

## Does Entitlement Card ensure Utilization of Urban Primary Healthcare Clinic in Bangladesh?

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### ABSTRACT

**Background:** Although Bangladesh substantially reduced 40% maternal death in the last decades, it is still challenging, especially among the urban poor. The achievements are not equitable between different economic quintiles and between the rich and the urban poor. This study aims to examine the extent to which the entitlement card affects the utilization of maternal and child health care and identifies other factors that influence MCH services.

**Subjects and Method:** This cross-sectional study was carried out in the working areas of the Urban Primary Healthcare Project (UPHCP) in Bangladesh. A two-stage cluster sampling technique was used to select the participants. A total of 3,949 women aged 15-49 years, having at least one child aged two years or less were selected for this study. The data were collected through face-to-face interviews. The data were analyzed using multinomial logistic regression.

**Results:** The proportion of utilization of UPHCC was 49.9%. One-fourth (26.6%) of them fully utilized it and another 23.3% utilized it partially. Stepwise multinomial logistic regression analysis revealed that those who had an Entitlement Card from the UPHC project were 11.75 times (95% CI= 9.481, 14.549; p= 0.001) more likely to fully Utilized and 3.64 times (95% CI= 3.643, 2.911; p= 0.001) likely be utilized partially compared to

non-utilizer. Respondents having no formal education utilized UPHCC fully (AOR=2.32; 95% CI= 1.46, 3.68; p= 0.001) and partially (AOR= 1.76; 95% CI= 1.12, 2.77; p= 0.014) used UPHCC. It was 3.08 (95% CI= 2.03, 4.67; p= 0.001) times for fully and 2.71 (95% CI= 1.82, 4.04; p= 0.001) times for partially utilized UPHCC compared to non-users among the primary level of education. Small family size ( $\leq 4$ ) and monthly family income in the range of BDT 10,000 above were likely to utilize UPHCC. However, non-Muslims were less likely to Utilized UPHCC.

**Conclusion:** Apart from the entitlement card, other factors such as monthly income BDT > 10,000, small family size, no formal educated mother appeared to be potential predictors for utilization of the Urban Primary Health care clinic.

**Keywords:** entitlement card, maternal care, Utilization, urban primary healthcare

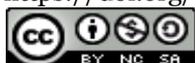
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### BACKGROUND

The eight elements of Primary Health Care (PHC) are rendered since the inception in 1979-1980 of PHC services in Bangladesh. The Government of Bangladesh, since 1998, has been pursuing a Sector-Wide Ap-

proach (SWAp). Based on the previous SWAps, the Ministry of Health and Family Welfare (MOHFW) has prepared the 4<sup>th</sup> SWAp (2017-22) which would serve as the first and the foundation stone of three subsequent SWAps. The primary health care

service provision operates at three tiers, i.e., Upazilla, union and the community linking them with the districts as part of the public-sector health service which is rural-based infrastructure (Ministry of Health and Family Welfare, 2017).

But in urban areas, delivery of preventive health services including Primary Health Care services is mandated to the Ministry of Local Government, Rural Development and Cooperatives (Ahmed et al., 2015).

For a while, there has been proportionately less investment in the primary health care services for the urban poor and slum dwellers to meet these priority needs. The delivery of preventive health and limited curative care as an obligation of the city corporations and municipalities under the provision of Municipal Administration Ordinance of 1960, the Pourashova Ordinance of 1977, the City Corporation Ordinance of 1983 and the Local Government (Pourashova) Act 2009.

The Urban Primary Health Care Project (UPHCP) was introduced with the support from Development partners, Donor agency and Bangladesh Government. A Private-Public Partnership (PPP) model was adopted to provide primary health care services and in particular maternal and child health services to the urban poor. Urban Primary Health Care Project (UPHCP) is also providing Essential Service Delivery plus package through three tiers as Comprehensive Reproductive Health Care Centers (CRHCCs), PHCCs and satellite clinics in selected partnership areas (Local Government Division, Bangladesh, 2012).

Direct obstetric complications cause the majority of maternal deaths and disabilities. These deaths and morbidities would be avoided if women can get timely and ample antenatal, delivery, and post-delivery services. The dropping of maternal morbidities and mortalities is the global issue that is

given due attention by the government of countries worldwide (Zelalem-Ayele et al., 2014). Banke-Thomas et al. (2017) reported understanding better the maternal health service utilization pattern of the pregnant adolescent in low and middle-income countries. They found minimal research has been done in these vulnerable areas while more common significant factors were wealth quintile, media exposure and rural/urban residence.

The education of the mother and her partner were the commonest significant factors that influenced utilization. Antenatal care utilization predicted the use of skilled birth attendance and the use of both predicted use of postnatal care. In Bangladesh, the central policy focus since the late 1990s was the reduction of maternal mortality and the extension of safe motherhood services. This was reflected in the Health and Population Sector Strategy (HPSS) and the rights' based National Policy for Maternal Health of 2001. An Essential Services Package (ESP) including comprehensive services for antenatal, delivery and post-delivery and neonatal care at primary level healthcare facilities throughout the country, has been treated as a central program feature (Ministry of Health and Family Welfare, 2017).

The UPHCP is providing a package of high-impact primary healthcare services to the urban population, mainly targeting the poor women and children in urban areas of Bangladesh with entitlement cards, popularly known as 'red card'. A red cardholder is allowed access to all types of care at urban primary healthcare centers free of costs. To identify the beneficiaries of a red card, a baseline survey was conducted by the partner NGOs at the beginning of the partnership agreement to identify poor households in the respective partnership areas. Poor families were identified based on the project prescribed social and economic indicators. These

households were given entitlement health cards giving them free access to health services under the project. The survey of low-income families would be updated annually (Local Government Division, Bangladesh, 2012). There are some other health cards available in Bangladesh some of which are Green Color and Orange Color. In earlier Smiling Sun Clinic had implemented the Urban Family Health Partnership health card scheme.

This scheme comprised three types of health cards - Red cards for family members, Yellow cards for the middle class and Green cards for extremely poor, which are not currently available. Then the NGO Service Delivery Program (NSDP) had modified earlier schemes and introduced Health Benefit Cards (HBCs) scheme. Under this scheme Smiling Sun Clinic has been implemented partially or fully following two cards – Green Color Health Benefits Card for Least Advantaged (LA) people and Orange Color Health Benefits Card for the middle and upper-middle class (able to pay customer) (HB Consultants and Natural Resources Planners, 2012).

Considering this view, this study was aimed to estimate the proportion of urban women utilizing the urban healthcare clinic for their maternal care and the factors affecting it. However, the study was aimed to determine to what extent an entitlement card influences them to utilize the urban primary health care clinic.

## SUBJECTS AND METHOD

### 1. Study design

This was a cross-sectional study conducted in working areas of Urban Primary Healthcare Project (UPHCP) areas in seven divisions of Bangladesh.

### 2. Population and sample

A two-stage cluster sampling technique was adopted to select the ever-married women aged 15-49 years having at least one child

aged within two years. For the determination of sample size, the anticipated population proportion of urban poor was considered as base criteria with 10% relative precision and 95% confidence interval.

The initial sample size was 896 which then inflated by multiplying non-response, design effect. So, the final sample size was 4124. However, 3949 completed questionnaires were collected with a response rate of 95.8%. The respondents who did not consent or unwilling to participate, visitors, or guests residing in the household were excluded from the study.

### 3. Study Variables

The dependent variable was the utilization of maternal care services from urban primary health care clinics. The independent variables were having an entitlement card, catchment area, age of the respondent, religion, family size, level of education of the respondent, occupation of the husband and respondent, wealth index and ownership status of the house.

### 4. Operational Definition of Variables

**The utilization of maternal and child health** refers to antenatal care, delivery care, post-natal care and family planning. For child health, vaccination, ARI, diarrhea, fever and child nutrition was assessed.

**Wealth index** is a composite measure of a household's cumulative living standard. The wealth index is calculated using easy-to-collect data on a household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction, and types of water access and sanitation facilities.

**Catchment area** was defined as the set rules or criteria provided by the Ministry of Local Government to classify the area into Poor and non-poor.

**Entitlement card** is a red color document given by the project authority which verifies the bearer's eligibility for a particular service from the project UPHC clinic.

## 5. Study Instrument

The questionnaire was divided into five parts. The first section was the socioeconomic and demographic characteristics followed by utilization of MCH services. In the present paper, we analyzed the usage of maternal care in terms of antenatal, delivery, and postnatal care (Rahman, 1997; National Institute of Population Research and Training, Bangladesh, 2012).

Before field operation, the pre-test of the questionnaire was done in the non-sample area. Data were collected through face-to-face interviews using the interviewer-administered questionnaire. Failure to respond after three attempts of the interview was considered as non-response.

## 6. Data analysis

A completed data was entered into the computer for analysis. Incomplete and inaccurate and missing information in the main components of the questionnaire was discarded. Before data analysis, data were cross-checked for any unusual findings, outliers and missing values (Sterne et al., 2009). Descriptive statistics were presented in frequency, percentage, mean and standard deviation. For inferential statistics, Chi-square test of independence was done to find a significant association between the qualitative variables.

To determine the utilization of maternal care, a question was asked whether the respondents received antenatal care, delivery and post-natal care in her last pregnancy. Then she was asked for the place of the utilization of care. If she received service from UPHCC then it was coded as '1' and others were coded as '0'. A composite score was calculated with three as full utilization, 1 and 2 as partial and zero as non-utilization of UPHCC. Finally, a stepwise multinomial logistic regression analysis was done to determine the factors associated with the utilization of maternal care from UPHCC. Statisti-

cal analysis was done using Statistical Package SPSS, version 22.0 (IBM SPSS, 2013).

## 7. Research ethics

The Ethical Committee of Universiti Malaysia Sarawak (UNIMAS) has approved this study (UNIMAS/NC-21.02/03-02.JID.02 (08), 11 February 2014). Ethical approval was also obtained from the Bangladesh Medical Research Council (BMRC), Bangladesh (BMRC/NREC-2013-2016/1265, 30 June 2015). All the respondents were briefed about the objectives of the study and written informed consent was obtained before data collection.

## RESULTS

### 1. Sociodemographic characteristics

The details of socio-demographic characteristics are illustrated in Table 1. This study attempted to calculate the wealth index based on household assets i.e. usable goods and avoiding assessing the income of the households. In Urban Primary Healthcare Project (UPHCP) working area, entitlement cards (red card) were issued to the poor families to avail healthcare services free of charge from UPHCP facilities. Out of 3949 respondents, 20% entitlement cardholder had shown there to the interviewer. However, another 5% did not show a card, although they claimed to have a card.

### 2. Utilization of maternal care

Out of 3949 respondents, 7.2% did not receive any antenatal care; however, those who received antenatal care, 51.5% from non-UPHCC and 48.5% from UPHCC. In terms of delivery care, 70.4% received delivery care from other than UPHCC, and only 29.6% received delivery care from UPHCC. The prevalence of postnatal care was less than antenatal care and 22.8% did not receive postnatal care. Half of the respondents received postnatal care from non-UPHCC and the rest were from UPHCC (Figure 1).

**Table 1. Sociodemographic characteristics**

<b>Characteristics</b>	<b>Frequency</b>	<b>%</b>
<b>Type of catchment area</b>		
Non-poor	1985	50.3
Poor	1964	49.7
<b>Age (Years)</b>		
< 20	302	7.6
20 – 24	1461	37.0
25 – 29	1304	33.0
30 – 34	565	14.3
35 – 39	261	6.6
≥40	56	1.4
<b>Religion</b>		
Non-Muslim	380	9.6
Muslim	3569	90.4
<b>Family Size</b>		
<4	864	21.9
4	1221	30.9
5	936	23.7
≥6	928	23.5
<b>Level of education</b>		
No formal education	456	11.5
Primary School	1509	38.2
Secondary School	1263	32.0
Higher Secondary	456	11.5
Graduate and above	265	6.7
<b>Occupation (respondents)</b>		
Not working	192	4.9
Working	475	12.0
Housewife	3282	83.1
<b>Occupation (Husband)</b>		
Small trade	1078	27.3
Service	968	24.5
Manual job	1760	44.6
No specific job	143	3.6
<b>Having entitlement card</b>		
Yes	988	25.0
No	2961	75.0
<b>Wealth index</b>		
Poorest	776	19.7
Poor	828	21.0
Middle class	767	19.4
Rich	786	19.9
Richest	792	20.1
<b>Ownership status</b>		
Own	1592	40.3
Rented	1998	50.6
Sheltered	359	9.1

Comparative analysis revealed that utilization of urban primary healthcare project clinic was found to be high among the respondents from the poor catchment area in terms of ANC (59.0%), delivery care (36.4%) and postnatal care (62.4%). Whereas the respon-

dents from the non-poor catchment area mostly received services from the non-UPHC clinic and the difference was statistically significant ( $p < 0.001$ ). However, their strength of association (effect size) was small (Table 2).



**Figure 1 Percentage distribution of respondents by maternal care**

**Table 2. Utilization of urban primary healthcare clinic by the catchment area**

Place of service	Catchment area				p (ES)
	Non-poor		Poor		
	n	%	n	%	
<b>Place of ANC</b>					
Non-UPHCC	1151	61.6	733	41.0	<0.001
UPHCC	718	38.4	1055	59.0	(0.202)
<b>Place of delivery</b>					
Non-UPHCC	1532	77.2	1250	63.6	<0.001
UPHCC	453	22.8	714	36.4	(0.15)
<b>Place of PNC</b>					
Non-UPHCC	976	61.6	554	37.9	<0.001
UPHCC	608	38.4	909	62.1	(0.23)
<b>Overall Utilization of UPHCC</b>					
No	1167	58.8	812	41.3	<0.001
Partial	421	21.2	500	25.5	(0.18)
Fully	397	20.0	652	33.2	

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001

\*p-value reached from chi-square test, ES=Effect size

**2. Factor affecting the overall Utilization of maternal care from UPHCC: Multinomial logistic regression analysis**

To determine the factors affecting the utilization of maternal care, a stepwise multinomial logistic regression analysis was done, as the dependent variable was the overall utilization of maternal care, which was categorized into fully, partial and non-utilization of UPHCC. The non-utilization of UPHCC was considered as the reference. All the sociodemographic variables such as religion, level of education,

the occupation of the respondents and husband, history of borrow loan, having an entitlement card, wealth index, age in years were included into the model. However, religion, level of education, monthly household income, family size, having an entitlement card, and age in years retained in the model.

The model information indicated that the chi-square (df) was 1004.135(26); p <0.001 and the goodness of fit (GOF) was not statistically significant (p>0.05) indicating well-fitted model with homogeneity.

**Table 3 Factors affecting the Utilization of maternal care services from urban primary health care clinic**

Parameters	Partially					Fully				
	β	SE	OR	95% CI		β	SE	AOR	95% CI	
				LL	UL				LL	UL
Intercept	-	0				-	0			
	2.25***	.33				4.15***	.34			
Religion										
Non-Muslim	-0.54***	0.15	0.59	0.44	0.78	-0.80***	0.17	0.45	0.32	0.63
Muslim (RC)			1.00					1.00		
Level of education										
No formal education	0.57**	0.23	1.76	1.12	2.77	0.84***	0.24	2.32	1.46	3.68
Primary School	1.00***	0.20	2.71	1.82	4.04	1.12***	0.21	3.08	2.03	4.67
Secondary School	0.60***	0.20	1.82	1.23	2.68	0.55**	0.21	1.72	1.14	2.60
Higher Secondary	0.12	0.23	1.13	0.72	1.76	0.35	0.23	1.42	0.90	2.25
Graduate and above (RC)			1.00					1.00		
Family size										
<4	0.03	0.13	1.03	0.81	1.32	0.55***	0.14	1.73	1.32	2.26
4	0.15	0.11	1.17	0.93	1.45	0.49***	0.12	1.64	1.29	2.08
5	-0.12	0.12	0.88	0.70	1.12	0.23	0.13	1.26	0.98	1.63
≥6 (RC)			1.00					1.00		
Having an entitlement card										
Yes	1.29***	0.11	3.64	2.91	4.56	2.46***	0.11	11.75	9.48	14.55
No (RC)			1.00					1.00		
Family income (BDT)										
< 10000.0	0.29	0.15	1.34	1.00	1.81	0.09	0.15	1.09	0.81	1.48
10000.0 - 19999.9	0.53***	0.14	1.70	1.29	2.24	0.04	0.15	1.04	0.78	1.39
20000.0 - 29999.9	0.35*	0.16	1.42	1.04	1.93	0.25	0.16	1.28	0.93	1.77
≥30000 (RC)			1.00					1.00		
Age in years	0.01	0.01	1.01	1.00	1.03	0.07***	0.01	1.07	1.05	1.09
n observation	3,949									
Model Chi <sup>2</sup> (df)	1004.135(26); p<0.001									
Pearson	4776.888(4638); p>0.05									
Deviance	4602.864(4638); p>0.05									
Cox and Snell	22.5%									
Nagelkerke	25.7%									
McFadden	0.122									
Reference	Non-utilization of UPHCC									
Classification	60%									

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Dependent variable: utilization of UPHCC (None, partial and fully)

The Pseudo Cox and Snell R<sup>2</sup>= 22.5%; Nagelkerke= 25.7%. Predicted classification showed that 60% correctly classify the dependent variable. The analysis revealed that the non-Muslim were 46% less likely to partially utili-

zed the UPHCC, and 20% less likely to utilize fully. It was found that respondents who had no formal education, 2.32 times (95% CI= 1.46 to 3.68, p= 0.001) likely to fully utilized UPHCC, whereas, 1.76 times (95% CI= 1.12 to

2.77;  $p= 0.004$ ) likely to partially utilized UP-HCC. Among the respondents with a primary level of education, 2.71 times (95% CI= 1.82 to 4.04;  $p= 0.018$ ) likely to utilized partially and 3.08 times (95% CI= 2.03 to 4.67;  $p= 0.001$ ) fully utilized the UPHCC.

However, the secondary level of education, 1.82 times (95% CI= 1.25 to 2.68;  $p= 0.004$ ) partially and 1.72 times (95% CI= 1.14 to 2.60;  $p= 0.017$ ) likely to fully utilized the clinic. Those who had entitlement card, 11.75 times (95% CI= 9.48 to 14.55;  $p= 0.001$ ) likely to fully utilized UPHCC and 3.64 times (95% CI= 2.91 to 4.56;  $p= 0.001$ ) likely to partially utilized UPHCC.

The monthly income BDT 10,000-19,999, 1.70 times likely (95% CI= 1.29 to 2.24;  $p= 0.001$ ) to partially utilized UPHCC. However, other income categories had no impact on utilization. The family size with less than four members were 1.73 times (95% CI= 1.32 to 2.26;  $p= 0.010$ ) and family size with four members were 1.64 times (95% CI= 1.29 to 2.08;  $p= 0.001$ ) likely to fully utilized UPHCC. It was found that one-unit increase of age affects 1.07 times (95% CI= 1.05 to 1.09;  $p= 0.001$ ) likely to increase the utilization of UPHCC (Table 3).

## DISCUSSION

Majority of respondents in this study received their last ANC from the doctor. This result is higher than other studies in UPHCP-II (HB Consultants and Natural Resources Planners, 2012; Research Evaluation Associates for Development, 2012). Respondents having an entitlement card were more likely to utilized urban primary health care clinic than without card.

In a past study of UPHCP-II revealed that most of the entitlement cardholders received health care services with satisfaction due to free services, free medicine and availability of care which support the present finding. This study found that 29.6% of women

delivered their last child at UPHCP clinic. In another study of UPHCP, results of the present study are almost similar to their findings where delivery at UPHCP was 28.5% (HB Consultants and Natural Resources Planners, 2012).

Here, most of the respondents received PNC from medically trained personnel which is higher than several studies in Bangladesh. More than two-fifths of the women received their first follow-up check after delivery within one day (45.8%). Findings are similar to BDHS, 2014 results (National Institute of Population Research and Training, Bangladesh, 2016), and higher than other survey reports in Bangladesh (HB Consultants and Natural Resources Planners, 2012; National Institute of Population Research and Training, Bangladesh, 2013; Research Evaluation Associates for Development, 2012).

This study found that the age of the mother appeared to be an independent predictor for utilization of institutional care. Mothers with older age were likely to fully utilized urban primary health care clinic. This might be due to their previous experience, guiding them to choose institutional care. However, other than UPHCC, the receiving maternal care among the young mother was satisfactory. This might be the fact that UPHCC is mostly providing basic health care compared to specialized medical care facilities.

Weldemariam et al. (2018) reported that younger women were more likely to utilized institutional care. Similar studies reported that young mothers were more likely to utilize institutional care (Amano et al., 2012; Teferra et al., 2012; Wolelie et al., 2014). Though the religious beliefs in modern medicine are not always taken into consideration, however, sometimes, seeking any related medical services can use their beliefs to guide them to select the health services (Eisenhut, 2018). The present study revealed that non-

Muslim were less likely to utilized urban healthcare project clinic. This might be due to the fact that Bangladesh is Muslim dominant countries with 92% Muslims. Similar findings were reported in past studies with an association between service utilization and religion (Addai, 2000; Gyimah et al., 2006).

They contradicted the findings of our study and indicated that Muslim women are less likely to utilize postnatal services. The result of their study shows that Christian women had higher utilization of this service. This may be due to the strong link between Christianity and medicine. Bangladesh has a comprehensive network of health service delivery from top to grass root level. To ensure the optimum health to the poor, the government of Bangladesh implemented the Essential Service Package (ESP) which ensure the basic Medicare to all especially the poor (Ministry of Health and Family Welfare, Bangladesh, 1998).

However, these services were mostly implemented through primary healthcare services in the sub-district and below level. The same concept was also implanted in urban areas. The only difference is that it is implemented through the local government of Bangladesh. Ahmed et al. (2006) reported that the targeted intervention among the ultra-poor in rural areas increases the accessibility of health care services, especially Allopathic Medicare.

Our study had similar finding with the distribution of entitlement card increase in the healthcare services in terms of preventive, promotive and curative care from the urban healthcare clinic. Though the delivery cares are less than the national expectation, it has an increase in trend. In our study, it was found that the level of education had an impact on utilization of reproductive health care. These findings indicated that with formal education, primary and secondary level of education increases the likelihood of

maternal care from the UPHCC. However, beyond the secondary level of education, it had no impact. This might be the fact that the healthcare services are especially targeted for the urban poor. With increasing level of education, they had the preference to take care from specialized health care services.

The level of education grounded the transformative role in improving the health of the individual and also to the society, i.e. education helps to develop their capacity to personal control, mastery, and self-direction: the habits and skills of communication and analytic skills (Ivančič et al., 2008).

Kim (2016) argued that educated women are more physically capable of procuring child than the uneducated, but want fewer children and control birth better. This decrease family size. Nonetheless, educated women provide better care at home, thus increasing the value of their children's human capital and reducing the need for more children. This might be a link that the educated women with a small family size increase the utilization of health care service. In our study, the pattern of utilization was likely to be the same with others studies (Kifle et al., 2017; Srivastava et al., 2014; Zhang et al., 2016).

Respondents are having health entitlement card or red card likely to be fully and partially utilized MCH care from UPHCP more than respondents having no entitlement card in this study. Health entitlement card, popularly known as a red card since it is red is an essence of the UPHCP. It is like a free ticket for the urban poor, marginalized dwellers to visit UPHCP health facility to get treatment at free of cost. There were few studies in UPHCP which also showed similar findings (HB Consultants and Natural Resources Planners, 2012; National Institute of Population Research and Training, Bangladesh, 2013; Research Evaluation Associates for Development, 2012).

Other than the red card of this project, the government of Bangladesh with support from development partners have introduced different healthcare schemes for the poor and marginalized people for improving maternal health situation examples are Demand Side Financing (DSF)-Voucher schemes introduced by MOHFW and voucher schemes by Marie Stopes Clinic Society (World Health Organization, 2010).

Maximum past studies opined that the DSF-MHVS has ominously enhanced access to maternal health services for the voucher holders and utilization of ANC, safe delivery and PNC have increased in the DSF areas and among voucher holders (Ahmed and Khan, 2011; Farzana, 2014; Halim, 2014; Hatt et al., 2010; Noor et al., 2013). In the DSF areas, equity in maternal health service utilization has also improved compared to similar non-DSF areas. Although one study did not find any effect on equity, income, especially low income influenced the utilization of UPHCP as it served to lowest quintile people with subsidy and free of cost. Wealth status and income, age and education affect maternal healthcare utilization (Birmeta et al., 2013; Ononokpono and Odimegwu, 2014; Rutaremwa et al., 2015). Use of maternal services is affected by socioeconomic status and has a positive relationship with the utilization of maternal care (Bernard et al., 2017; Khanal et al., 2014).

Although the majority of urban women received antenatal care (92.6%), the utilization of antenatal care services from urban primary healthcare clinic was only 48.5%. Similarly, 77.15% of the women received postnatal care, but only 49.8% were from UPHCC. The delivery was lowest (29.6%) from UPHCC. This study revealed that age, family income, family size, level of education, religion and having entitlement card were associated with utilization of urban primary health care clinic. These findings should be

taken into consideration when designing programs aimed at promoting the usage of urban primary health care clinic. These findings have important policy implications for meeting the Sustainable Development Goals (SDGs) of improving maternal health by reducing the maternal mortality. Health promotion program should be undertaken to enhance women's awareness of the utilization of urban healthcare clinic which is specially provided for the urban poor. Local Government with collaboration with the ministry of health, should initiate to implement the program.

Though the study adopted multistage cluster sampling, some limitation of this study was encountered. Most of the responses were recorded based on their memory, where recall bias might be the main issues. The data were collected from urban areas, which might not be reflected in the general population. Thus, the generalization of the results should be cautiously interpreted.

#### **AUTHOR CONTRIBUTION**

Md Mizanur Rahman and Sharmin Mizan developed the concept, design, analysis, interpretation of data and manuscript writing of the study, Sharmin Mizan and Sk Akhtar Ahmad organized and collected data. All authors assisted in the editing and refining of the manuscript. All authors read and approved the final manuscript.

#### **CONFLICT OF INTEREST**

The authors declare that they have no competing interests.

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