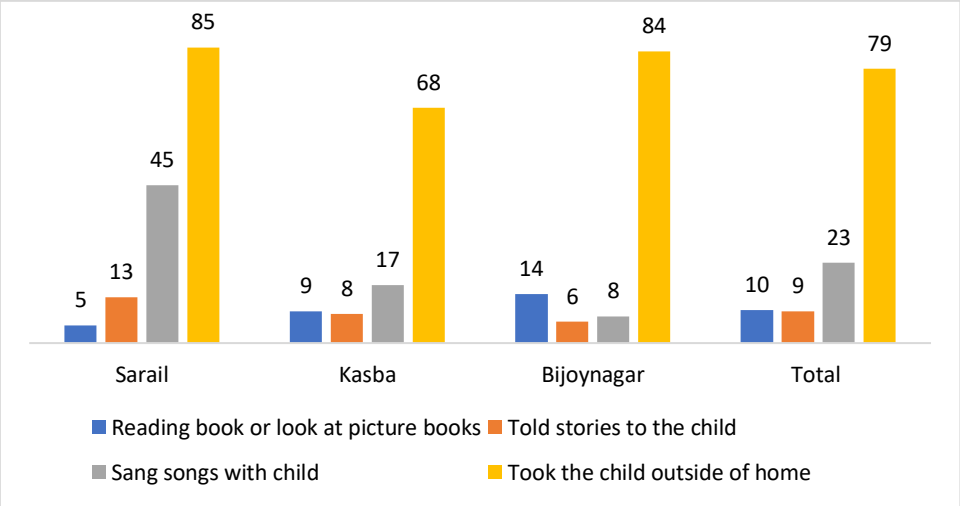


Figure 27: Percent distribution of the activities with the child in the preceding three days of the interview reported by the women (n=1,670) during the endline survey, 2022

Availability of newspapers and magazines at home

Availability of newspaper and magazines at home indicate the exposure to these media for information related to both MNH and ECD. Overall, no newspaper or magazine was available in about 98.6% of the households reported by the women from the three subdistricts. The unavailability of newspapers or magazines was highest in the *Kasba* area (99.3%) and lowest in the *Sarail* area (97.4%). Overall, only 0.4% of the households had at least one newspaper or magazine at the time of the interview (**Table 83**).

Table 83: Number of newspapers or magazines available at the residence of less than 12 months old children during the endline survey, 2022

	Endline (2022)			
Number of magazines and newspapers at home	***Sarail***	***Kasba***	***Bijoynagar***	**Total**
None	97.4	99.3	99.1	98.6
1-2	0.8	0.0	0.4	0.4
3-5	0.6	0.3	0.1	0.3
6 or more	1.3	0.4	0.4	0.7

Results (8): Community participation and engagement

Key findings

- **Awareness regarding community engagement for MNH issues:** Awareness among women regarding all forms of community participation and engagements to improve MNC situation decreased from the baseline to the endline except community involvement in providing feedback to health services (65.0%). Between the intervention areas, this proportion was 97.6 in *Sarail*. However, women from *Kasba* were not aware of any community participation or engagement for MNH issues.

Involving the community in the MNH services is a key area of the WHO IFC framework. In this part we discussed about the community involvement about awareness on MNH issues, arranging transportation, organizing finances to give MNH care, and arranging forum for giving feedback on the health services.

Table 84 shows data collected at the baseline and at the endline of the study on women's knowledge of their respective community's involvement regarding MNH issues. Findings from this endline survey revealed that overall, awareness among women regarding all forms of community engagements decreased from the baseline to the endline except community involvement in providing feedback to health services (65.0%). In *Sarail*, this proportion was 97.6% although in *Kasba*, women were not aware of any community participation related to the MNH issues. Only 1.6% women reported that they were aware of activities related to health education on MNH issues whereas this proportion was 4% during the baseline. The proportion of women reported they were aware of other activities to improve MNH such as organizing transportation, funds organized by community to assist women pay for health services for MNH issues also decreased from 2.2% and 2.7% to 0.8% and 1.7% respectively during endline.

Table 84: Percent distribution of women with less than 12 months old children according to their awareness regarding community engagement for MNH issues during the baseline (n=1,367) and endline (n=1,670) survey, 2022

	Baseline (2018)	Endline (2022)

	Health education	Organize transportation	Organize funds	Feedback regarding to health services	Health education	Organize transportation	Organize funds	Feedback regarding to health services
Age (women)								
15-19	2.3	1.5	2.3	3.8	0.0	0.0	5.9	94.1
20-24	4.3	2.1	3.4	4.2	0.0	3.7	3.7	100.0
25-29	4.7	2.6	2.6	3.4	10.5	0.0	0.0	94.7
30-34	3.3	2.8	2.3	2.8	0.0	0.0	0.0	100.0
35+	2.8	0.9	0.9	2.8	0.0	0.0	0.0	100.0
Education (women)								
No education	1.5	0.7	1.5	1.5	0.0	0.0	0.0	100.0
Partial incomplete	2.1	0.0	0.7	2.1	0.0	10.0	10.0	100.0
Primary complete[1]	4.8	2.2	3.5	3.5	5.3	0.0	0.0	94.7
Secondary incomplete	3.3	2.3	2.3	3.2	0.0	0.0	3.2	96.8
Secondary complete[2] or higher	6.6	3.8	4.5	6.3	5.3	0.0	0.0	100.0
Upazila								
Sarail	4.6	2.4	2.6	6.4	4.8	2.4	2.4	97.6
Kasba	4.2	2.9	3.5	2.7	0.0	0.0	0.0	0.0
Bijoynagar	3.0	1.3	2.0	1.7	0.0	0.0	2.6	97.4
Wealth quintile								
Lowest	2.9	1.5	2.6	2.6	0.0	0.0	0.0	100.0
Second	3.3	1.5	1.5	2.9	7.7	0.0	0.0	92.3
Middle	4.7	2.2	2.2	3.3	0.0	0.0	6.3	93.8
Fourth	4.0	3.3	4.0	5.9	3.5	3.5	3.5	100.0
Highest	4.8	2.6	3.3	3.3	0.0	0.0	0.0	100.0
Total	**4.0**	**2.2**	**2.7**	**3.6**	1.6	0.8	1.7	65.0

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Discussion and conclusion

Discussion and recommendations

Health Nutrition and Population Programme (HNPP) of BRAC has been working for decades to ensure basic and quality health care services at the prenatal and postnatal stage through its maternal and neonatal health (MNH) wing. Between 2017-2021, BRAC-MNH implemented a programme modelled on Individual, Family and Community (IFC) Framework of WHO in collaboration with Enfants du Monde (EdM) to improve access to a continuum of care throughout pregnancy, childbirth, and the postpartum periods. During 2021-24, the programme will continue to contribute to the reduction of maternal, neonatal and child mortality. This four-year programme will broadly cover three primary areas, namely 1. Health education on rights to MNH and on ECD, 2. Capacity building and 3. Accountability/Advocacy for Quality of care in MNCH. The ultimate aim of the programme was to integrate elements of the IFC components into the national MNH strategy. This research was carried out to review the progress made by the first phase of the project implemented between 2017-2021. Moreover, this report will also establish the baseline indicators for the 2021-2024 phase of the project. In this report we included findings from the quantitative component of the project covering data collected from 1670 women with <12 months old children, 1650 husbands with <12 months old children and 2184 <12 months old children.

Even though the comparison area (*Bijoynagar*) selected for the evaluation was already more socio-economically developed compared to the intervention areas (*Sarail* and *Kasba*), the first phase of the IFC programme contributed to the improvement in several areas of maternal and newborn health. Additionally, two intervention sub-districts had dissimilar socioeconomic conditions. However, based on the collected data, we can make the following conclusions, along with some operational and strategic suggestions for continued action.

- Household wealth and food security are important determinants of health and nutrition status, and they are also relevant for access to MNCH care. Since the intervention areas are socioeconomically different (*Sarail* is poorer than *Kasba*), there is a need to revisit the program activities of the second phase of the IFC program considering that separate program activities and strategies may be necessary to improve MNCH situation.
- In both intervention subdistricts, the utilization of modern family planning methods was slightly lower (*Sarail* 40% and *Kasba* 48%) compared to Chattogram division overall

(49%) (17). The differences in the percentage of women using modern methods can also be attributed to the sampling strategies followed. In BDHS, currently married women aged 15-49 years, regardless of the age of their youngest child were included whereas in our study only women with less than 12 months old children were included. Compared to BDHS, a relatively higher proportion of the women in our study had very young children and it is likely that they were not using any contraceptive methods early in their lactational period. The use of modern and suitable contraceptive methods should be prioritized particularly during the early postpartum period in the next phase of the IFC program. Moreover, as IFC program is working closely with the government, and therefore facilitating access to government supplied contraceptive methods will help the community reduce cost of contraceptives and may increase availability and use. To ensure the proper use of contraceptive methods awareness raising programs need to be organized, the legal age of marriage can be increased and strictly enforced as well as the husbands and the family members can be involved in the family planning program (18).

- The second phase of the IFC program should also emphasize menstrual hygiene particularly during postpartum period through integrating relevant information and promoting low-cost sanitary napkin through the community health workers of BRAC. BRAC HNPP can also establish linkage with different non-government organizations involved with menstrual hygiene to improve access to sanitary pads.

- It is evident that the first phase of the IFC program contributed to the improvement of knowledge relevant to the importance of ANC among the women and their husbands, access to ANC from medically trained providers, and quality of ANC. However, the quality of ANC is still a concern in the intervention sub-districts particularly in *Sarail*. Moreover, the proportion of women received their first ANC during the first trimester decreased in intervention sub-districts as well as in the comparison area. One explanation for this reduction could be the disruption of health services during COVID-19 pandemic (19,20). However, the next phase of the IFC program should consider improving the quality of ANC through taking necessary steps for increasing the proportion of women who receive first ANC within the first trimester and increasing number of ANC from MTPs throughout the pregnancy period.

- The level of knowledge on danger signs of pregnancy, childbirth, postpartum period, and newborn did not improve among the women and their husbands. In fact, the level of knowledge on these important health conditions declined during the first phase of the IFC program. Therefore, there is an urgent need to review the social and behavioural change communication (SBCC) strategies for improving knowledge on danger signs. Due to a lack of educational opportunities and poor understanding of danger signs and possible complications, many women may not recognize the symptoms and consider them normal during pregnancy (21). An increase in access to medically trained provider cannot compensate the need for improved knowledge and awareness among the women and their husbands as improved knowledge can trigger care seeking at an early stage. To reduce delay in seeking appropriate healthcare; access to health information and education should be improved through community outreach programs that provide information on childbearing issues, especially danger signs for obstetric complications (21). Therefore, in the second phase of IFC programme, existing approaches and strategies of knowledge dissemination should be reviewed and innovative SBCC strategies should be promoted to improve knowledge and awareness on the danger signs. Knowledge on danger signs need continuous reinforcements through different SBCC programs, the COVID-19 pandemic might be responsible as community-based maternal and child health services were disrupted.
- The first phase IFC program also contributed to the involvement of husbands in the care of women e.g., accompanying during ANC. Given that *Brahmanbaria* is a more conservative area, this achievement is praiseworthy. The emphasis on male involvement in maternal and reproductive health should be continued in the second phase of the IFC program.
- It is also evident that some components of birth preparedness and complication readiness were improved due to the implementation of the first phase of the program. However, *Sarail* is lagging behind *Kasba* with respect to the overall improvement in birth preparedness. As mentioned earlier, specific strategies should be developed and implemented in *Sarail* to further improve birth preparedness and complication readiness.
- In both the intervention sub-districts the level of C-section was very high. There is a need to implement evidence-based activities to reduce the rate of medically unjustified

C-section in the intervention areas. At the population level, C-section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates (22,23).

- Between 2018 and 2022, there has been a huge increase in the postnatal care for both women and newborn. The achievement should be sustained in the second phase of the program.
- The first phase IFC program may have contributed to improve exclusive breastfeeding since introduction of weaning foods before 6 months of age was higher in the comparison area and the introduction of colostrum was higher in the intervention areas. The progress made should be sustained and further improved in the second phase.
- In both the intervention sub-districts some components of essential newborn care are still a concern though cord care has improved. In the intervention and comparison areas almost, no newborn received all components of essential newborn care. Therefore, essential newborn care and its components should be prioritized in the second phase of the IFC program.
- It is also evident that there has been no change in the complications experienced by the women and their newborn. Accordingly, early identification, rapid transport, and treatment without and delay are of utmost importance to save the lives of mothers and newborn. The second phase of the IFC program therefore take initiatives to improve early care seeking and establish appropriate referral linkages.
- Care seeking form non-medially trained provider is another area of concern and appropriate activities should be implemented to make sure that every woman and child receive appropriate and quality care. Increased access to medically trained provider should be emphasized in the second phase of the IFC programme.
- It is also evident that the household environments are not very suitable for optimal development of the children. Therefore, child development indicators should also be monitored in the second phase of the IFC program and initiatives should be taken to make the home environment suitable for early childhood development.
- IFC program in the first phase also contributed to improve decision making on MNCH related issues by involving husbands, family members and community. These initiatives should be sustained in the second phase.

Limitations

Our research has some drawbacks. Firstly, as we were unable to access the baseline database, it was not possible for us to analyse additional important indicators and compare them with

endline findings, such as quality of ANC, an important indicator of maternal health. Secondly, the baseline report lacked operational definitions or the process of recoding of a number of indicators. For instance, while reviewing the uptake of ANC-related services from various providers in the baseline report, we could not find any clear operational definition of the unqualified providers or how the other providers were categorized. Additionally, Public-DH and Public-DC were used for the place of health service provisions, but it was not clear whether they were the same or distinct facilities. Thirdly, it is already evident that the COVID-19 pandemic disrupted overall service delivery and service uptake, including maternal services during pregnancy, due to restrictions enforced, fear of service seekers and providers contracting the virus, and insufficient resources (19,20). This is also true of courtyard sessions (one of the key activities of this IFC project), which were temporarily suspended due to the COVID-19 pandemic. These could negatively impact several important indicators e.g., first ANC in the first trimester. Furthermore, as already indicated, *Bijoynagar* is a more socioeconomically developed area than the intervention areas, which could dilute the comparisons between intervention areas and *Bijoynagar*. As Bijoynagar was selected as the comparison area during the baseline study, we had to keep it. Therefore, it is necessary to interpret our findings with caution.

Conclusions

The priority areas of IFC framework are to develop capacity, increase awareness, strengthen linkages, and improve quality of maternal and newborn health. The aims relevant to these priority areas including knowledge and awareness on ANC, access to ANC, delivery care, PNC, male involvement in maternal health, and women empowerment have been achieved to some extent during the first phase of the project. However, there are many areas that still need improvement to fully achieve them. Hence, the second phase of the program should emphasize use of modern contraceptive methods, menstrual hygiene, quality of MNCH care, danger signs relevant to MNH, male involvement in all aspects of MNH, essential newborn care, reduction of C-section, early identification and care seeking for maternal and newborn complications, and early child development.

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Annexes

Table 85: Percentage distribution of women with less than 12 months old children according to the sources of different contraceptive methods used in the endline (n=1,670) survey, 2022

Sources	*Sarail*	*Kasba*	*Bijoynagar*	Total
	n=555	n=560	n=555	N=1,670
Government Medical college & Hospital	0.0	0.4	0.0	0.1
Government specialized hospital	0.0	0.4	2.3	0.8
DH	0.0	0.7	1.4	0.7
Upazila/Thana Health Complex	11.6	3.3	0.5	5.1
Maternal & Child Welfare Centre (MCWC)	0.0	0.0	0.0	0.0
Family welfare centre (FWC)	8.9	9.2	18.4	11.9
Private medical college & hospital	0.0	0.0	0.0	0.0
Private clinic	5.8	3.7	6.9	5.3
Others NGO hospital/clinic	1.8	0.4	0.5	0.8
Specialized physician's chamber	0.5	0.0	0.0	0.1
Pharmacy/drug shop	58.9	71.6	61.0	64.4
Community clinic (CC)	0.9	9.6	6.0	5.8
Home	6.7	2.2	5.5	4.6
BRAC NGO	0.5	0.0	0.0	0.1
Physician's chamber	0.0	0.7	0.0	0.3
Do not know	1.3	0.4	0.0	0.6
Others	5.8	0.4	0.0	2.0

Table 86: Percent distribution of women with less than 12 months old children who had received at least one ANC visit by the place for first ANC during the endline (n=1,469) survey, 2022

	Endline (2022)						
	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Private clinic	NGO	Home	Others (CC)
Age (women)							
15-19	1.2	4.4	3.6	88.4	0.0	2.4	0.0
20-24	2.5	3.6	2.9	87.6	0.9	1.8	0.7
25-29	3.2	5.7	4.6	83.3	0.5	1.9	0.8
30-34	2.6	5.1	4.6	82.1	0.5	3.6	1.5
35+	4.2	4.2	3.2	86.3	1.1	1.1	0.0
Education (women)							
No education	2.4	4.8	1.2	89.2	0.0	2.4	0.0
Partial incomplete	2.2	7.9	3.6	80.6	0.0	5.8	0.0
Primary complete[1]	2.5	4.6	3.2	86.5	0.4	2.1	0.7
Secondary incomplete	2.0	4.8	4.2	85.8	0.5	2.0	0.8
Secondary complete or higher[2]	4.3	2.0	3.7	86.7	1.7	0.7	1.0

	Endline (2022)						
	Public-DH/ MCWC	**Public-UHC**	**Public-UH&FWC**	**Private clinic**	**NGO**	**Home**	**Others (CC)**
Upazila							
Sarail	0.4	6.0	1.4	86.9	1.2	3.9	0.2
Kasba	3.6	3.8	4.0	85.6	0.4	1.5	1.1
Bijoynagar	3.7	3.7	5.7	85.1	0.2	0.9	0.7
Wealth quintile							
Lowest	1.6	5.5	5.2	84.7	0.7	2.3	0.0
Second	4.0	5.6	4.8	81.0	0.0	3.2	1.6
Middle	1.5	4.7	3.3	86.1	0.4	3.3	0.7
Fourth	3.5	3.2	3.8	87.0	0.6	1.9	0.0
Highest	2.5	3.8	1.6	89.4	1.3	0.3	1.3
Total	**2.6**	**4.5**	**3.7**	**85.8**	**0.6**	**2.1**	**0.7**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 87: Percent distribution of women with less than 12 months old children who had received at least one ANC visit according to the place for the last ANC during the endline (n=1,469) survey, 2022

	Public-DH/ MCWC	**Public-UHC**	**Public-UH&FWC**	**Private clinic**	**NGO**	**Home**	**Others (CC)**
Age (women)							
15-19	0.4	4.4	1.2	92.4	0.4	1.2	0.0
20-24	2.7	2.3	1.3	91.4	0.5	1.1	0.7
25-29	2.4	4.0	2.2	90.1	0.3	1.1	0.0
30-34	2.0	4.1	2.6	89.3	0.5	1.5	0.0
35+	2.1	4.2	4.2	86.3	2.1	1.1	0.0
Education (women)							
No education	2.4	3.6	2.4	91.6	0.0	0.0	0.0
Partial incomplete	2.2	5.8	1.4	86.3	0.7	3.6	0.0
Primary complete[1]	2.1	3.9	2.5	90.1	0.0	1.4	0.0
Secondary incomplete	1.5	3.8	2.1	90.1	0.8	1.2	0.6
Secondary complete[2] or higher	3.3	1.3	0.7	94.0	0.7	0.0	0.0
Upazila							
Sarail	0.4	4.5	1.2	90.4	1.0	2.5	0.0
Kasba	3.0	3.0	1.7	91.1	0.2	0.4	0.6
Bijoynagar	2.9	2.9	2.6	90.4	0.4	0.7	0.2
Wealth quintile							
Lowest	1.3	4.2	2.6	89.9	0.3	1.6	0.0
Second	2.8	4.4	2.8	86.9	0.0	2.4	0.8
Middle	1.8	4.7	1.8	89.8	0.4	1.1	0.4
Fourth	2.9	2.2	1.0	92.4	1.0	0.6	0.0
Highest	1.9	2.2	1.3	93.1	0.9	0.3	0.3
Total	**2.1**	**3.5**	**1.8**	**90.6**	**0.5**	**1.2**	**0.3**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years

Table 88: Percent distribution of women with less than 12 months old children according to the place of the first PNC for women during the baseline (n=1,367) and the endline (n=1,158); (considering the number of women who received at least one PNC only) survey, 2022

	Baseline (2018)							Endline (2022)						
Indicators	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Public- CC	Private clinic	NGO	Home	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Public- CC	Private clinic	NGO	Home
Age (women)														
15-19	1.5	0.0	0.0	0.0	4.5	0.0	1.5	1.8	1.1	3.9	0.0	47.5	1.8	19.3
20-24	0.9	0.0	0.0	0.0	9.4	0.0	1.7	2.4	0.5	2.4	0.0	41.6	2.4	18.9
25-29	1.0	0.0	0.0	0.0	7.1	0.0	1.0	2.4	1.5	1.5	0.0	43.8	1.0	17.7
30-34	0.5	0.0	0.0	0.0	4.7	0.0	2.3	1.3	0.9	3.4	0.0	39.9	0.9	24.5
35+	0.0	0.0	0.9	0.0	11.1	0.0	2.8	1.6	0.8	2.4	0.0	36.3	3.2	19.4
Education (women)														
No education	0.7	0.0	0.0	0.0	5.8	0.0	2.2	1.7	0.0	0.9	0.0	18.0	2.6	33.3
Partial incomplete	0.7	0.0	0.7	0.0	3.4	0.0	2.1	2.4	2.4	1.2	0.0	24.9	2.4	24.3
Primary complete[1]	0.0	0.0	0.0	0.0	4.8	0.0	1.7	2.0	2.0	1.4	0.0	34.3	1.7	29.1
Secondary incomplete	0.5	0.0	0.0	0.0	6.9	0.0	1.6	1.4	0.3	4.1	0.0	45.8	1.6	15.2
Secondary complete[2] or higher	2.4	0.0	0.0	0.0	14.7	0.0	1.4	3.9	0.7	1.6	0.0	63.2	1.6	10.8
Upazila														
Sarail	0.4	0.0	0.0	0.0	7.3	0.0	0.9	1.4	1.1	0.5	0.0	37.3	5.2	35.9
Kasba	0.9	0.0	0.0	0.0	1.3	0.0	0.2	2.9	1.1	1.8	0.0	47.1	0.2	8.4
Bijoynagar	1.3	0.0	0.2	0.0	14.3	0.0	3.9	2.0	0.5	5.4	0.0	43.1	0.0	14.2
Wealth quintile														
Lowest	0.7	0.0	0.0	0.0	2.6	0.0	1.5	1.5	2.1	2.9	0.0	40.8	2.4	24.3
Second	0.4	0.0	0.4	0.0	4.0	0.0	2.2	2.5	0.3	1.8	0.0	30.9	1.5	26.9
Middle	0.4	0.0	0.0	0.0	8.8	0.0	0.7	2.1	0.9	3.3	0.0	35.3	1.8	18.9
Fourth	0.7	0.0	0.0	0.0	8.4	0.0	2.6	2.1	0.3	1.2	0.0	50.6	1.8	16.2
Highest	2.2	0.0	0.0	0.0	14.7	0.0	1.5	2.4	0.9	3.6	0.0	54.8	1.5	11.1
Total	**0.9**	**0.0**	**0.1**	**0.0**	**7.7**	**0.0**	**1.7**	**2.1**	**0.9**	**2.6**	**0.0**	**42.5**	**1.8**	**19.5**

[1]Primary complete is defined as completed 5 years of education
[2]Secondary complete is defined as completed education of 10 years

Table 89: Percent distribution of women with less than 12 months old children according to the care seeking practice (place) for medical emergencies during the endline (n=1,670) survey, 2022

Indicators	Public-DH/ MCWC	Public-UHC	Public-UH&FWC	Public-Community clinic (Cc)	Private clinic	NGO	Home	NA
Age (women)								
15-19	0.4	0.0	1.1	0.0	8.6	0.4	1.8	87.9
20-24	0.8	0.0	0.7	0.3	9.7	0.5	0.8	87.3
25-29	0.0	0.2	0.2	0.2	11.9	0.0	1.7	85.7
30-34	0.4	0.4	0.4	0.0	12.5	0.0	2.2	84.1
35+	0.0	0.0	0.0	0.8	9.7	0.0	0.8	88.7
Education (women)								.
No education	0.0	0.0	0.9	0.9	10.3	0.0	0.9	87.2
Partial incomplete	0.6	0.0	0.6	0.0	7.7	0.6	3.0	87.6
Primary complete[1]	0.3	0.0	0.0	0.3	8.1	0.6	2.3	88.5
Secondary incomplete	0.3	0.1	0.8	0.3	11.1	0.1	0.7	86.6
Secondary complete[2] or higher	1.0	0.3	0.3	0.0	13.0	0.0	1.3	84.0
Upazila								.
Sarail	0.2	0.2	0.2	0.0	12.1	0.7	1.6	85.1
Kasba	0.9	0.2	0.5	0.7	11.1	0.0	1.6	85.0
Bijoynagar	0.2	0.0	0.9	0.0	8.1	0.0	0.9	89.9
Wealth quintile								.
Lowest	0.0	0.0	0.9	0.0	9.7	0.3	2.4	86.8
Second	1.2	0.0	0.6	0.9	7.7	0.3	1.8	87.5
Middle	0.3	0.0	0.3	0.3	11.1	0.0	0.3	87.7
Fourth	0.3	0.3	0.3	0.0	12.6	0.6	1.2	84.7
Highest	0.3	0.3	0.6	0.0	11.1	0.0	1.2	86.5
Total	**0.4**	**0.1**	**0.5**	**0.2**	**10.4**	**0.2**	**1.4**	**86.7**

NA: They experienced no medical emergency.
[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years

Table 90: Percent distribution of women with less than 12 months old children who sought care for medical emergencies during post-natal period according to the care seeking practice (care providers) during the endline (n=1,670) survey, 2022

	Medically trained provider						Non-medically trained provider				NA
	MBBS doctors	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	Trained TBA	Unqualified provider	Family/ relative/ Neighbour/ friend	Total	
Age (women)											
15-19	7.5	1.1	0.0	0.7	0.4	9.6	0.7	1.8	0.0	2.5	87.9
20-24	7.9	0.3	0.0	0.3	0.2	8.7	0.2	3.7	0.2	4.0	87.3
25-29	9.0	0.7	0.0	0.2	0.0	9.9	0.0	4.4	0.0	4.4	85.7
30-34	9.9	0.0	0.4	0.0	0.0	10.3	0.0	5.6	0.0	5.6	84.1
35+	8.1	0.0	0.0	0.0	0.0	8.1	0.0	3.2	0.0	3.2	88.7
Education (women)											
No education	6.8	0.0	0.0	0.0	0.9	7.7	0.0	5.1	0.0	5.1	87.2
Partial incomplete	5.9	0.0	0.6	0.0	0.0	6.5	0.6	5.3	0.0	5.9	87.6
Primary complete[1]	4.9	0.3	0.0	0.0	0.0	5.2	0.3	6.1	0.0	6.3	88.5
Secondary incomplete	9.0	0.8	0.0	0.7	0.0	10.5	0.1	2.6	0.1	2.9	86.6
Secondary complete[2] or higher	12.7	0.3	0.0	0.0	0.3	13.4	0.0	2.6	0.0	2.6	84.0
Upazila											
Sarail	10.1	0.2	0.0	0.0	0.2	10.5	0.5	3.8	0.2	4.5	85.1
Kasba	9.3	0.7	0.2	0.4	0.0	10.5	0.0	4.5	0.0	4.5	85.0
Bijoynagar	5.8	0.5	0.0	0.5	0.2	7.0	0.0	3.1	0.0	3.1	89.9
Wealth quintile											
Lowest	6.7	0.6	0.3	0.6	0.0	8.2	0.6	4.4	0.0	5.0	86.8
Second	7.0	0.0	0.0	0.3	0.3	7.7	0.0	4.9	0.0	4.9	87.5
Middle	6.9	0.6	0.0	0.3	0.0	7.8	0.0	4.2	0.3	4.5	87.7
Fourth	11.1	0.3	0.0	0.0	0.3	11.7	0.3	3.3	0.0	3.6	84.7
Highest	10.2	0.9	0.0	0.3	0.0	11.4	0.0	2.1	0.0	2.1	86.5
Total	**8.4**	**0.5**	**0.1**	**0.3**	**0.1**	**9.3**	**0.2**	**3.8**	**0.1**	**4.0**	**86.7**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 91: Percent distribution of type of health care providers for the first PNC (newborn) (n=1,670) during the endline survey, 2022

	Medically trained provider						Non-medically trained provider					NA
	MBBS doctors	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	Trained TBA	Unqualified provider	Family/ relative/ Neighbour/	BRAC Shasthya Shebika/ Karmi	Total	
Age (women)												
15-19	34.6	12.5	1.1	2.9	0.0	51.1	6.4	14.6	0.4	0.4	21.8	27.1
20-24	34.8	4.7	0.2	2.1	0.2	41.9	10.5	11.9	0.5	0.7	23.6	34.5
25-29	35.6	7.3	0.0	1.0	0.0	43.8	6.8	14.5	0.5	0.5	22.3	33.9
30-34	29.2	8.6	0.0	3.4	1.3	42.5	7.7	14.6	0.9	0.9	24.0	33.5
35+	29.0	4.0	0.0	4.0	0.0	37.1	8.1	23.4	0.0	0.0	31.5	31.5
Education (women)												.
No education	10.3	4.3	0.0	0.9	0.0	15.4	11.1	31.6	2.6	0.9	46.1	38.5
Partial incomplete	22.5	7.1	0.0	2.4	0.0	32.0	9.5	17.8	0.0	1.2	28.4	39.6
Primary complete[1]	29.4	5.8	0.3	1.4	0.9	37.7	9.5	19.6	1.4	0.6	31.1	31.1
Secondary incomplete	35.3	8.0	0.3	2.9	0.0	46.4	8.8	12.3	0.0	0.3	21.4	32.2
Secondary complete or higher[2]	50.2	7.8	0.3	2.3	0.3	60.9	4.2	4.2	0.0	0.7	9.1	30.0
Upazila												.
Sarail	36.2	6.5	0.0	1.1	0.4	44.2	9.4	26.3	1.3	1.4	38.4	17.5
Kasba	28.0	5.5	0.2	1.4	0.0	35.2	1.3	3.6	0.0	0.2	5.0	59.8
Bijoynagar	37.1	9.4	0.5	4.3	0.4	51.7	14.4	13.0	0.2	0.0	27.6	20.7
Wealth quintile												.
Lowest	33.7	8.8	0.3	2.4	0.0	45.2	7.0	15.3	0.3	0.3	22.9	32.0
Second	24.2	3.7	0.3	0.9	0.0	29.1	11.0	22.0	1.2	1.2	35.5	35.5
Middle	27.0	9.3	0.6	3.0	0.6	40.4	10.8	16.5	0.3	0.6	28.2	31.4
Fourth	41.6	6.0	0.0	1.8	0.6	50.0	6.0	10.2	0.6	0.0	16.8	33.2
Highest	42.2	7.8	0.0	3.3	0.0	53.3	6.9	7.5	0.0	0.6	15.0	31.7
Total	33.8	7.1	0.2	2.3	0.2	43.7	8.3	14.3	0.5	0.5	23.6	32.8

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed education of 10 years.

Table 92: Percent distribution of the place of the first PNC (newborn), during the endline (n=1,158) survey, 2022

Indicators	Public-DH/ MCWC	Public-UHC	Public-UH& FWC	Private clinic	Home	NGO	NA
Age (women)							
15-19	1.4	1.4	3.6	40.7	23.2	2.5	27.1
20-24	1.9	0.3	2.1	36.1	22.6	2.4	34.5
25-29	1.9	1.2	1.5	37.8	22.5	1.2	33.9
30-34	0.4	0.9	3.9	34.8	25.3	1.3	33.5
35+	2.4	0.0	4.8	29.8	29.0	2.4	31.5
Education (women)							
No education	0.9	0.0	0.9	13.7	43.6	2.6	38.5

Indicators	Public-DH/ MCWC	Public-UHC	Public-UH& FWC	Private clinic	Home	NGO	NA
Partial incomplete	2.4	1.8	1.8	24.9	27.8	1.8	39.6
Primary complete[1]	1.4	1.2	1.7	31.4	31.7	1.4	31.1
Secondary incomplete	1.4	0.3	3.8	39.0	21.1	2.2	32.2
Secondary complete[2] or higher	2.6	1.3	2.0	52.1	10.1	2.0	30.0
Upazila							
Sarail	1.6	1.1	0.5	36.6	36.9	5.8	17.5
Kasba	1.4	0.5	1.6	30.5	6.1	0.0	59.8
Bijoynagar	2.0	0.7	5.8	42.9	27.8	0.2	20.7
Wealth quintile							
Lowest	1.5	1.2	2.9	35.2	24.9	2.4	32.0
Second	2.1	0.6	1.5	24.5	34.6	1.2	35.5
Middle	1.5	0.6	2.7	33.8	27.3	2.7	31.4
Fourth	1.8	0.6	2.1	43.4	17.1	1.8	33.2
Highest	1.5	0.9	3.9	46.1	14.1	1.8	31.7
Total	**1.7**	**0.8**	**2.6**	**36.7**	**23.5**	**2.0**	**32.8**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed 10 years of education.

Table 93: Percent distribution of women with less than 12 months old children according to the care-seeking practices (place) among the women (n=1,670) who sought care for the neonate having complication(s) after childbirth during the endline survey, 2022

Indicators	Public-DH/ MCWC	Public-UHC	Public UH&FWC	Public-Community Clinic (CC)	Private clinic	NGO	Home	NA
Age (women)								
15-19	0.4	1.4	0.4	0.0	52.1	0.4	0.7	44.6
20-24	1.0	0.7	0.5	0.8	49.0	0.7	0.5	46.9
25-29	1.0	1.5	0.0	1.2	46.3	0.2	1.2	48.7
30-34	0.4	2.2	0.9	0.4	50.6	0.0	0.4	45.1
35+	0.8	1.6	0.0	0.0	48.4	0.0	0.8	48.4
Education (women)								
No education	0.0	1.7	0.0	0.9	49.6	0.9	0.9	46.2
Partial incomplete	0.6	1.2	0.0	0.6	49.1	0.0	0.0	48.5
Primary complete[1]	1.7	1.2	0.9	0.6	49.0	0.0	0.6	46.1
Secondary incomplete	0.6	1.1	0.4	0.8	49.5	0.3	1.1	46.3
Secondary complete or higher[2]	0.7	1.6	0.0	0.3	47.9	1.0	0.3	48.2
Upazila								
Sarail	0.9	2.0	0.2	0.0	46.1	0.9	0.9	49.0
Kasba	0.7	0.9	0.5	1.8	46.8	0.2	1.1	48.0
Bijoynagar	0.7	0.9	0.4	0.2	54.2	0.0	0.2	43.4
Wealth quintile								
Lowest	0.6	1.5	0.6	0.0	49.6	0.3	1.5	46.0
Second	0.9	1.5	0.3	2.1	49.2	0.3	0.6	45.0
Middle	0.6	0.9	0.9	0.6	52.1	0.6	0.9	43.4

Indicators	Public-DH/ MCWC	Public-UHC	Public UH&FWC	Public-Community Clinic (CC)	Private clinic	NGO	Home	NA
Fourth	0.9	1.5	0.0	0.6	44.6	0.0	0.6	51.8
Highest	0.9	0.9	0.0	0.0	49.7	0.6	0.0	47.9
Total	**0.8**	**1.3**	**0.4**	**0.7**	**49.0**	**0.4**	**0.7**	**46.8**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed 10 years of education.

Table 94: Percent distribution of women with less than 12 months old children according to the care seeking practice (care provider) among the women (n=1,670) who sought care for the neonate having complication(s) after childbirth during the endline

	Medically trained provider						Non-medically trained provider				
	MBBS doctors	Nurse/ Midwife	Paramedic/ MA/ SACMO	FWV	CSBA/ HA/ FWA	Total	CHCP	Unqualified provider	Family/ relative/ Neighbour/ friend	Total	NA
Age (women)											
15-19	17.5	0.0	0.0	0.0	1.1	18.6	0.0	36.8	0.0	36.8	44.6
20-24	20.7	0.2	0.2	0.5	0.2	21.6	0.2	31.3	0.0	31.5	46.9
25-29	18.9	0.2	0.0	0.2	0.2	19.6	0.0	31.7	0.0	31.7	48.7
30-34	16.3	0.0	0.0	0.9	0.0	17.2	0.4	37.3	0.0	37.8	45.1
35+	18.6	0.8	0.0	0.8	0.0	20.2	0.0	30.7	0.8	31.5	48.4
Education (women)											
No education	7.7	0.0	0.0	0.9	0.0	8.5	0.0	45.3	0.0	45.3	46.2
Partial incomplete	8.9	0.6	0.0	1.2	0.0	10.7	0.0	40.8	0.0	40.8	48.5
Primary complete[1]	15.3	0.0	0.3	0.0	0.6	16.1	0.0	37.8	0.0	37.8	46.1
Secondary incomplete	21.9	0.1	0.0	0.3	0.4	22.7	0.3	30.7	0.0	31.0	46.3
Secondary complete or higher[2]	25.7	0.3	0.0	0.7	0.0	26.7	0.0	24.8	0.3	25.1	48.2
Upazila											
Sarail	12.4	0.2	0.0	1.1	0.4	14.1	0.0	36.8	0.2	36.9	49.0
Kasba	28.0	0.4	0.0	0.0	0.2	28.6	0.2	23.2	0.0	23.4	48.0
Bijoynagar	16.2	0.0	0.2	0.2	0.4	16.9	0.2	39.5	0.0	39.6	43.4
Wealth quintile											
Lowest	17.9	0.3	0.0	0.6	0.3	19.1	0.3	34.6	0.0	34.9	46.0
Second	16.2	0.0	0.0	0.6	0.3	17.1	0.3	37.3	0.3	37.9	45.0
Middle	17.4	0.0	0.3	0.3	0.0	18.0	0.0	38.6	0.0	38.6	43.4
Fourth	19.8	0.3	0.0	0.3	0.6	21.0	0.0	27.3	0.0	27.3	51.8
Highest	23.4	0.3	0.0	0.3	0.3	24.3	0.0	27.8	0.0	27.8	47.9
Total	**18.9**	**0.2**	**0.1**	**0.4**	**0.3**	**19.9**	**0.1**	**33.1**	**0.1**	**33.3**	**46.8**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed 10 years of education.

Table 95: Percent distribution of women with less than 12 months old children according to their involvement with income generating work during the endline (n=1,670) survey, 2022

Indicators	*Sarail*	*Kasba*	*Bijoynagar*	Total
	n=555	n=560	n=555	n=1,670
Age (women)				
15-19	8.5	1.1	2.2	3.9
20-24	12.0	1.9	4.3	6.0
25-29	20.3	5.8	6.9	11.1
30-34	29.1	5.0	10.8	15.0
35+	20.5	7.9	0.0	8.9
Education (women)				
No education	14.1	11.1	5.7	11.1
Partial incomplete	19.1	7.0	2.7	12.4
Primary complete[1]	19.3	3.9	7.3	11.5
Secondary incomplete	17.4	3.3	3.0	6.7
Secondary complete[2] or higher	8.2	2.1	8.9	5.5
Wealth quintile				
Lowest	19.8	2.4	6.1	9.4
Second	15.7	2.4	6.5	9.2
Middle	14.9	5.4	6.5	8.4
Fourth	20.7	3.3	4.1	9.9
Highest	9.2	4.8	2.4	5.1
Total	**16.6**	**3.6**	**5.1**	**8.4**

[1]Primary complete is defined as completed 5 years of education.
[2]Secondary complete is defined as completed 10 years of education.

Table 96: Relevant health indicators national vs. Brahmanbaria/Chattogram including the status from baseline (2018) and endline (2022)

Indicator	Brahmanbaria 2010	National 2010	Brahmanbaria 2016	National 2016	BDHS National 2018	BDHS Chattogram 2018	Baseline (2018)	Endline (2022)
	Per 1000 live birth							
Newborn mortality rate	33	32	32	30	30	31	NI	NI
Infant mortality rate	45	45	38	39	38	33	NI	NI
U-5 mortality rate	52	56	47	47	45	41	NI	NI
	Percentage (%)							
ANC from any provider (At least one visit)	71	71	-	-	92	91	74	88
ANC from any provider (At least one visit from MTP)	57	54	76	74	82	83	73	86
ANC from any provider (At least four or more visit)	18	23	-	-	47	-	9	24
ANC (At least four or more) and at least 1 from MTP	-	-	17	34	44	36	8	23
Institutional delivery	19	23	32	47	49	46	NI	53

PNC from a medically trained provider within two days of delivery	24	23	36	48	52	50	6	48

* NI= No information

Table 97: Comparison between study findings in study areas and in Chattogram division for selected important indicators

Indicators	Sarail		Kasba		Bijoynagar		Endline report (Table/Figure number)	Chattogram division	Reference (s)
	2018	2022	2018	2022	2018	2022			
Family planning: • Current use of contraceptive method (Any modern method) (%)	NI	40	NI	48	NI	39	Figure 7	49	BDHS 2022
Knowledge on ANC									
• Knowledge regarding the importance of receiving ANC among women (≥4 ANC) (%)	6	23	11	51	9	24	Table 1		
• Knowledge regarding the importance of receiving ANC among husbands (≥4 ANC) (%)	7	17	9	30	8	17	Table 16		
• Knowledge regarding the importance of receiving ANC within first trimester among women (%)	15	28	15	35	17	41	Table 15		
• Knowledge regarding the importance of receiving ANC within first trimester among husbands (%)	15	20	10	28	14	39	Table 16		
ANC from any provider									
• Received at least 1 ANC from any provider (%)	73	88	84	94	66	82	Table 19	91	BDHS 2022
• Received ≥4 ANCs from any provider (%)	6	18	11	36	9	16			
• Received first ANC within first trimester (considered ≤13 weeks as 1st trimester) (%)	15	11	15	9	17	4		37 (for <4 months of pregnancy)	BDHS 2017-18
• Received first ANC within first trimester and took ≥4 ANC (%)	4	8	4	7	5	3			
ANC from medically trained provider (MTP)									
• Received at least 1 ANC from MTP (%)	71	85	82	91	66	82	Table 20	88	BDHS 2022
• Received ≥4 ANC from MTP (%)	6	18	11	35	9	16			
• Received first ANC within first trimester from MTP (%)	15	22	15	25	17	21			
• Received first ANC within first trimester and took ≥4 ANC from MTP (%)	4	13	4	16	5	10			
Quality of ANC									
• Percentage with 4+ ANC visits and last ANC from an MTP (%)	NI	18	NI	35	NI	16	Table 25	37	BDHS 2022
• Percentage receiving all basic components of ANC (%)	NI	24	NI	57	NI	26		37	BDHS 2022
• Percentage with 4+ ANC visits and all components of ANC (%)	NI	11	NI	26	NI	3		21	BDHS 2022
Knowledge on danger sign									
• Knowledge on danger signs during pregnancy among women (3 or more) (%)	41	21	32	28	46	20	Table 26		
• Knowledge on danger signs during pregnancy among husbands (3 or more) (%)	36	10	23	17	42	10	Table 27		

* NI= No information

For additional information,

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