

## Utilization of Maternal and Child Health Services in Selected Community Clinics

Israfil KM<sup>1</sup>, Riaz BK<sup>2</sup>, Islam ANMS<sup>3</sup>, Haque MF<sup>4</sup>, Bosu S<sup>5</sup>, Happy N<sup>6</sup>

### Abstract

**Objective:** The government of Bangladesh initiated community clinics (CC) to extend the reach of primary health care services. Maternal and child health services are the part of primary health care which are available at the community clinics. The current study aimed to investigate the real status of community clinic utilization in the case of maternal and child health, and find out ways for proper and satisfactory utilization of services at community clinics.

**Materials and methods:** This cross-sectional study was conducted at community clinics of Feni Sadar Upazila among conveniently selected of 221 service receivers and 20 service providers aged 18 years or older. Data were collected from the respondents using a semi-structured questionnaire through face-to-face interviews.

**Results:** The results shows that respondents aged between 30 to 44 years were the most frequent service seekers in community clinics and women were the prominent group of seeking healthcare services. About one third of the service receivers are illiterate. Among the service receivers, 98.2% had knowledge about family planning methods, but only 48.4% utilized family planning services from CCs. On the other hand, half of the female respondents received ANC and PNC services. Over 70% service receivers came to CC due to its proximity to their place of residence.

**Conclusions:** The present study indicates that to increase the utilization of services from CCs, awareness regarding normal vaginal delivery, family planning, and breastfeeding counselling should be increased among the rural people. Also, some services such as normal vaginal delivery should be introduced to all the community clinics.

**Key words:** Child Health Care, Community Clinic, Maternal Health Care, Primary Health Care.

### Introduction

The community clinic (CC) is a unique extension of primary health care services to the doorsteps of rural people of Bangladesh. More than 60% of the people of Bangladesh live in the rural areas<sup>1</sup> and they have to depend upon the local health centers or on the village doctors for their health care. Community clinic is the lowest tier health facility at primary level established throughout the country including very hard-to-reach, remote & isolated areas. The government has established community clinics to deliver local primary health care and family planning services in rural areas. They replace the home-based and other outreach services at the community level.<sup>2</sup> Now it has become an integral part of health system in Bangladesh and millions of people are getting services from the community clinics.

Community clinic (CC) had started its journey in 1998, and during 1998-2001 periods, 10,723 Community Clinics were constructed and 8,000 started functioning.<sup>3</sup> In a report published on 2014, CCs in Bangladesh were found to have catchments areas with approximately 1200-1500 households

and population between 6000-10000.<sup>4</sup> Till 2018, 14878 Community Health Care Provider (CHCP) is appointed for the community clinics throughout the country.<sup>5</sup> Each clinic is provided with a laptop and internet facilities to establish e-health connection from the community clinic to the Upazila Health complex. The in-charge of the clinic is called CHCP. The CCHP provides contraceptives to the villagers and advice to the pregnant women during the prenatal and postnatal period. They also provide medicines for diarrhea, pneumonia and other childhood infections. At present, about 30 types of medicines are supplied to poor people through these clinics at free of cost. It is reported that over the last two decades, the health and family planning programs of Bangladesh have achieved considerable progress in reducing fertility, infant mortality and under five mortality rates with the support of community clinic services.<sup>2</sup>

Previous studies showed a mixed report in the case of structure, location, availability and capability of human resources, presence of maternal and child healthcare medical facilities (medicine and equipment) and availability of general equipment of functioning community clinic in Bangladesh, which expresses both adequacy and inadequacy in this regard.<sup>2,6,7</sup> Till to date, it is not clear the depth of the services provided and received at community clinics in terms of maternal and child health. Therefore, this study aimed to investigate the real status of community clinic utilization in the case of maternal and child health, and find out ways for proper and satisfactory utilization of services at community clinics. It is expected that the findings of this study would provide relevant and valid information to set a baseline for future action and would help the policy makers in formulating strategies for

1. Dr. Kazi Md. Israfil, Lecturer, Dental Public Health Department, Dhaka Dental College.

2. Dr. Baizid Khurshid Riaz, Professor, Department of Public Health and Hospital Administration & Director, NIPSOM, Mohakhali, Dhaka.

3. Dr. ANM Shamsul Islam, Associate Professor, Department of Public Health and Hospital Administration, National Institute of Preventive and Social Medicine, Mohakhali, Dhaka.

4. Dr. Mohammad Farhadul Haque, Director Hospital, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

5. Dr. Sunanada Bosu, Medical Epidemiologist, Institute of Epidemiology Disease Control and Research (IEDCR), Mohakhali, Dhaka.

6. Dr. Nazmunahar Happy, Lecturer, Barishal Nursing college, Barishal.

further improvement in the initiative and thus utilization of community clinic.

### Materials and methods

This cross-sectional study was conducted among conveniently selected 241 participants including both health care services receivers and providers in 18 community clinics of Feni Sadar Upazila, Feni for a period of one year starting from January 2019 to December 2019. Community Health Care Providers (CHCP), Health Assistant (HA) and Family Welfare Assistant (FWA) were selected as the participants of health care service providers of the study. On the other hand, mothers who had children up to the age of five and were receiving services from community clinic were included as the participants of service receivers of this study. Face to face interview by using a semi-structured questionnaire was executed for collecting the data. In order to avoid confusion, and getting the exact response, the questionnaire was asked into Bengali after translation from the English version.

Before going to the process of data collection, pre-testing was carried out on 25 respondents. After necessary modifications, the main questionnaire was implemented on the selected participants. The collected data were checked, verified and then entered into the computer. The analysis was carried out by using both descriptive and inferential statistics with the help of SPSS (Statistical Package for Social Science) version 25 for Windows by IBM and Microsoft Excel Version 2019 for Windows 10. Both descriptive and inferential analysis was carried out upon the variables. For descriptive statistics; frequency, percentage, mean, and SD were used. Inferential statistics were carried out to see any association between independent and dependent variables. For the test of significance, the Chi-square test was done and a P-value of <0.05 were considered as significant.

Prior to the study, ethical clearance was taken from the Institutional Ethical Review Committee of National Institute of Preventive and Social Medicine (NIPSOM), Dhaka, Bangladesh. In addition, necessary permission was taken from the authority of the study place and NIPSOM before starting the data collection procedure.

### Results

**Table 1: Descriptive statistics of study population (n = 241)**

Variables and Sub-groups		Service receivers Frequency (%) (n <sub>1</sub> =221)	Service providers Frequency (%) (n <sub>2</sub> =20)
Age in completed years (Mean ± SD)	Male	41.04 (± 13.84)	32.33 (± 3.882)
	Female	33.39 (± 11.32)	38.00 (± 10.168)
	Total	34.95 (± 12.24)	36.30 (± 9.044)
Age group	18 to 29	82 (37.1%)	2 (10.0%)
	30 to 44	84 (38.0%)	14 (70.0%)
	45 to 59	43 (19.5%)	4 (20.0%)
	60 and above	12 (5.4%)	0

Gender	Male	20.40%	30%
	Female	79.60%	70%
Marital status	Unmarried	20 (9%)	3 (15.0%)
	Married	196 (88.7%)	17 (85.0%)
	Widow	5(2.3%)	0(0%)
Education in completed years (Mean ± SD)	Male	6.40 (± 3.77)	14.17 (± 1.17)
	Female	6.22 (± 3.54)	12.86 (± 1.657)
	Total	6.25 (± 3.58)	13.25 (± 1.62)
Educational Status	No formal education	73 (33.0%)	0
	Primary completed	58 (26.2%)	0
	Class 8 completed	48 (21.7%)	0
	SSC	22 (10.0%)	2 (10.0%)
	HSC	20 (9.0%)	13 (65.0%)
	Graduate	0	5 (25.0%)
Residence	Rural	205 (92.8%)	13 (65%)
	Urban	14 (6.3%)	7(35%)
	Suburb	2 (0.9%)	0(0%)
Family income	<10 thousand	64.30%	-
	10-20 thousand	33.90%	-
	>20 thousand	1.40%	-
Family members	1-4	36.70%	-
	5-8	59.30%	-
	9-12	3.60%	-
	13-16	0.50%	-

Socio-demographic profile of the participants (both service receivers and providers) were evaluated (Table 1). There were 221 service receivers and 20 service providers as respondents of this study. The mean age of service receivers was 34.95 (±12.24) years. Highest proportions 38.0% of respondents were from 30 to 44 years age group, followed by 37.1% from 18 to 29 years age group. On the other hand, mean age of service providers was 36.30 years. Highest proportions of 70.0% of respondents were from 30 to 44 years age group. In regards to gender, there were 20.40% male and 79.60% female among the services receivers but 30% male and 70% female were in the service providers group. A great proportion of 88.7% of service receivers was married and 9% and 2.3% were unmarried and widows, respectively. Similarly, 85% service providers were married and 15% were unmarried. In the case of education, the mean years of education for service receivers were 6.25 (± 3.58) years. About 33.0% of respondents did not have any formal education. Approximately 26.2% had completed primary education and 21.7% completed up to class 8. There were no graduate service receivers. In contrast, 25% were graduate service providers. Further, highest 65% were HSC passed. Most 205 (92.8%) service receivers and 13 (65%) service providers were from the rural area where only 14 (6.3%) service receivers and 7(35%) service providers were from the urban area. Only 1.40% of service receivers had monthly family income over 20 thousand BDTK where the highest 64.30% of service receivers had a family income of below 10 thousand BDTK. In addition, a huge proportion of 59.3% of respondents was from families having 5 to 8 members, followed by 36.7% from families with 1 to 4 persons.

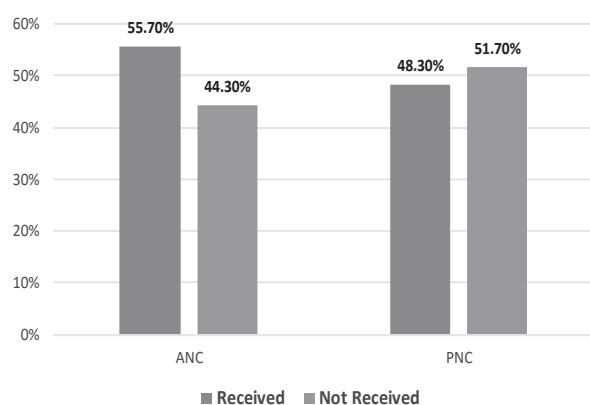
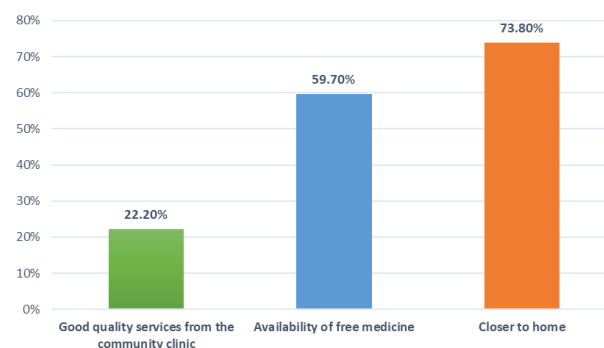
**Table 2: Distribution of service receivers according to knowledge about ANC and PNC services in community**

Services	Knowledge	Received
Availability of Normal Vaginal Deliver service in community clinic	18 (10.2%)	1 (0.6%)
TT Vaccination	219 (98.9%)	172 (77.8%)
EPI	220 (99.5%)	188 (85.1%)
Family planning	217 (98.2%)	107 (48.4%)
Breastfeeding counseling	218 (98.3%)	146 (67%)
Availability of antihelminth drugs	218 (98.6%)	177 (80.1%)
availability of Vitamin A capsule	218 (96.4%)	218 (96.4%)

Among the respondents, 18 (10.2%), 219 (98.9%), 220 (99.5%), 217 (98.2%), 218 (98.3%), 218 (98.6%) and 218 (96.4%) of service receivers had knowledge about the availability of normal vaginal delivery, TT vaccination, EPI, family planning, breast feeding counseling, antihelminth drugs and vitamin A capsule in the community clinic, respectively (Table 2). In contrast, 1 (0.6%), 172 (77.8%), 188 (85.1%), 107 (48.4%), 146 (67%), 177 (80.1%), and 218 (96.4%) of service recipients had received the above-mentioned services based upon their knowledge.

About 55.70% and 48.30% of female service receivers had a history of taking ANC and PNC services, respectively from the community clinics whereas 44.30% and 51.70% of them did not receive any services regarding ANC and PNC from the community clinics (Figure 1).

Among the respondents 73.8% choose to seek health care services from community clinics due to its proximity to their residence, 59.7% had visited to community clinics due to availability of free medicine and 22.2% had visited due to good quality services from community clinics (Figure 2).

**Figure 1: Distribution of female respondents (n = 176) according to history of receiving ANC and PNC services from community clinics****Figure 2: Distribution of service receivers according to reason for choosing community clinic****Table 3: Availability of maternal and child health services in the community clinics according to service providers**

Name of Services in CCs	Frequency	Percentage
ANC and PNC services	20	100.0
IMCI	19	95.0
FP	20	100.0
EPI	20	100.0
TT for Women of reproductive age	20	100.0
Breastfeeding counseling	20	100.0
NVD	3	15.0
Iron and folic acid tablet for pregnant women	20	100.0
Full supply of prescribed medicine	10	50.0
Anthelminthic Drugs	20	100.0
Vitamin A capsule	19	95.0%

Community clinics were assessed for availability of services and 100% of the CCs were found to be providing ANC and PNC services, FP, EPI, TT for Women of reproductive age, Breastfeeding counseling, Iron and folic acid tablet for pregnant women and Anthelminthic Drugs. On the other hand, 95% provide IMIC services and Vitamin A capsule. Only 15% provide NVD services.

### Discussion

This cross-sectional study was conducted among 221 service receivers and 20 service providers from the selected community clinics to estimate the utilization of maternal and child health services. The study found that the 30 to 44-year-old age group received more services from community clinics than other age groups, which was slightly higher than research conducted in Bangladesh.<sup>8</sup> Earlier studies showed that female had more tendencies to receive health services than the male

which is consistent with present study findings.<sup>8,9</sup> In regards to the educational status, nearly one-third of service receivers had no formal education qualifications in this study but a previous study showed a very tiny proportion of respondents had educational qualifications below than the high school.<sup>9</sup> This difference could be due to the difference in national literacy rate between these two study places. Further, it is noticed that the service recipients who had a monthly income below 10 thousand BD Taka went to the community clinic more compared to the other monthly earning group. As these clinics provide free services, their popularity among low-income earners is noticeable. Interestingly, the service recipients who have 5-8 members in the family went to the community clinics more often, the reasons behind this need to be explored through conducting the study in this regard.

The present study shows that almost all the service receivers knew that community clinic provides TT vaccination, EPI, family planning, breastfeeding counseling, antihelminth drugs, and vitamin A capsule. In contrast, along with these services, IMCI, iron and folic acid tablet for pregnant women and prescribed medicines are available for the maternal and child care in the community clinics which was mentioned by almost all the service providers. Further, all the service providers of the community clinics spoke about the availability of ANC and PNC related services but a little over half of female clients of the community clinics took ANC services and less than half used PNC services. These signify that there is information gap about the services providing by the community clinics. Thus, concerned authorities are requested to take initiatives to promote the services of community clinic in a comprehensive way.

The current study found some discrepancies between knowledge and practice among the service receivers in the case of family planning and breast-feeding counseling services. Therefore, further in-depth research regarding knowledge and practice of community clinic service users should be carried out. On the other hand, this study illustrates that, service recipients' both knowledge and practice were very poor in terms of normal vaginal delivery at the community clinic. Inadequate availability of services may be one of the reasons for this finding because at the time of data collection, only three community clinics were providing normal vaginal delivery, according to service providers. Hence, Government and the relevant authorities are requested to arrange the necessary equipment and training at all the community clinics of the country to ensure the normal vaginal delivery.

This study found that due to the shorter distance of community clinics from the service users' homes, the respective clinics were chosen by about three-quarters of the participants. This statistic supports the objective of establishing community clinics in terms of accessibility and location. However, only a quarter of service recipients choose community clinics to

receive quality services that call into question the overall goal of community clinic services. Thus, it is recommended to conduct in-depth research in this regard by the concerned stakeholders.

### **Strengths**

Present study interviewed the all-adult patients seeking healthcare services at community clinics irrespective of gender, ensuring that the study population comprised of patients from every stratum of the society possible. Also, data were collected on all the determinants of maternal and child health healthcare services provided by CCs, so present study could accurately estimate the utilization of maternal and child health services from selected CCs.

### **Limitations**

Not all the respondents could recall all the services they availed from the community clinics over the year, increasing the chance of bias.

### **Conclusion**

Community clinics are the first gateway to receive health care services in the rural area of Bangladesh. Almost all the services related to maternal and child health care are available to the most of the community clinics across the country. In addition, due to the small size of the area covered and its wide spread across the country, service recipients can easily access services from community clinics. But there is an information gap about the availability of maternal and child health care services towards the service receivers which hinder them getting those services timely. Therefore, it is required to take initiatives for promoting its services, and need to implement program for service providers for updating their knowledge and skills to handle the service consumers in a scientific and modern way.

### **Acknowledgement**

The researchers would like to acknowledge the contributions made by Dr. Md. Ziaul Islam, Professor and Head, Department of Community Medicine, NIPSOM, Dr. Humayun Kabir, Professor and Principal, Dhaka Dental College, all the faculty members of NIPSOM and the patients and healthcare service providers from the community clinics at Feni Sadar Upazila.

### **References**

1. *Trading Economics (2019). Bangladesh-Rural Population. Available at: <https://tradingeconomics.com/bangladesh/rural-population-percent-of-total-population-wb-data.html>.*
2. *Normand, C., Ifjeekar, M. H. and Rahman, S. a. (2002) Assessment of the community clinics: effects on service delivery, quality and utilization of services, Health Systems Development Programme. Available at: [http://www.research4development.info/PDF/Outputs/HealthSysDev\\_KP/bang\\_comm\\_clinics\\_web\\_version.pdf](http://www.research4development.info/PDF/Outputs/HealthSysDev_KP/bang_comm_clinics_web_version.pdf)*
3. *Ministry of Health and Family Welfare (2018). Community Based Health Care. Available at: <http://www.communityclinic>.*

gov.bd/about-us.php

4. Hanifi, S.M.A., Hossain, A., Chowdhury, A.H. et al. Do community scorecards improve utilisation of health services in community clinics: experience from a rural area of Bangladesh. *Int J Equity Health* 19, 149 (2020). <https://doi.org/10.1186/s12939-020-01266-5>

5. Autism Wing (2019). Utilization of Community Clinic as Autism Center. Available at: <https://autismwing.com/blog/community-clinic/>

6. Adams AM, Ahmed T, El Arifeen S, Evans TG, Huda T, Reichenbach L; Lancet Bangladesh Team. Innovation for universal health coverage in Bangladesh: a call to action. *Lancet*. 2013 Dec 21;382(9910):2104-11. doi: 10.1016/S0140-6736(13)62150-9. Epub 2013 Nov 21. PMID: 24268605.

7. Barman, S. and Nayeem, M. A. (2018) 'A field survey on provision of health care service in a community clinic of Bangladesh: a case study of Raicho community clinic', *International Journal of Community Medicine and Public Health*, 6(1), p. 69. doi: 10.18203/2394-6040.ijcmph20185229.

8. National Institute of Population Research & Training (2013). Utilization of Community Clinic.

9. Mattson, J. (2011). Transportation, distance, and health care utilization for older adults in Rural and small Urban Areas, *Transportation Research Record*, (2265), pp. 192–199. doi: 10.3141/2265-22.

## Correspondence

### Dr. Kazi Md. Israfil

Lecturer, Dental Public Health Department

Dhaka Dental College.

E-mail: drisrafil47@gmail.com