Assessment of Ipas Initiatives for Promoting Long-acting Reversible Contraceptive and Permanent Method

Mahbub Elahi Chowdhury
Sadika Akhter
Nabila Mahmood
Aklima Chowdhury
Dilruba Nomani
Shafayatul Islam Shiblee
Dipika Paul
Rezwana Chowdhury
Maria Persson

icddr,b
Ipas Bangladesh
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Ipas Partners for Reproductive Justice BANGLADESH

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Report

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List of Acronyms

ANC	Antenatal Care
BASA	Bangladesh Association for Social Advancement
BAPSA	Bangladesh Association for Prevention of Septic Abortion
BNNRC	Bangladesh NGO Network for Radio and Communication
CCSDP	Clinical Contraception Service Delivery Program
CPR	Contraceptive Prevalence Rate
DFID	The Department for International Development
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DHIS-2	The District Health Information Software-2
eLMIS	electronic Logistic Management Information System
FCDO	Foreign, Commonwealth and Development Office
FP	Family Planning
FWA	Family Welfare Assistant
FWV	Family Welfare Visitor
FPIB-QA	Family Planning in Bangladesh-Improving Quality & Access
GoB	Government of Bangladesh
HPNSDP	Health, Population & Nutrition Sector Development Program
IDI	In-depth interview
IUD	Intrauterine Contraceptive Device
KII	Key-informant interview
LARC and PM	Long-acting reversible contraceptive permanent method
LMIS	Logistic management information system
MM	Medical Monitoring
MNH	Maternal Neonatal Health
MoHFW	Ministry of Health & Family Welfare
MR	Menstrual Regulation
MVA	Manual Vacuum Aspiration
NTC	National Technical Committee
OGSB	The Obstetrical & Gynecological Society of Bangladesh
PAC	Post Abortion Care
PNC	Post-natal Care
PPFP	Postpartum Family Planning
RCOG	Royal College of Obstetrician & Gynecologists
RHSTEP	Reproductive Health Services Training Education Program
SPR	Site Progress Visit Report
TFR	Total Fertility Rate
UIMS	Upazila Inventory Management System

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Executive summary

Background: With an aim to reduce the unmet need for contraceptives in Bangladesh and to deliver PPFP and PAFP services to women with a special focus on promoting LARC and PM, Ipas implemented QFP project from October 2016 to July 2021. This study assessed the contribution of QFP project to promote LARC and PM in Ipas intervention facilities in Bangladesh to identify the enablers and/or hinders in uptake of LARC and PM.

Methodology: For the assessment, we conducted an exploratory study comprising of both quantitative and qualitative research methods. All the three tiers of the health system i.e. division, district and upazila where Ipas intervention were implemented were covered in our qualitative interviews. Quantitative analysis was done using all FP service secondary data, from the Ipas supported 154 facilities (under DGHS, private sector) across different divisions, collected during February 2017 and December 2020.

Quantitative findings: During February 2017 and December 2020, under the QFP project from 154 facilities (135 DGHS and 19 private MCHs/hospitals), among the total of 5,93,443 FP method acceptors (5,71,908 from DGHS and 21,535 from private MCHs/hospitals), the majority (69.6%) were PPFP clients, followed by PAFP (15.7%) and interval (14.7%) clients. Among the LARC and PM acceptors (n=63,350) the majority (78.5%) were PPFP clients followed by PAFP (11.6%) and interval clients (9.8%). When we examined the service performance of LARC and PM by the administrative divisions, Dhaka, Chattagram and Sylhet came out as the high performing divisions. On the other hand, Rangpur, Rajshahi and Barisal were the low performing divisions.

Of all the LARC and PM services from QFP project during 2017 and 2020, among the PPFP clients, 95.4% were provided from DGHS facilities and 4.6% from private MCHs/hospitals. The corresponding figures among the PAFP clients were 98.7% from DGHS facilities and 1.3% from private MCHs/hospitals. Among the DGHS facilities, the majority of the LARC and PM services were provided from MCHs in each PPFP, PAFP and interval clients.

Trend analysis of secondary data of QFP project of Ipas during 2017 and 2020, showed an increasing trend in service provision (quantity of services) of LARC and PM services for each PPFP, PAFP and interval clients in all the facilities under DGHS and private sectors until 2019, though there has been a drop in related service provision in 2020 that is likely to be due to the COVID-19 pandemic effect for which there had been drastic fall in accessibility to the health facilities and service delivery. However, our further examination of the secondary data, looking into the rate of acceptance of the LARC and PM (proportion of method acceptors among all FP clients) over time by type of facilities, revealed a declining trend in DGHS facilities. Findings from determinant analysis showed, as compared to the year 1 in DGHS facilities, there had been a 39% improvement in acceptance of LARC and PM. However, method specific examination of the effect revealed that for each IUD and tubectomy, the likelihood of acceptance decreased by 27% and 82% respectively, in year 4 of the program. In DGHS facilities, for implant, though

there had been a 19% improvement in acceptance in year 3, ultimately had a 16% drop in year 4 that may be related to COVID-19 affect.

On the other hand, the private MCHs/hospitals demonstrated about 3 times improvement in acceptance of LARC and PM in year 4 as compared to the initial year. By method specific examination, the private MCHs/hospitals demonstrated 1.4, 3.6 and 1.7 times improvement in acceptance of IUD, implant and tubectomy respectively.

Qualitative findings: Our respondents acknowledged that because of the QFP project, for the first time, it had been possible to provide IUD and Implants among the PPFP and PAFP clients from the DGHS facilities while tubectomy as PPFP had already been available in these facilities prior to Ipas intervention. Most of our respondents admitted that providing quality training of the providers with emphasis on counseling; ensuring supply of logistics for LARC and PM to the DGHS facilities; making provision for directly managing the Imprest fund; and engaging in policy advocacy by the QFP project, helped increase service provision of each IUD, Implant and tubectomy by engaging doctors and nurses to provide the services. However, at the same time, they discussed about the challenges from both the clients' as well as the service delivery perspectives that worked as barriers in uptake of the LARC and PM. For each of the components of the LARC and PM, religious misconception and social stigma including lack of support from the family members played as negative force in accepting the methods. Inadequate knowledge about the functionality of IUD and Implant among the clients also worked as a deterrent factor in acceptance of these methods. From the service delivery perspectives, the major challenge was the lack of adequate number of trained providers in the designated facilities. Frequent transfer of the trained providers and heavy workload of the existing providers in public facilities created a vacuum in availing the required skills and time for quality counseling and continuum of the related service delivery for the LARC and PM from public facilities. Gaps in coordination and leadership within the DGHS facilities in effective management of Imprest fund was reported as a de-motivating factor by the providers and manages. There was a strong demand for bringing the private hospitals/clinics within the scope of independent management of Imprest fund.

Conclusions and recommendations: Based-on our study findings, the QFP project of Ipas had a major contribution in strengthening of the LARC and PM in facilities under DGHS and private sectors. Clearly the intervention had effect in increasing the trend in service provision of LARC and PM in each type of facility. However, in terms of improvements in rate of acceptance of the LARC and PM services, among the PPFP, PAFP and interval clients, the DGHS facilities could not demonstrate the change in expected direction. While the private facilities despite having a much small stake in service provision, could demonstrate changes in rate of acceptance of LARC and PM in positive direction.

For improving acceptance of LARC and PM, the study recommendations are: i) enhance training to develop a critical mass of the trained providers in each facility, ii) introduce refresher training, iii) consider to train the new cadre of midwives for LARC, iv) advocate for task shifting for implants, v) strengthen

counseling by appointing a counselor and establishing a counseling corner in each facility, vi) establish collaboration with the community based program to mitigate misconception and stigma through community engagement.

1. Introduction

Since 1975, there has been a significant improvement in maternal and reproductive health in Bangladesh. The modern contraceptive prevalence rate (mCPR) has increased from 5% in 1975 to 52% in 2017, and the total fertility rate (TFR) has declined from 6.3 births per woman in 1975 to 2.3 births per woman in 2017. However, during the past ten years the progress has stagnated and the mCPR and the TFR has remained almost unchanged. Meanwhile, the unmet need for contraception in Bangladesh remains high at 12 % and the rate of discontinuation of contraceptives has increased from 30 % in 2014 to 37 % in 2017. The discontinuation rates are much higher for short-term methods like pill (42 percent), condom (45 percent) and injectables (34 percent) compared to long acting and reversible (LARC) methods like implants (11 percent). The short-acting methods (pill, condom and injectables) make up the largest portion (43.3 %) of the contraceptive method mix (which include modern and traditional methods) while the long-acting and reversible (LARC) and permanent methods (PM) only count for about 9 % [1]. LARC and PM methods are convenient, effective, long-lasting, reversible and cost-effective [2]. Additionally, these methods can prevent failure rate due to incorrect use that frequently occurs with short-acting methods like pills or injectables [3]. It is estimated that 1,250 unwanted pregnancies would have been prevented if 5000 oral contraceptive users were to switch to intrauterine device (IUD) or implants over a period of year [4]. However, the overall issue of LARC and PM service delivery in Bangladesh has many supply side and demand side challenges that limit the provision and uptake.

From the supply side of the service delivery, there are institutional barriers for the provision of these services [5]. Currently the execution of the operational plans (OPs) under health, population, nutrition sector development program (HPNSDP) for ensuring FP service provision is on Directorate General of Family Planning (DGFP). The other channel to deliver health services, Directorate General of Health Services (DGHS), which is not mandated for FP service provision, is responsible for executing OPs for ensuring maternal neonatal and health (MNH) service provision under the same HPNSDP. When quality FP services are a precondition for maternal mortality reduction due to unwanted pregnancies and unsafe abortions, lack of an integrative approach from these two Directorates in OP implementation has developed a situation of opportunity missed. If this opportunity could have been utilized, then an enormous number of married pregnant women accessing MNH services from DGHS facilities, could have been offered postpartum family planning (PPFP) or post abortion family planning (PAFP) services [6, 7]. Which could have led to a reduction in maternal mortality and in the TFR.. Institutional barriers have resulted in limited number of service providers in DGHS facilities being trained to provide LARC and PM services, supply shortage of necessary commodities (i.e., IUDs, implants) within the DGHS facilities, and

inefficient management of Imprest[1] fund to provide incentives to both clients and service providers for selected LARC and PM service provision [5].

There are also national policies that inhibit service provision. For example, implants can only be inserted and removed by doctors; this policy limits accessibility to implants in facilities staffed mainly by midlevel providers. Current policy also only allows DGFP to procure commodities, limiting access to commodities at DGHS sites and at private sectors.

With funding from FCDO, Ipas was assigned - to implement the project 'Family Planning in Bangladesh - Improving Quality and Access' (QFP) during (October 2016– July 2021) with the goal to reduce the unmet need for contraceptives and thereby unwanted pregnancies and unsafe abortions in the country. The project emphasized on delivering PPFP and PAFP services to women with a special focus on promoting LARC and PM services.

Ipas, with its four implementing NGO partners (RHSTEP, BAPSA, BASA, BNNRC) [2], worked closely with both the DGHS and the DGFP to implement the project in seven divisions[3] of Bangladesh where the unmet need of contraception was the highest. The project aimed to make inroads to a significant but neglected area of maternal health in Bangladesh: death and injury from unwanted pregnancy by improving availability of high-quality contraceptive services, menstrual regulation (MR) and post abortion care (PAC), educating and empowering women, men and adolescents to access services and advocating at the national and local level for improved reproductive health policies. Special attention had been given to increasing the availability and utilization of LARC and PM.

This report aim to assess the QFP project's initiatives to promote LARC and PM services, the contribution of the QFP project to the LARC and PM service performance, to understand the challenges with increasing LARC and PM service performance and acceptability, to document the lesson learned and to put forward recommendation. So that, in future this information can help to realize if these initiatives can be replicated to inform other project and polices.

Objectives:

1. To determine the contribution of Ipas QFP project to the LARC and PM performance in Ipas supported DGHS and private facilities in Bangladesh

[1] For LARC and PM (IUD, implants and tubectomy), service providers performing the procedure and clients receiving the methods get incentives. This incentive is allocated from a fund that is known as Imprest fund.
[2] Reproductive Health Services Training and Education Program (RHSTEP); Bangladesh Association for Prevention of Septic Abortion (BAPSA); Bangladesh Association for Social Advancement (BASA); and the Bangladesh NGO Network for Radio and Communication (BNNRC)
[3] Sylhet, Chittagong, Barisal, Dhaka, Rangpur, Rajshahi and Mymensingh

2. To identify the factors that enable and/or hinder the uptake of LARC and PM in DGHS and private facilities.

2. Methodology

We conducted an exploratory study comprising of both quantitative and qualitative research methods to address the study objectives. The assessment covered all the three tiers of the health system i.e. division, district and upazila where Ipas intervention were implemented. The areas had been selected purposively so that the factors contributing to success and challenges of Ipas intervention could be documented.

2.1 Study Sites (Qualitative)

The study collected data from four UHCs, four DHs and four MCHs including two private MCHs from four districts. The areas have been selected purposively considering the performance (high and low) of clinical contraceptives (see figure 1 and 2) so that the factors contributing to success and challenges of Ipas intervention can be documented through this assessment. Dhaka and Sylhet were during the project more high performing whereas Rangpur and Chittagong were more low performing.

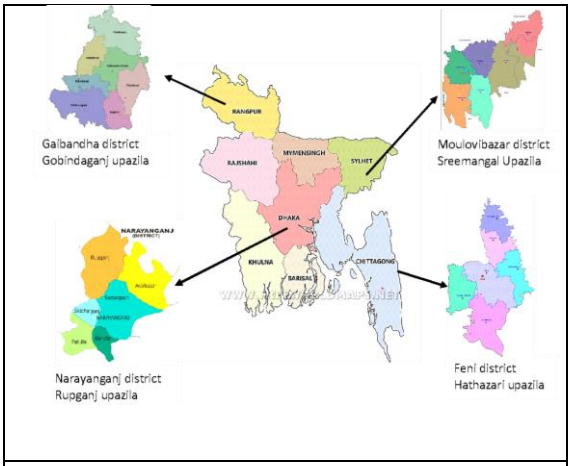

Figure 1: Study sites (qualitative)

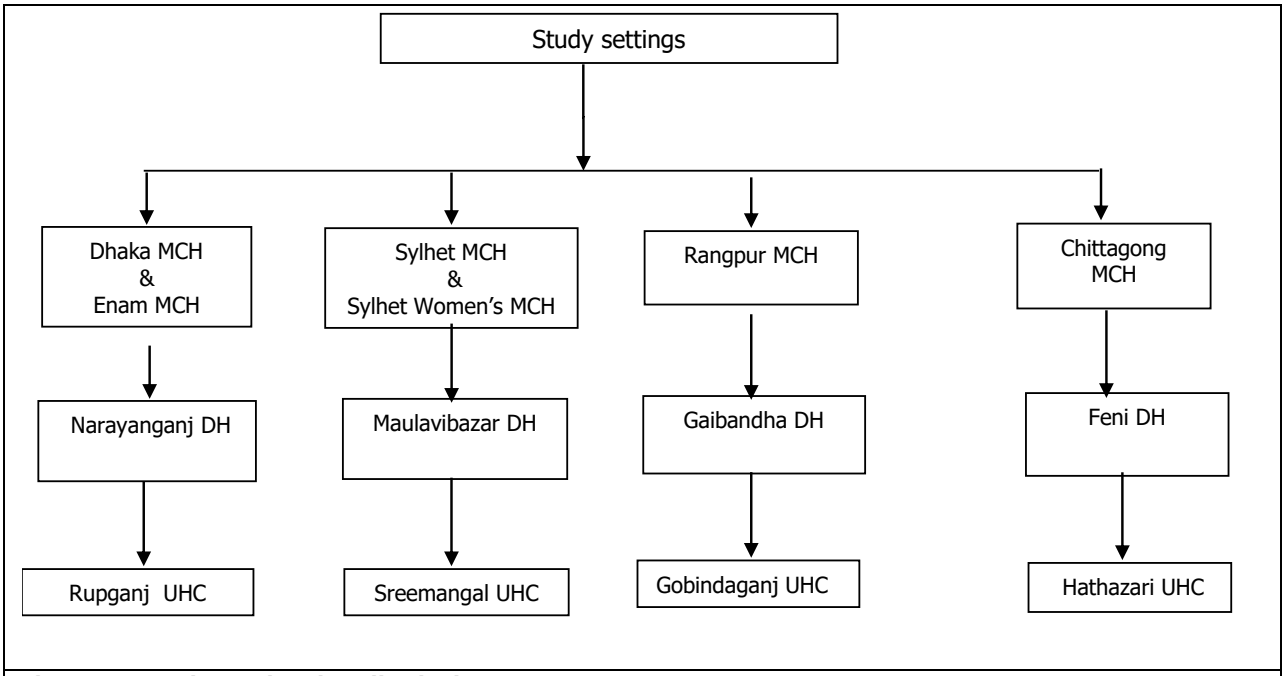

Figure 2*:* Study setting (qualitative)

2.2. Qualitative data collection and sampling

This study collected qualitative data through in-depth interviews (IDIs) and key informant interviews (KIIs). Under the direct supervision of the study PI and Co-PI, three female research officers with degree and experience in social science studies were trained and supervised in qualitative data collection activities. A week-long training on the data collection tools and interviewing techniques of qualitative research was conducted before starting the actual data collection. Further, field test of the IDI and KII guidelines were finalized before data collection commenced. All qualitative data was collected between May-June 2021. The interviews were audio-recorded and transcribed verbatim into Bengali. After analysis, all the findings were directly written in English from Bengali transcription by the investigators.

2.3. IDIs and KIIs

We have conducted 39 interviews (16 KIIs and 23 IDIs) and the number of interviews and type of respondents are outlined in **Table 1**. IDIs were conducted to collect information from service providers that includes doctors and nurses/midwives. KIIs were conducted with Directors, Line Directors (LDs), Program Managers (PMs), Deputy Program Managers (DPMs), Civil Surgeons (CS) and Deputy Directors of Family Planning (DDFP) at district level. Main topics discussed in IDIs and KIIs are described in **Table 2.** To reduce the risk of transmission of corona virus, most of the interviews were conducted through using virtual platforms such as Zoom and over phone as per the convenient time and date of the study

participants. Some interviews were also conducted face-to-face, while study team visited in different service facilities maintaining social distance. The interviews lasted approximately 50 minutes to 1 hour. Non-randomized, purposive sampling was used to identify the respondents. Those who provided consent to participate, were interviewed.

Table 1: Qualitative interviews conducted by type at different levels of health systems

Diff. level	Area	Qualitative interview done			
		Group for KII	Total KII	Group for IDI	Total IDI
Central level		DGHS (LD and PM); DGFP (LD); OGSB (President and focal person); Trainer (BAPSA, RH-STEP)	7	-	-
Divisional	Dhaka	Doctor- ob/gyn	1	Doctor-Obgyn and Senior Staff Nurse (SSN)	2
	Rangpur	DDFP	1	Doctor-Obgyn and SSN	2
	Sylhet	Doctor, Head ob/gyn,	2	Doctor-Obgyn and SSN	2
	Chittagong	-	-	Doctor-Obgyn and SSN	2
District	Narayanganj	-	-	Doctor-Obgyn and SSN	2
	Gaibandha	-	-	Doctor-Obgyn and SSN	2
	Moulvibazar	DDFP	1	Doctor-Obgyn and SSN	2
	Feni	Doctor- Head of Gynae	1	Doctor-Obgyn and SSN	2
Upazila	Rupganj	MOMCH-FP	1	Doctor-Obgyn and SSN	2
	Gobindaganj	-	-	SSN	1
	Srimongol	UH&FPO; MOMCH-FP	2	Doctor-Obgyn and SSN	2
	Hathajari	Doctor-Obgyn	-	Doctor-Obgyn and SSN	2
Total			**16**		**23**

Table 2: Topics discussed with IDIs and KIIs participants

IDI	KII
1. Information related to LARC and PM service delivery and service uptake from the relevant facility	1. Availability and accessibility of LARC and PM services in public/private/NGO facilities in Bangladesh

2. Implementation of LARC and PM services in DGHS facilities under QFP project 3. Contribution of counseling to motivate LARC and PM clients 4. Impact of training on skills of service providers 5. Management of LARC and PM related logistics and equipment 6. Mobilization of Imprest fund from DGFP to DGHS 7. Suggestions to ensure/ improve accessibility and availability of LARC and PM services in DGHS health facilities	2. Implementation of LARC and PM services in DGHS facilities under QFP project 3. Implementation of LARC and PM in DGHS facilities under QFP project 4. LARC and PM service delivery relevant logistic and equipment supply 5. Mobilization of Imprest fund from DGFP to DGHS 6. Suggestions to ensure/improve accessibility and availability of LARC and PM services in DGHS health facilities

2.4. Quantitative data and variables

2.4.1. Study Sites

All FP service data (secondary), from Ipas QFP project supported facilities (n=154) under DGHS and private facilities (**Table 3**) across different divisions, collected during February 2017 – December 2020 was used to demonstrate the uptake in intervention, to examine trends of different LARC and PM service utilization and understanding the factors enable and/or hinder the uptake or utilization of overall LARC and PM and different LARC and PM methods like IUD, implants and sterilization for all Ipas supported facilities.

Table 3: Distribution of different Ipas intervention facilities (DGHS and private sector) from where secondary FP service data collected

Site Type	**All Sites (n=154)**
Medical College Hospital (MCH)	15
District Hospital (DH)	35
Upazila Health Complex (UHC) - Health Unit	85
Private MCHs/hospitals	19

2.4.2. Data

Secondary data collected from the Ipas project program was checked for inconsistencies (like missing values only 0.1%) and then cleaned manually and finally 5,93,443 cases were used for further analysis.

2.4.3. Study Variables

Outcome Variable

The outcome variables of the study were:

1. Utilization of LARC and PM methods (Yes or No)
2. Utilization of IUD (Yes or No)
3. Utilization of implants (Yes or No)
4. Utilization of tubectomy (Yes or No)
5. Acceptance of PPFP
6. Acceptance of PAFP

Co-variates

Age of the clients in years (<=19 years, 20-24 years and >=25 years), project year (Year 1: Feb'17-Dec'17, Year 2: Jan'18 -Dec'18, Year 3: Jan'19-Dec'19 and Year 4: Jan'20-Dec'20), study site type (District hospitals (DH), Medical college hospitals (MCH), private MCH/hospitals and, Upazila health complexes-Health (UHC) units), site category (primary, secondary and tertiary), provider type (doctors, nurses/midwives, SACMO/paramedics), adoption of Ipas training (trained and untrained), patient type (interval, postpartum and post-abortion), and client type (adopters, changers/continuers).

2.5. Analysis

2.5.1. Qualitative Analysis

Three major steps were followed to analyze the data. At the first step, transcripts were prepared during the course of the data collection from audio recorded files. Secondly, codes were developed based on reviews of transcripts. These codes were grouped into categories. Finally, in the third step the researchers developed themes that expressed the content of data from each of the grouped codes. Coding categories was derived from initial research themes, as well as emerging concepts. Thematic analysis was conducted based on relevant findings on barriers in introducing FP, MR, and PAC including LARC and PM services and strategies to overcome the barriers to ensure those services in DGHS and other types facilities. The process of data analysis was iterative which involved concurrent data collection and analysis. The narrative data from the interviews was summarized in the form of word text files. A

team approach was employed during data analysis to minimize individual biases. A total of three main dominant themes were appeared and reappeared. Data analysis was done manually based on themes and sub-themes. The following **Table 4** is presenting the themes and sub-themes according to the study findings.

Table 4: Themes and sub-themes based on the responses

Theme-1: Service providers' and managers' perception on the role of Ipas QFP project in promoting LARC and PM services
Theme-2: LARC and PM service provision and service uptake in general **Sub-theme:** ✓ *Provision of IUD service* ✓ *Provision of implant service* ✓ *Provision of tubectomy service* ✓ *LARC and PM service provision and service uptake during COVID-19* ✓ *Challenges for service providers to deliver LARC and PM services*
Theme-3: Contribution of QFP project in strengthening LARC and PM in health facilities ✓ *Impact of training on skills of service providers to provide LARC and PM services* ✓ *Contribution of counseling to motivate clients for LARC and PM services* ✓ *Management of logistics and equipment* ✓ *Mobilization of Imprest Fund*

2.5.2. Quantitative Analysis

Descriptive analysis was done to describe relevant socio-demographic study variables of the study participants for all sites. Distribution by divisions and site types was checked also for overall FP, LARC and PM and short-acting methods for all sites. Trends of different LARC and PM methods were explored during study period.

We have reported ‘trend in FP service provision’ to assess the performance of a facility in terms of quantity of services provided over time. It has been defined as the percentage of specific FP service provided from a specific type of facility over time.

Also calculated ‘acceptance rate of FP method’ to assess the ability of a facility in promoting a specific FP method. It has been defined as the proportion of clients accepting a specific FP method among the total number of FP clients in a facility within a specified time period.

Chi-square test was done to evaluate the relationship between different LARC and PM utilization and other co-variates. Binomial logistic regressions were done to identify factors associated with overall LARC and PM and different types of LARC and PM utilization. Statistical significance of results was defined as p-values of <0.05. Data analysis was done by SPSS V.20.

3. Qualitative findings

3.1. Service providers' and managers' perception on the role of Ipas's QFP project in promoting LARC and PM

The respondents reported that the QFP project of Ipas empathized on PPFP and PAFP and especially LARC and PM related FP service delivery and uptake. The LARC and PM services included IUD, implant and tubectomy. While IUD is provided by doctors, nurses, midwives and family welfare visitors (FWVs), implant and tubectomy are provided by doctors only. Ipas had organized training programs for these service providers which increased service performance.

As expressed by one of the key informants of the DGFP:

"Ipas has taken an initiative for the promotion of PPFP and PAFP in the hospitals under the health directorate. For the related service provision, our midwives, nurses, and doctors got the required training. Accordingly, the volume of the related services also increased. Previously, when 10-12 IUDs had been provided per month, now it has increased to 50-60 per month."

Providing support to the Government of Bangladesh in developing and implementing policies to strengthen the health system's capacity to deliver FP services, particularly LARC and PM services, was expressed by the key informants as enabling factor..

In this regard, one policy implementer from the central level said:

"Ipas is working as a radiant agency; they are helping the Government of Bangladesh in the development of policies for the promotion of LARC and PM through sharing policies of other countries and to help us in the adaptation of those policies in our context. In addition to policy support, they are also contributing to the supply of commodities, providing training, etc. For this, we should give credit to Ipas."

3.2. Provision and uptake of LARC and PM service

The service providers attributed the possibility to provide FP services to clients who were admitted for delivery or PAC services to the QFP project of Ipas. They expressed that strengthened the LARC and PM service performance at the DGHS facilities.

One service provider (nurse) from a district hospital said:

"We could not provide any family planning-related services to the clients who were admitted at the hospital for delivery before Ipas started to work with us. The services (for short-acting methods) were available at the health facilities only for the outpatients. Now, we are providing FP services (LARC and PM) to inpatients as well. Obviously, it has increased our services. Now, we can provide the method directly."

A manager of a district hospital said:

"I think family planning service delivery was low earlier. We couldn't bring back the clients after delivery. But now, right after cesarean section delivery, we are providing IUD, implant, and tubectomy. A larger number of clients are now accessing these services. This is a massive change."

3.2.1. Provision of IUD service

While interviewing policymakers, policy advocators, and policy implementers, they mentioned that an important goal of the QFP project was to increase service delivery and acceptability of LARC and PM. They mentioned that the acceptability of LARC methods before the QFP project intervention had been low, particularly for IUD. Our key informants acknowledged that Bangladesh has a low IUD acceptance rate, compared to some Muslim countries, but that the QFP project interventions had led to an improvement in the acceptance rate of IUD

One program implementer from the DGFP said;

"IUD acceptance rate in Bangladesh is nearly 6%. Other Muslim countries like Jordan and Syria have 40% IUD acceptance rate. It was becoming difficult to increase IUD rate here in Bangladesh. But because of Ipas's activities on family planning and emphasis on LARC and PM, the IUD acceptance rate is improving. If Ipas stops working on this. it will be difficult for the DGFP alone to improve the FP service."

The respondents also stated that policy advocacy done through this project ensured improved quality of service as well as increased accessibility of IUD by engaging doctors and nurses to provide the services. Through the QFP project, IUD is provided after normal or cesarean delivery and after PAC from the DGHS facilities. However, according to our IDIs, religious and social stigmas work as barriers to the adoption of IUD by the clients. The service providers often find it difficult to motivate the clients as many of the clients, including their families who are religiously conservative, believe that having IUD results in losing their right to have funeral rituals.

A senior staff nurse at a MCH said:

"Many are afraid of taking IUD, thinking that a foreign body will be inserted in them. Most of the time, the husband also refuses. Those who come with their mothers always say if there is such a foreign body inside them, they may not get Janaja (funeral right) after death. So, some superstitions still exist."

Our IDI respondents also informed that clients and their family members sometimes have limited knowledge and misconceptions about IUD. Further, the service providers also reported that husbands and mothers-in-law sometimes prohibit women to take IUD.

One doctor from a district hospital said:

"The most wrong idea about IUD among the clients is that IUD will hurt the husband during physical interaction. Mothers-in-law of the clients say that their sons will face problem because of the IUD. These are not good."

A doctor from a medical college hospital said:

"They (clients), sometimes, hear stories from the neighbors that insertion of IUD will harm the cervix. And, after insertion, it will cause heavy bleeding. They think it will stop their menstruation, which means the uterus will be filled with dirt. It will harm their body also."

The service providers also reported experiencing that some clients provide consent for IUD before delivery but then change their mind after delivery. According to the service providers, some clients change their mind because of fear of being rejected services if they do not give consent..

On this issue, one doctor from a medical college hospital mentioned:

"An interesting fact is that they (clients) give consent for IUD insertion during normal vaginal delivery or cesarean section, but, after delivery, before the procedure, they say they will not take it. One reason is that they (clients) think that if they do not give consent, they will not get the services and will be sent back home."

Some service providers also reported that the PPIUD services were hampered in at their facilities due to unavailability of cesarean section services due to lack of care providers (obstetrician and/or anesthesiologist).

One doctor from a union health complex said:

"This was a high-performing facility for cesarean section delivery. Here, the PPIUD service was also very good. However, for a long time, the PPIUD service has been stopped due to unavailability of anesthesiologist."

3.2.2. Provision of implant service

According to our IDI respondents, implant was more generally accepted among clients compared to IUD, despite implant being a surgical method. Upon availability, both one-rod and two-rod implants were being used. The service providers expressed that the one-rod implant was easier to insert and remove compared to the two-rod implant. However, as implant can only be inserted by doctors and due to the lack of doctors and lack of trained doctors, impants were not always accessible to clients.

One doctor of a union health complex said:

"As only a doctor can provide implant, I can provide it as a trained doctor. On some days when my duty is in the morning shift, the implant service is not available in the evening or night shift on that day. Besides,

when I am on leave, the service is not available. So, if additional one or two doctor(s) could be trained, the implant service provision could be improved."

Further, due to unavailability of anesthesiologist in some of the facilities, the service for cesarean section delivery is not possible to provide that ultimately have impact on providing long-acting methods. Another challenge that services providers expressed was a shortage in the supply of implants which hampered services and causing delays for the clients in receiving services.. This despite Ipas efforts to minimize the logistic and supply

One doctor of a UHC said:

"Even for implants, we are required to refer the client as we do not have the logistics. For delivery or abortion, we first counsel them for adoption of the method. Many do not want to take IUD but they are interested in implant. Also, implant's side-effect is less. So, this one has more demand. Since we cannot do this due to shortage of supply, we refer the client to the DGFP facilities."

Service providers also expressed experiencing that clients had misconceptions about implant and negative attitudes toward implant, which service providers expressed was a reason for why some clients did not accept the method.

One doctor of an MCH said:

"When a client is informed that there will be cessation of menstruation after having implant, they wrongly perceive that it will do harm to their health by accumulation of wastes within the uterus causing different diseases."

3.2.3. Provision of tubectomy service

According to the current policy, doctors counsel a woman to adopt tubectomy as a permanent method if she has at least two living children with the younger one being minimum 1 year of age [8]. In the DGHS facilities, the provision of tubectomy after cesarean section delivery was already available, even before the Ipas's QFP project.

One nurse from a district-level facility said:

"Our doctors do the ligation during cesarean section (CS) delivery. Sometimes, some CS clients come prepared and tell us to perform ligation after CS. Some with 3 or 4 children want to have CS just to get the ligation. We do not conduct ligation separately, i.e. never except the time of CS delivery."

However, tubectomy was not available after normal delivery and PAC, in DGHS facilities. Thus, some service providers suggested that the eligible clients with 3 or 4 living children should be referred to the nearest Mother and Child Welfare Centre (MCWC) for tubectomy services.

One nurse of a district hospital mentioned:

"If we see that the client can have a normal delivery, we suggest to get it (tubectomy) done at Matri Sadan (MCWC) 42 days after delivery."

According to some service providers, clients' misconceptions about tubectomy, negative attitude toward permanent methods and husbands' consent were the main barriers to the adoption of tubectomy.

One of the doctors of a DH mentioned:

"They (clients) say: they will not get funeral if they do tubectomy. Some also say: they need their husband's permission, and their husbands do not want them to do it. However, this method does not require husband's consent."

Some service providers expressed that counseling both client and her husband can increase acceptance tubectomy, although husband's consent is not required for adopting FP methods.

In this relation, one doctor of a UHC said:

"We once found a client with 8 children, and she conceived again. The youngest child was not 1 year old yet. The husband was old and not able to walk properly; however, he never suggested any contraceptive to his wife. Later, I counseled them both on that it is surely important to save lives according to our religion but if your wife dies giving birth to another child, how would you handle these many kids? The youngest one is not 1 year old yet. Later they agreed. That is how I counsel for tubectomy."

3.2.4. Service provision and uptake of LARC and PM during COVID-19

During COVID-19 pandemic, the service performance and uptake of LARC and PM declined and clients became more inclined to short-acting FP methods.

In this regard, one nurse from a UHC said:

"During COVID-19 situation, we could provide less IUD compared to pre-COVID time. For example, in the last month, we could provide only two IUDs."

The primary reason includes clients' fear of visiting the facilities for antenatal check-ups, for MR and for PAC services. Which led to a missed counseling opportunity. Which is important to provide accurate information and challenge misconceptions about LARC and PM methods. Further, during the COVID-19 pandemic, the service providers were also afraid of touching clients.

In this regard, one doctor of an MCH said:

"During COVID-19, we are also in fear and avoid to touch with patients/clients. This is also a direction from our supervisor to be in less contact with the patients/clients."

Besides, some respondents mentioned that the supply of logistics for LARC and PM was not regular during COVID-19. However, Ipas, in emergency basis, provided some PPE logistics during that time.

3.2.5. Challenges for service providers to deliver LARC and PM services

In our IDIs, the service providers and managers mentioned about the challenges they faced while delivering LARC and PM services. In their interviews, they highlighted workload and human resource retention as major challenges in delivering LARC and PM services.

3.2.5.a. Workload

According to some of the IDI respondents' inadequate human resources led to a high workload for the service providers, hampering the quality of their services. The additional responsibilities of FP service provision (counseling and performing procedures) had led to burnout and inefficient service delivery, even when they wanted to deliver the service properly.

One manager of a district hospital echoed the issue of workload, thus:

"Our senior staff nurses are very busy in managing emergency and delivery clients. They do not have the scope to spend time to counsel a client to adopt FP method. If they get busy to provide counseling service, they cannot manage emergency and the patients' attendants get angry if the emergency service is delayed. In fact, our nurses do not get time to take breathe. As the hospital superintendent, I always see that my nurses are running after patients."

A manager of a DH said:

"We do not have the required manpower as per our organogram. The workload in the DH has increased several times in the last few years. Previously, home-delivery was common but now we are encouraging facility delivery. So, there is a need for expansion of the service provision at facilities with additional manpower."

3.2.5.b Problem of HR retention

Another challenge reported by the IDI respondents was the transfer of trained manpower, for which the continuation of services was greatly hampered.

One program manager of the DGFP said:

"One problem of health sector is that the doctors do not continue for long after having training. Either they go for a course or get transferred. For that reason, even after providing training, the benefit is not fully achieved."

3.3. Contribution of the QFP project in strengthening LARC and PM DGHS and private health facilities

3.3.1. Impact of training on service providers skills

The training of service providers conducted by Ipas's QFP project particularly focused on initiating and increasing uptake of LARC and PM in the DGHS facilities and on PPFP and PAFP services. Service providers were trained on counseling, insertion of IUD and implant, tubectomy, and management of complications during performance of a procedure. For this purpose, nurses, midwives, and FWVs received training on IUD (PPIUD and interval IUD); doctors received training on IUD, implant, and tubectomy. For doctors, nurses/ midwives, and FWVs, the training lasted for 6, 14, and 8 days respectively. For all types of service providers, training on counseling was common. The training included practical sessions on dummies and real patients, which made it exceptional from training provided by other development organizations. Such modality of training had enriched service providers' knowledge on service provision and boosted their confidence.

Regarding this issue, one senior staff nurse from a DH said:

"I am not afraid of performing IUD. We got opportunity during the training period to insert IUD practically. Our madam was there; in front of her we have performed IUD on real patients. So, it has benefitted us. In many training sessions, we only performed IUD on dummy. Here, we got training to perform on real clients; the labor room was beside our training room. So, I could practice performing IUD just after delivery and could insert it successfully."

Training has been a key and significant intervention under the QFP project implementation in the DGHS facilities. Regarding the quality and content of the training, one key informant from an NGO said:

"The way Ipas set up their curriculum, I find it sufficient. The training has both lecture and clinical sessions. The training is planned with trainers who are clinical experts in different public medical college hospitals. There is also an advisor from North Carolina for capacity-building purpose. The advisor also supports to keep the training materials updated. In this way, the trainees can attain knowledge, clinical updates within the context of our country."

A major success of the training has been to transform the service providers' attitude toward LARC and PM services and bringing out the empathetic side of the service providers, where the service provider put the need of the client in center which has the potential of increasing client satisfaction regarding the service.

In support of this, a senior staff nurse of a DH mentioned:

"Earlier, I used to get really annoyed when I did not have time to listen to them (clients) about the problems related to the FP issues. I used to tell them to go to the FP officer for service. Now, the service is being given in the ward of the hospital. Now, I know that I have to listen to her. I must give her time to understand her problems (clients). Now I do not get annoyed; rather, I go to her (admitted client) frequently. The training has made me sympathetic toward her."

In our study, the respondents (KIIs and IDIs) put emphasis on the importance of both new training and refresher training as the service providers may have the knowledge of long-acting procedures from a training but may lack practice, which will hamper their ability to conduct the procedures properly. Refresher training can help update their knowledge. It also has been suggested by program managers as well as service providers to plan training for all the service providers from each facility rather than to some selective ones. This is because when any assigned service provider with training gets transferred to some other facility, it becomes difficult for other trained providers (if available) to fill up the gap and train up their untrained colleagues. Some service providers and managers also mentioned that it is possible to train all the service providers on LARC and PM service delivery if the time gap between the training sessions can be reduced.

One doctor from an MCH said:

"From my unit, only a few doctors have got training. There are 25 doctors in this unit, only I and the other two of my doctor colleagues have got the training. The other 22 have not gotten the training, and the reason is that some doctors stay for short term and some doctors stay for long term. Those who are staying for short term leave the facility without training if a session is not organized during their stay. If this training could have been organized frequently, the first 10 doctors may get training in this session, and the next 10 doctors may get training in the next session. Then, both long-term and short-term doctors could have gotten training. If maximum doctors can be trained, we will be able to increase and improve the service delivery."

From our KII and IDI respondent, Recommendations for increasing the period of training for long acting methods and refresher training also came up from our respondents in KIIs and IDIs.

One key informant from the DGFP stated: *"Refresher training is mandatory. Each year, there should be refresher training on long-acting methods after the actual training. Procedures of long-acting or permanent methods are technical jobs. A doctor might have gotten MBBS degree but s/he might not have conducted tubectomy surgery before, no matter how minor the surgery is. This is a technical work and, even being a doctor, it needs proper training. Sometimes, there are changes and updates regarding a method. These issues can be discussed during refresher training."*

3.3.2. Contribution of counseling to motivate clients for LARC and PM

Most of the service providers reported that counseling is essential to motivate clients to adopt of FP methods, particularly LARC methods. The service providers reported that the project emphasized on counseling , through which a service provider would explain the method, its procedures, advantages, and the side-effects. In addition to that, the Imprest fund provided incentives to the clients to compensate for their time and the indirect cost they would be bearing for accepting the method. The service providers further explained that counseling on the above-mentioned issues helped clients in their decision-making process, and was particularly important for adoption of LARC methods. According to the service providers, strengthening the counseling services in the DGHS facilities has led to improved acceptability of FP methods.Further, the IDI respondents also mentioned that they never counseled indoor clients for adopting FP services before the intervention of the Ipas's QFP project. After implementation of the project, more emphasis was given on counseling the clients to motivate them and support them in their decision making about FP methods.

One nurse of an MCH said:

"I counsel the mothers during pregnancy, after delivery, and postpartum to ensure that none of them misses the counseling service. We have supply of Apon, Sukhi, PPIUD, and ligation after surgery. I counsel my clients not to take child within two years after having a child. I provide FP methods as per the choice of the clients. If clients prefer to have implant, our doctors provide that according to their choice."

Ipas had provided a service facilitator to extent support for implementation of the QFP Project in the DGHS facilities. However, in some facilities, these service providers had been engaged in counseling, and they (service provider) used to call them 'counselor'.

In this connection, one doctor from a DH stated:

"The program assigned a counselor whose sole responsibility was to counsel clients for both short- and long-acting methods. When she started the counseling, we could see a huge change in the acceptance level of IUD among clients. In 2017, it was 115 and, in 2018, it was 299. This change has happened due to the counseling service provided by the counselor."

However, concerns also had been expressed by the facility providers and managers about continuation of these service facilitators assigned by Ipas after completion of the QFP Project.

The majority of the service providers realized the necessity of a counselor, along with a counseling room at each of the DGHS facilities for counseling of the PPFP clients.

Regarding this, one doctor from a DH said:

"We have a high client-flow for ANC--about 6 to 7 hundred per month. A counseling corner is needed for good quality of counseling. The family planning department or any NGO should come forward to setting up a counseling corner, along with a counselor for our facility. Because I myself, along with my assistant nurse, have to be very busy with antenatal check-up and, consequently, cannot give required time for counseling."

In addition to this, some of the respondents suggested to train the midwives to counsel the clients on PPFP.

In this relation, one doctor said:

"Now, there are midwives at hospitals; they provide ANC and also conduct delivery but cannot counsel the clients on PPFP. So, if the midwives can be trained on counseling on LARC and PM, they would be very useful."

As counseling plays a significant role in increasing the acceptability for LARC and PM, suggestions came up from both our IDIs and KIIs for recruitment of separate counselors and increasing the time for counseling. Since the service providers are now doing both counseling and performing the method procedures, along with their other chores, they hardly can provide much time for counseling. However, counseling the clients for a longer time has the potentiality to increase the acceptability of LARC and PM among the clients.

In this regard, one doctor of a DH said:

"If counseling would have been done properly, we might need to talk more, which is not possible for us at this moment. It would be better to recruit a counselor separately. Counseling is important, particularly very important for LARC and PM. For example, clients are frequently taking short-acting methods. We do not require much time in counseling to convince them to take these methods. On the other hand, it really takes time to convince them for long-acting methods. However, counseling for a longer time increases the chance to convince clients for adopting a long-acting method."

According to our IDI respondents, service providers and doctors also mentioned that counseling the clients should begin from the antenatal care check-ups and also should be done at the household level to increase the acceptability of LARC and PM. The field staff also can be trained up for counseling. For LARC and PM, it is also important to counsel the family members as, most of the times, family members do the decision-making. Household-level counseling will be able to provide them correct information which will improve the acceptability of LARC and PM.

Some IDI respondents also suggested raising community awareness for LARC and PM through arranging courtyard meetings in the communities, particularly in remote communities, including influential people in

the community, whom the community would listen to. If these influential people promote LARC and PM in the community meetings, acceptability of these services may increase.

In this regard, one doctor of a UHC mentioned:

"If we can conduct courtyard meetings where family members will also join, along with the clients, we can counsel them all together regarding LARC and PM. We can also include influential women leaders in the community, whom they would listen to. In that sense, courtyard meetings will be very fruitful to increase the acceptability of LARC and PM."

The respondents in IDIs also suggested to target the religious institutions, like masjid, mandir, and church to raise awareness about LARC and PM.

One doctor of a DH said:

"Religious institutions should be engaged in increasing community awareness for long-acting methods since religion plays a significant role why the clients or their families are not inclined for long-acting methods. They come to us later and listen to the religious leaders first."

3.3.3. Supply of logistics and equipment

Ipas advocated at policy level for the DGHS facilities to receive commodities directly from the DGFP, like in DGFP facilities that are being operated under a service delivery point (SDP) model for sustainable availability of FP commodities and other associated logistics.

According to our respondents in IDIs, there was no shortage of supply, and the quality of the commodities was good. Also, the respondents reported no issue of the expiry of time for the commodities. While conducting IDIs, we also have found that regular supply of logistics motivates the service providers to provide services conveniently.

In this regard, a nurse of a DH said:

"I want to deliver these services. When I get the commodities according to my need and on time, it motivates me to do my duties."

3.3.4. Mobilization of Imprest fund

A significant contribution of the QFP project in promoting LARC and PM was policy advocacy for direct allocation of Imprest fund to DGHS facilities, and facilitation of the management of the Imprest fund.. According to our respondents in IDIs, collecting incentives from the DGFP was previously difficult as both care providers and clients needed to submit the related bills to the DGFP for further processing that was lengthy and time-consuming. Trade-off between collecting the incentives and time spent to collect the incentive was not satisfactory. For this reason, the service providers were reluctant to motivate clients for LARC and PM and to provide related services.

A key informant (hospital manager) of a DH mentioned:

"When the incentives were being provided by the DGFP, the providers were reluctant to deliver long-acting and permanent method-related services as the collection of incentive was problematic. The expense to collect the money was more than the incentive itself."

To ease the system of collecting incentive, the Ipas's QFP project advocated for direct allocation of imprest fund from DGFP to DGHS which enabled distribution of Imprest fund among service providers and clients for LARC and PM services in DGHS facilities. However, there were some challenges in effective management of Imprest fund within the designated MCHs and DHs due to the lack of coordination and leadership initiatives within the DGHS facilities.

In this regard, one policy implementer from the DGHS central level said:
"Many facility managers or supervisors still do not understand the mechanism of utilization of Imprest fund, how to get the advance, and how to deal with bill adjustment or audit facing."

Moreover, according to our findings, as the UHCs still hadn't been brought under the provision of the new system of Imprest fund management at the facility level, the providers in these facilities expressed their dissatisfaction for the challenges they had to face in collecting the incentives.

One senior staff nurse (SSN) from a UHC said:

"We face many difficulties in collecting the incentive of the Imprest fund. For this, we need to go to FP office and fill up a number of forms that takes a lot of our time and hampers the service provision."

On the other hand, all the private facilities are not well-informed about the provision of Imprest fund, although some of the private facility providers managed to get the benefit of Imprest fund.

One doctor from a private health facility stated:

"We are not getting any incentives from Imprest fund provision; neither Ipas has ever oriented us with this Imprest fund."

However, some private facilities impose charges for FP services at their own discretion, which is a concern and needs further exploration.

4. Quantitative findings

4.1. LARC and PM FP service performance in DGHS and private facilities

Of all the FP services provided (n=593443) in the 154 QFP project intervention facilities in DGHS (n=135) and private sectors (n=19) during February 2017 and December 2020, 96.4% were provided from DGHS facilities and the rest 3.6% from private facilities. In each sector the majority of the clients were PPFP clients (n=400189, 70.0% in DGHS and n=12856, 59.7% in private facilities).

The percentage distribution of LARC and PM FP methods of the total FP service performance in facilities under DGHS and private sector was 15.0% in private facilities and 10.5% in DGHS facilities. In both DGHS and private facilities the percentage distribution of LARC and PM FP services was higher for PPFP clients (11.9% in DGHS, 18.0% in private facilities) compared to PAFP and interval clients. While examining the LARC and PM FP performance by method and client type, the provision of tubectomy is higher than the service provision of IUD and Implant for PPFP clients in both DGHS and private facilities, for PAFP clients the service provision of IUD is higher than the provision of tubectomy and implant services in both DGHS and private facilities and for interval clients the service provision of Implant is higher than the provision of IUD and tubectomy services (**Table 5**).

Table 5: Percentage distribution of service performance of LARC and PM FP methods by FP client type in facilities under DGHS and private sectors during the QFP project.

	PPFP	PAFP	Interval	Total
DGHS facilities				
Method type	**n=400189**	**n=91013**	**n=80706**	**n=571908**
LARC and PM	11.9	8.0	6.7	10.5
IUD	3.7	5.9	1.8	3.8
Implant	2.5	2.0	4.1	2.7
Tubectomy	5.6	0.1	0.8	4.0
Short-acting	88.1	92.0	93.3	89.5
Private MCHs/hospitals				
Method type	**n=12856**	**n=2111**	**n=6568**	**n=21535**
LARC and PM	18.0	4.6	12.6	15.0
IUD	2.4	3.7	2.4	2.5
Implant	2.7	0.7	7.5	3.9
Tubectomy	12.9	0.2	2.7	8.5
Short-acting	82.0	95.4	87.4	85.0

Under the facilities of DGHS the majority (56.9%) of the LARC and PM FP services were provided from MCHs, followed by DHs (33.1%). The contribution of UHC health unit was 9.9% (**Table 6**).

Table 6: Percentage distribution of service performance of LARC and PM FP methods by client type by type of facilities under the QFP project

Facility type	**PPFP n=49755**	**PAFP n=7362**	**Interval n=6233**	**Total n=63350**
DGHS facilities (n=135)	95.4	98.7	86.7	94.9
Private MCHs/hospitals (n=19)	4.6	1.3	13.3	5.1
Type of DGHS facilities	**n=47445**	**n=7264**	**n=5404**	**n=60113**
Medical College Hospital (MCH) (n=15)	59.2	47.8	49.3	56.9
District Hospital (n=35)	33.4	31.1	32.8	33.1
Upazila Health Complex (UHC) - Health Unit (n=85)	7.3	21.1	18.0	9.9

The total service performance of LARC and PM FP methods was highest in Dhaka division followed by Chattogram for facilities under DGHS and private sector.

Among all the interval clients (n=5404) under DGHS facilities the provision of LARC and PM FP services was highest in Barisal division, although the number of facilities in Barisal is lower compared to the number of facilities in the other divisions **(Table 7)**.

Table 7: Percentage distribution of service performance of LARC and PM FP methods by division and client type in facilities under DGHS and private sectors during the QFP project.

	PPFP	PAFP	Interval	Total
DGHS facilities				
Division and number of facilities	**n=47445**	**n=7264**	**n=5404**	**n=60113**
Barisal (n=13)	6.2	5.3	25.2	7.8
Chattagram (n=25)	25.0	15.0	13.7	22.8
Dhaka (n=31)	34.2	48.1	21.6	34.8
Rajshahi (n=21)	9.3	11.4	7.8	9.4
Rangpur (n=21)	7.3	7.9	18.7	8.4
Sylhet (n=24)	18.0	12.4	13.0	16.9
Private MCHs/hospitals				
Division and number of facilities	**n=2310**	**n=98**	**n=829**	**n=3237**
Chattagram (n=4)	28.7	3.1	38.1	30.3
Dhaka (n=9)	34.5	90.8	53.0	40.9
Sylhet (n=6)	36.8	6.1	8.9	28.7

In DGHS facilities there has been more than three times increment in the overall service performance of LARC and PM FP services between 2017 and 2019. When examined by type of facilities under DGHS, the corresponding increments were 2.5 times in MCHs, 5 times in DHs and 9 times in UHC health unit. In private MCHs/hospitals there has been more than three times increment in the overall service provision of LARC and PM FP services between 2018 and 2019. However, from 2019 to 2020 the overall LARC and PM FP service performance dropped in both DGHS and private facilities. This drop in service performance of LARC and PM is very much likely related to COVID -19 pandemic **(Table 8).**

Table 8: Percentage distribution of service performance of LARC and PM FP methods during the QFP project period (2017 to 2020) under DGHS and private facilities.

Facility type	n	2017	2018	2019	2020
DGHS facilities (n=135)	60113	11.1	23.8	37.3	27.7
Medical College Hospital (MCH) (n=15)	34238	14.0	26.0	35.4	24.6
District Hospital (n=35)	19894	7.8	19.7	38.8	33.7
Upazila Health Complex (UHC) - Health Unit (n=85)	5981	4.4	23.8	38.5	33.4
Private MCHs/hospitals (n=19)	3237	-	15.2	49.6	35.2

The LARC and PM FP service trend (quantity of services over time) in DGHS facilities consistently increased from 0% in the first project quarter February-March 2017 to 12.3% in the quarter October-December 2019. From December 2019, to the quarter April-June 2020 there has been a sharp drop of LARC and PM FP services as a percentage of total FP services, from 12.3% to 3.3%, as an effect of COVID-19 pandemic. From July 2020 onward the performance in DGHS facilities increased **(Figure 3).**

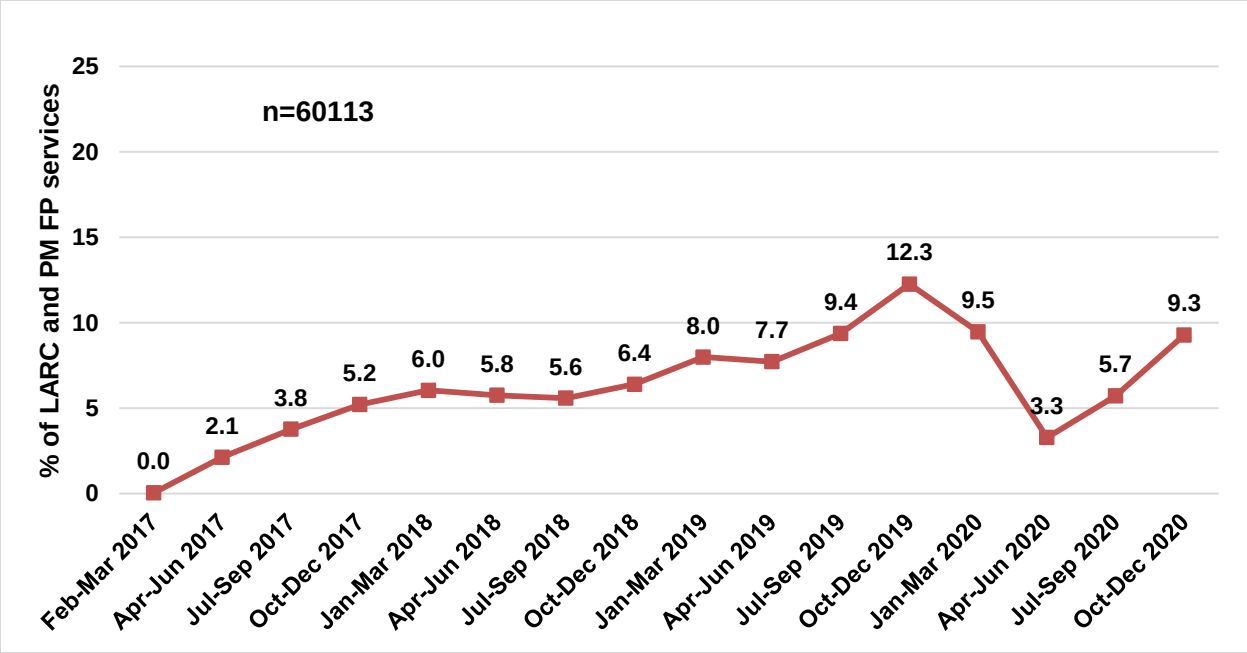

Figure 3: Trend in service provision of LARC and PM by quarter over the QFP project period (2017 to 2020) in DGHS facilities.

The LARC and PM FP service trend in private facilities consistently increased from 0.5% in the first project quarter January-March 2018 to 16.3% in the quarter of October-December 2019. As in the DGHS facilities the private facilities also show a sharp drop of LARC and PM FP services as a percentage of total FP services from 16.3% in December 2019 to 4.0% in the quarter April-June 2020, as an effect of COVID-19 pandemic. From July 2020 onward the performance in private facilities increased, with a slight drop between the quarter of July-September to the quarter of October- December 2020 **(Figure 4).**

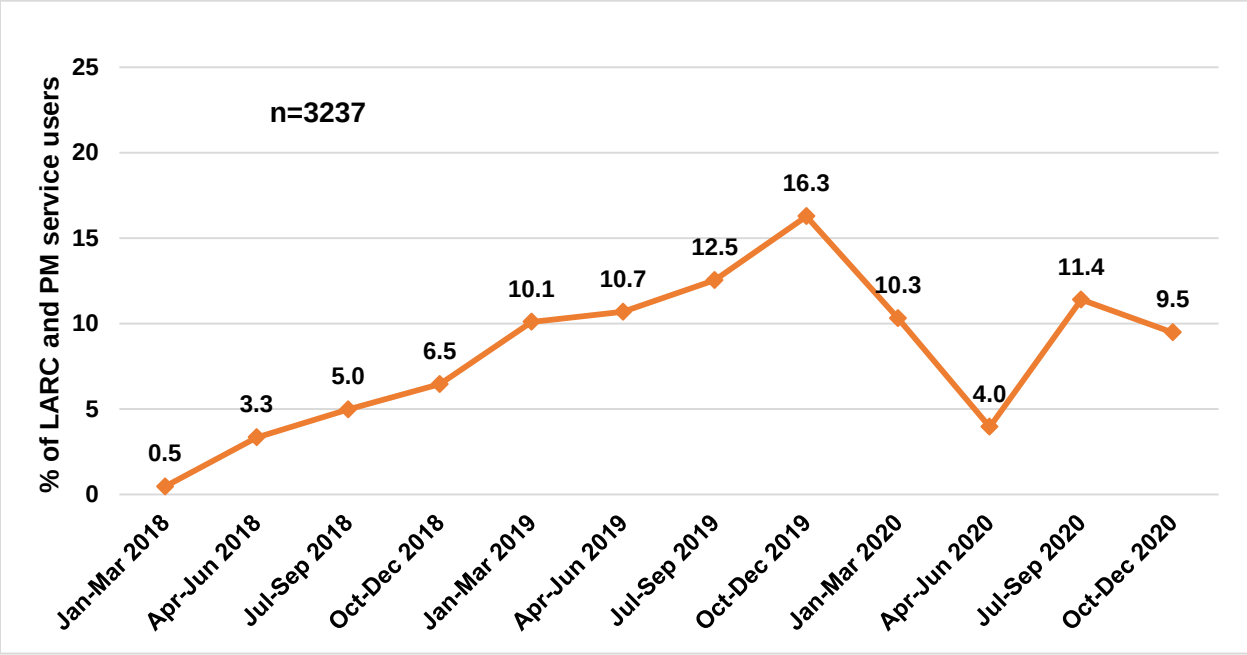

Figure 4: Trend in service provision of LARC and PM by quarter over the QFP project period (2018 to 2020) in private MCHs/hospitals.

In MCHs, DHs and health unit of UHCs the service provision of LARC and PM FP methods for both PPFP and interval clients has increased 3 to 10 times respectively between 2017 and 2019. For PAFP clients the service provision of LARC and PM FP methods increased between 2017 to 2019 in DHs and in UHC-health unit. In 2020, there has been drop in service provision of LARC and PM services across all facility and client types, except for PAFP clients in private facilities (**Figure 5**).

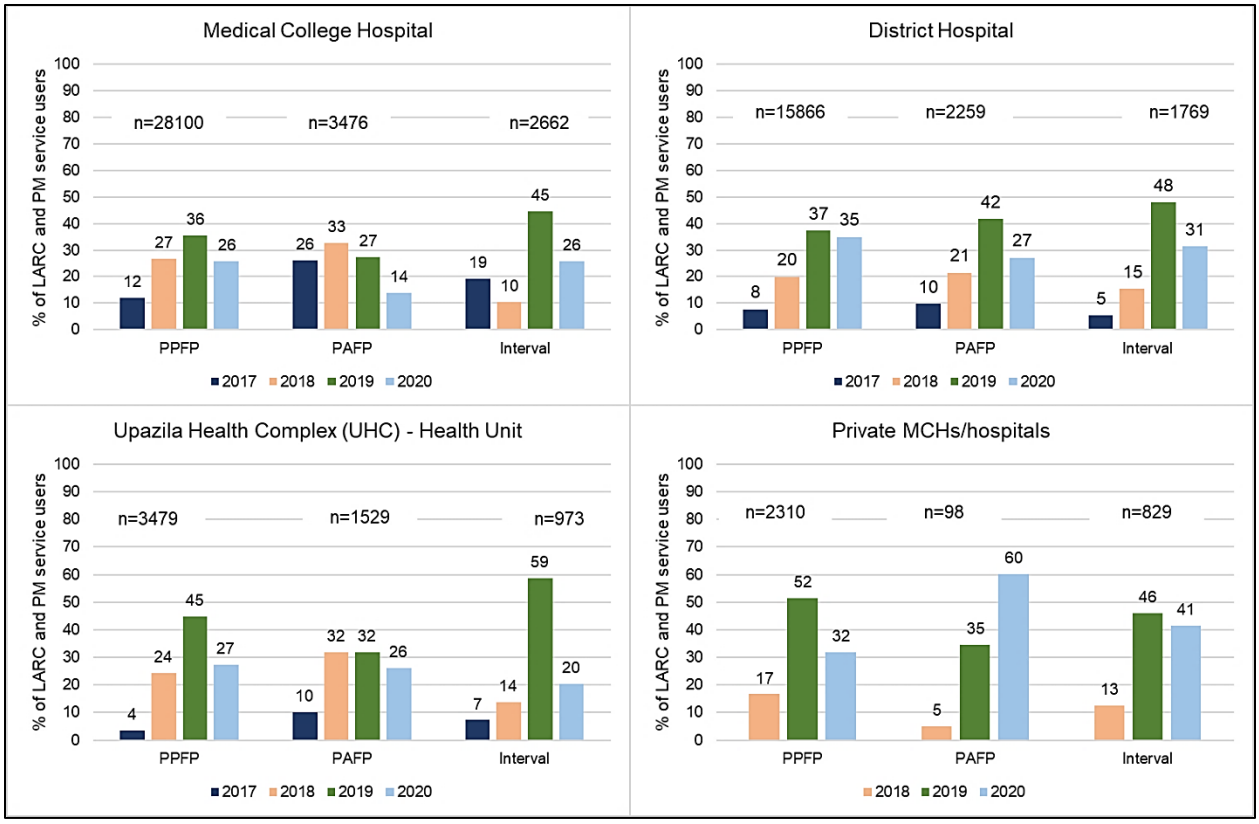

Figure 5: Trend in service provision of LARC and PM FP methods by different FP client type over the QFP project period (2017 to 2020) in different DGHS facilities and in private facilities.

In each of the three types of DGHS facilities there has been a decline in rate of acceptance of LARC and PM (proportion of method acceptors among all FP clients) in all the three different types of clients during 2017 and 2020. However, in private facilities an improvement in acceptance rate of LARC and PM has occurred in each PPFP and PAFP clients, though a decline in the rate has been observed in interval clients (**Figure 6**).

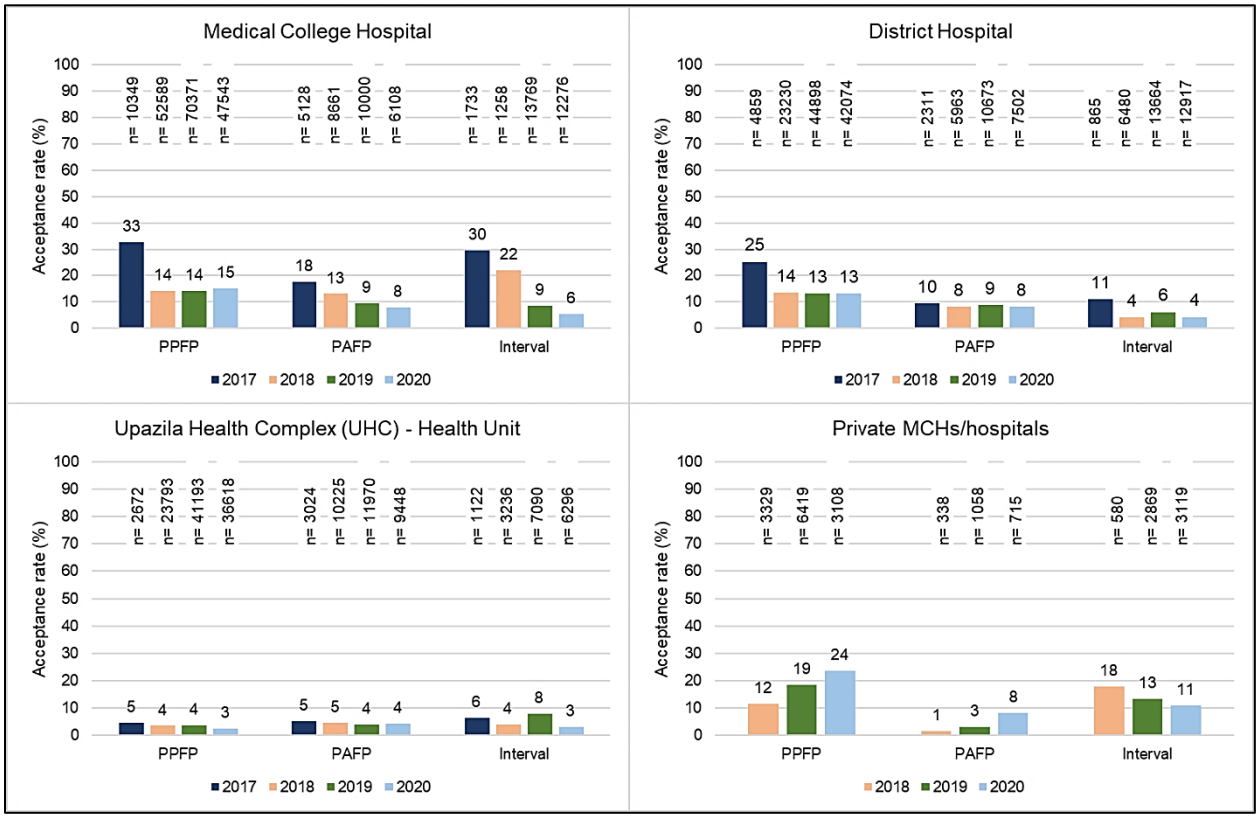

Figure 6: Acceptance rate of LARC and PM services of QFP project by FP client type during the QFP project period time (2017- 2020) by type of facilities.

According to secondary data of QFP project, during 2017 and 2020 of total 22,332 IUD acceptors, the majority were PPFP clients (68.6%), followed by PAFP (24.3%) and interval (7.1%) clients. For the DGHS facilities the DHs (41.9%) were the largest service provider for IUD, followed by MCHs (38.7%) then UHCs (19.5%). Out of total IUD services in DGHS and private facilities, 2.5% of the IUDs were provided from private facilities. Among the DGHS facilities, UHCs contributed to relatively lower proportion of IUDs among the PPFP clients (16.8%) as compared to the corresponding figures in each PAFP (25.2%) and interval (25.7%) clients. On the other hand, private facilities contribute to relatively higher proportion of IUDs among the interval clients (10.0%) as compared to the corresponding figures in each PPFP (2.0%) and PAFP (1.4%) clients (**Table 9**).

Table 9: Percentage distribution of service performance of IUD services in QFP project by client type and by type of facilities.

Facility type	**PPFP n=15312**	**PAFP n=5425**	**Interval n=1595**	**Total IUD services n=22332**
DGHS facilities (n=135)	98.0	98.6	90.0	97.5
Private MCHs/hospitals (n=19)	2.0	1.4	10.0	2.5
Type of DGHS facilities	**n=15001**	**n=5347**	**n=1435**	**n=21783**
Medical College Hospital (MCH) (n=15)	37.9	41.4	36.4	38.7
District Hospital (n=35)	45.3	33.5	37.9	41.9
Upazila Health Complex (UHC) - Health Unit (n=85)	16.8	25.2	25.7	19.5

In each MCHs, DHs and UHCs the provision of IUD services among the PPFP and interval clients consistently increased in the first three years of the project. Among the PAFP clients in DHs though there has been 4 times improvement in service performance of IUD between 2017 and 2019, in each MCHs and UHCs the service performance of IUD actually decreased since the second year of the project. In private hospitals/clinics in PAFP clients the service performance of IUD consistently increased between 2018 and 2020, however in PPFP and interval clients the improvement occurred between the first and second year of the life of the project (**Figure 7**).

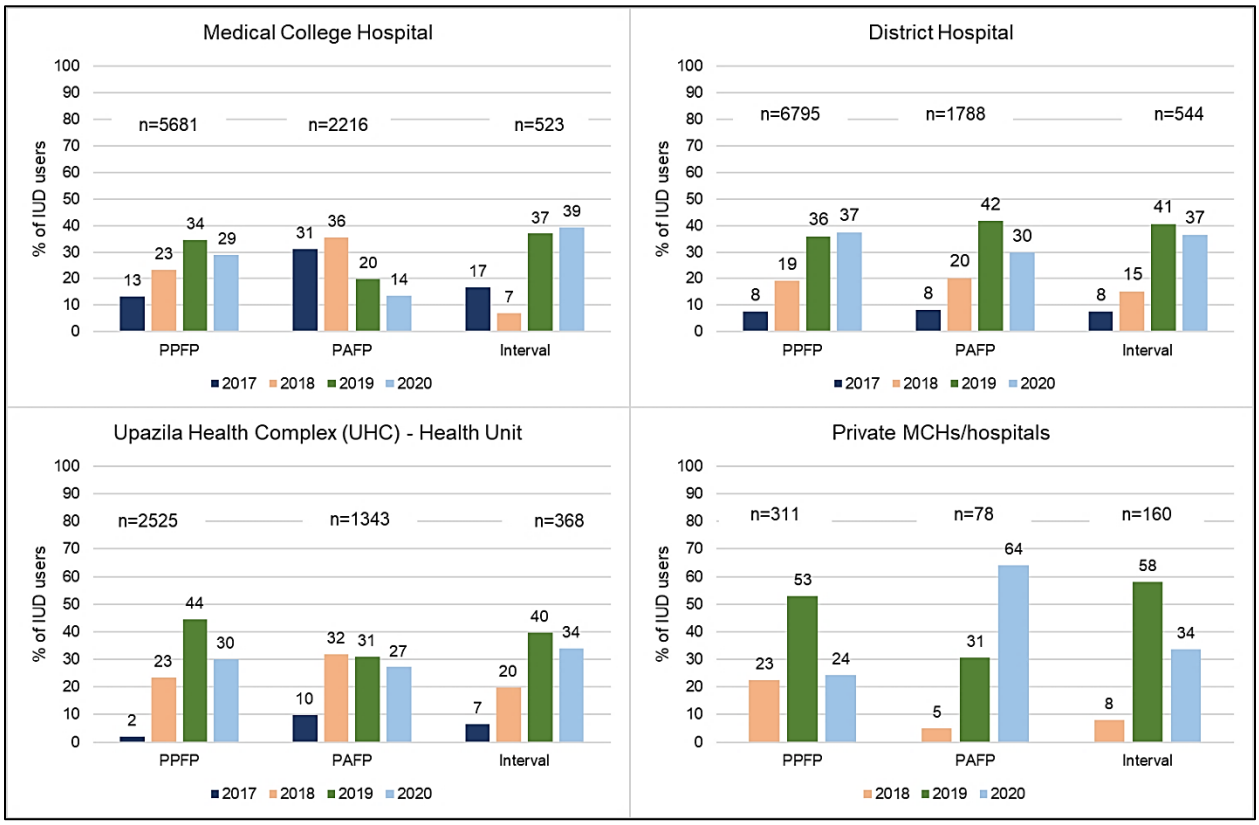

Figure 7: Trend in service provision of IUD among different client types over the QFP project period (2017- 2020) by type of facilities.

While examining the change in rate of acceptance of IUD over time, for MCHs, a decline in acceptance rate in each PPFP, PAFP and interval clients has been observed. In DHs there also has been a decline in acceptance rate of IUD in each PPFP and interval clients, although a slight improvement in PAFP clients has been noticed. In UHCs, no change has been observed in acceptance rate of IUD in any client type. On the other hand, in private facilities in PAFP clients there has been an improvement in rate of acceptance of IUD from 1% to 7% between 2018 and 2020, however no change has been observed in the rate of IUD acceptance in PPFP and interval clients (**Figure 8**).

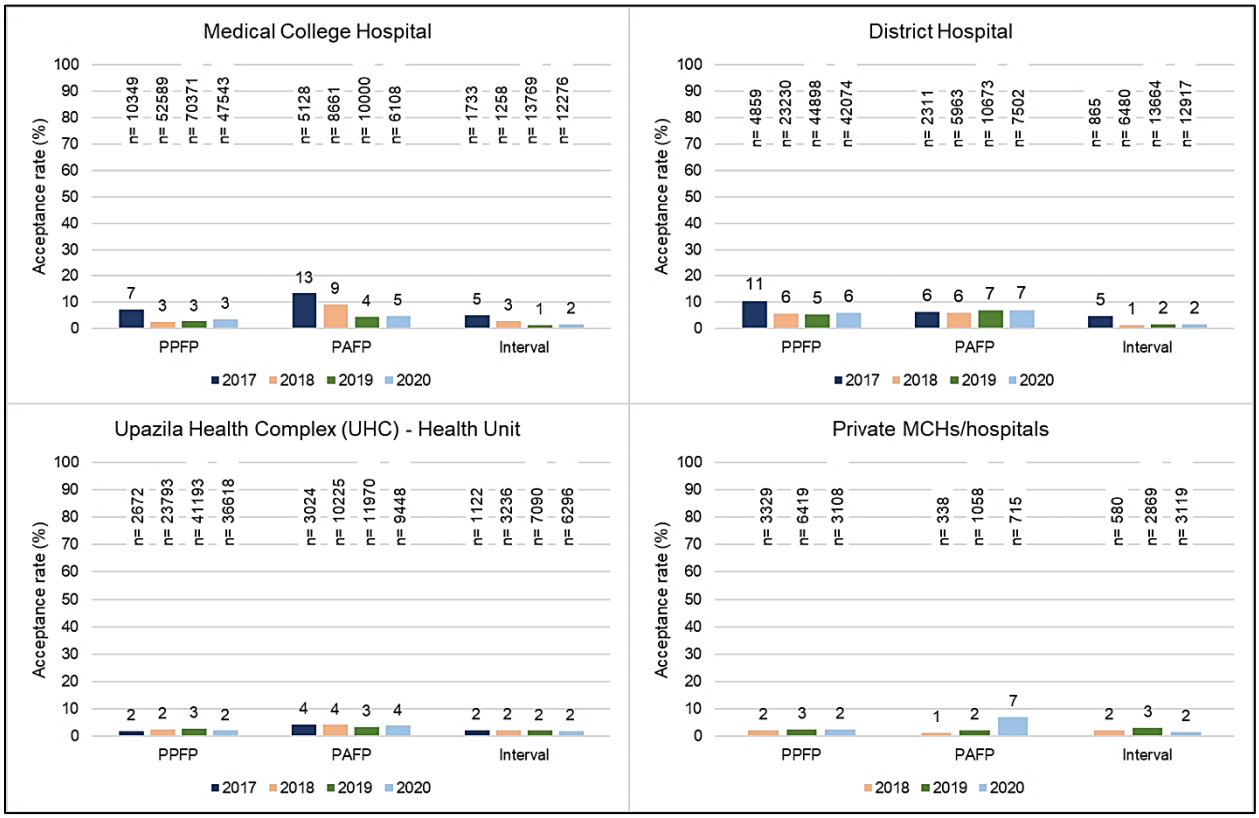

Figure 8: Acceptance rate of IUD services of QFP project by FP client type during the QFP project period time (2017- 2020) by type of facilities.

According to secondary data of QFP project, during 2017 and 2020 of total 16,053 implant acceptors, the majority were PPFP clients (65.2%), followed by interval (23.6%) and PAFP (11.2%) clients. Among DGHS facilities, about two-thirds of implant were provided from MCHs (63.7%) and nearly one-third from DHs. Each UHCs and private hospitals/clinics contribute to relatively higher proportion of implants among the interval clients as compared to the corresponding figures in each PPFP and PAFP clients (**Table 10**).

Table 10: Percentage distribution of service performance of implant of QFP project by client type by type of facilities.

Facility type	**PPFP n=10459**	**PAFP n=1804**	**Interval n=3790**	**Total Implant services n=16053**
DGHS facilities (n=135)	96.7	99.2	87.0	94.7
Private MCHs/hospitals (n=19)	3.3	0.8	13.0	5.3
Type of DGHS facilities	**n=10115**	**n=1789**	**n=3299**	**n=15203**
Medical College Hospital (MCH) (n=15)	67.2	65.6	51.7	63.7
District Hospital (n=35)	28.6	25.2	32.5	29.1
Upazila Health Complex (UHC) - Health Unit (n=85)	4.1	9.1	15.7	7.3

In each MCHs, DHs and UHCs, in both PPFP and PAFP clients the provision of implant services consistently increased during the first three years of the project. However, in each type of DGHS facilities among the interval clients there has been a jump (4 to 7 times) in service provision of implant between second and third year of the QFP project. In private hospitals/clinics there has been substantial improvement (6 to 10 times) in provision of implant services in PPFP, PAFP and interval clients between first and second year. In private hospitals/clinics though for each PAFP and interval clients the achievement was maintained in the third year of the project, for the PPFP clients the service provision fall by more than half of that in the previous year (**Figure 9**).

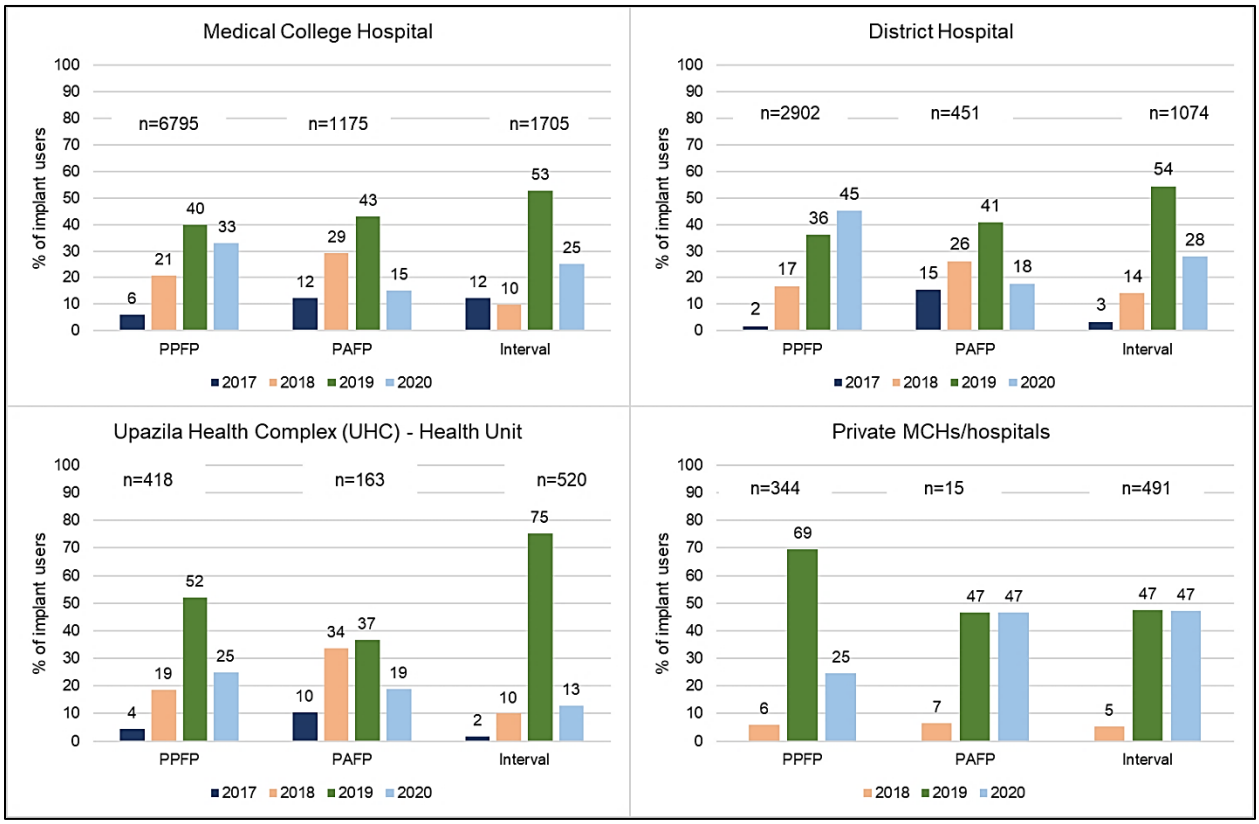

Figure 9: Trend in service provision of implant by client type over the QFP project period by type of facilities.

When we examined the rate of acceptance of implant in different facility type, in each MCHs and DHs, there has been slight improvement in acceptance rate of implant in PPFP clients. However, for both of these two types of facilities, for each PAFP and interval clients, either there has been no change or a decline in acceptance rate of implant has taken place during 2017 and 2020. For UHCs, the rate of acceptance of implant in each PPFP and PAFP clients remained quite low (0% to 1%) over time, though in interval clients an increment from 1% to 6% has occurred between 2017 and 2019. Nevertheless, the private facilities demonstrated an improvement in rate of acceptance of implant over time in each client type (**Figure 10**).

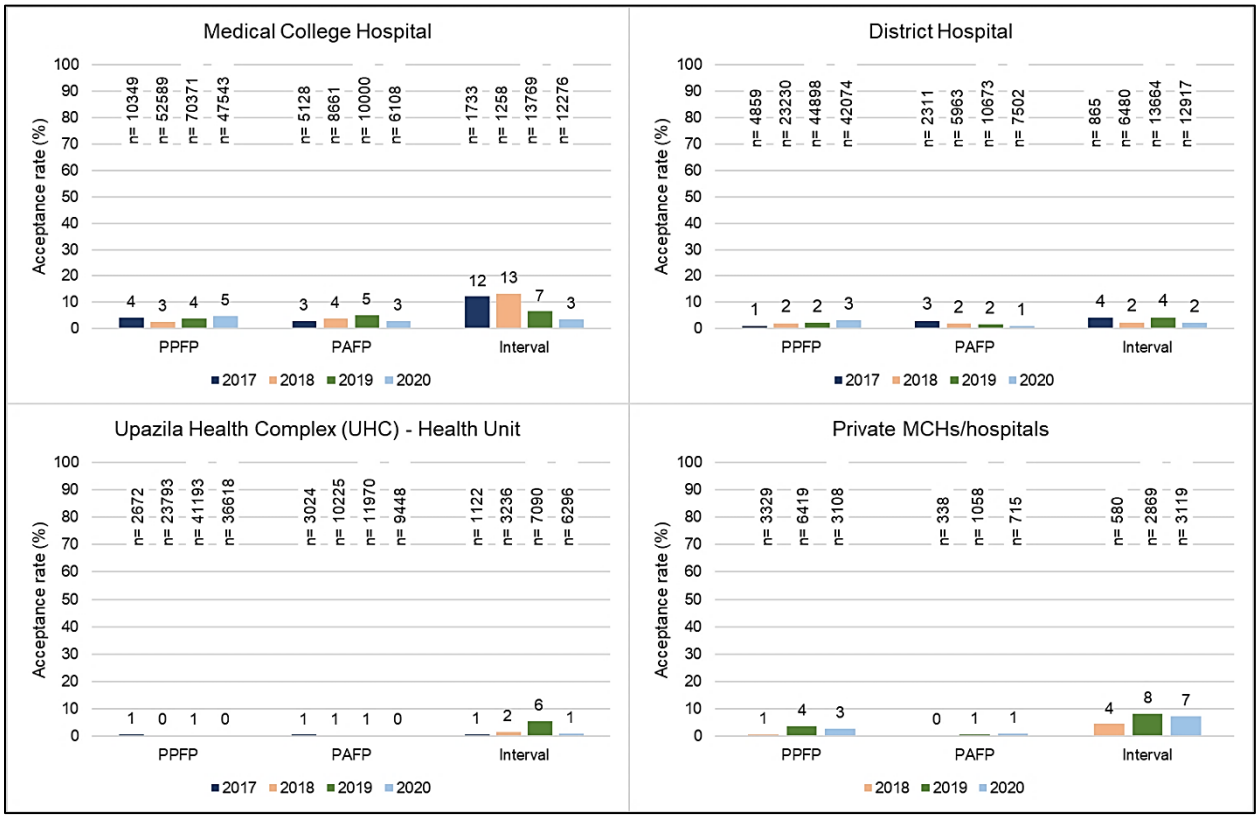

Figure 10: Acceptance rate of implant by FP client type during the QFP project period time (2017-2020) by type of facilities.

During 2017 and 2020 of all the tubectomy (n=24,965) performed in 154 facilities of QFP projects, the majority was performed in PPFP (96.1%) clients, followed by interval (3.4%) and PAFP (0.5%) clients. Under the DGHS facilities, MCHs were the largest contributor for tubectomy (69.9%), followed by DHs (27.4%) and UHCs (2.8%). Each MCHs and DHs contributed to higher proportion of tubectomy among the PPFP clients as compared to corresponding figures in interval clients. However, UHCs provide relatively higher proportion of tubectomy services in each interval and PAFP clients than that in PPFP clients. Private hospitals/clinics provide tubectomy services more in interval clients (21.0%) than the other two client types (**Table 11**).

Table 11: Percentage distribution of service performance of tubectomy of QFP project by client type by type of facilities.

Facility type	**PPFP n=23984**	**PAFP n=133**	**Interval n=848**	**Total Tubectomy services n=24965**
DGHS facilities (n=135)	93.1	96.2	79.0	92.6
Private MCHs/hospitals (n=19)	6.9	3.8	21.0	7.4
Type of DGHS facilities	**n=22329**	**n=128**	**n=670**	**n=23127**
Medical College Hospital (MCH) (n=15)	69.9	66.4	64.8	69.9
District Hospital (n=35)	27.6	15.6	22.5	27.4
Upazila Health Complex (UHC) - Health Unit (n=85)	2.4	18.0	12.7	2.8

In each of the three types of DGHS facilities the service provision of tubectomy in PPFP clients increased 2 to 4 times during the first three years of the project. However, in interval clients in DHs though the service performance of tubectomy consistently increased, in each MCHs and UHCs there has been a decline in its service performance over time. In private hospitals/clinics tubectomy in PPFP clients though increased more than 2 times between 2018 and 2019, in interval clients no change was observed (**Figure 11**).

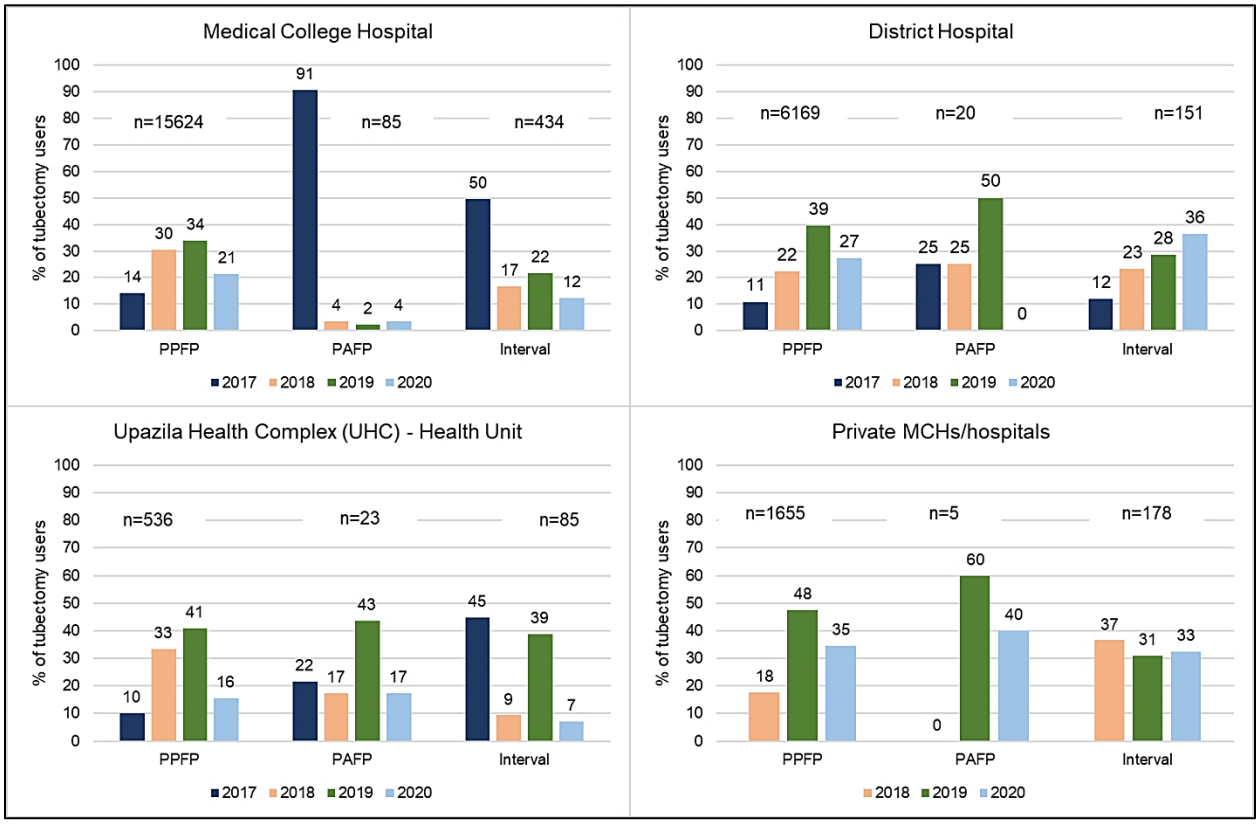

Figure 11: Trend in service provision of tubectomy services by client type over the QFP project period (2017- 2020) by type of facilities.

In each of the three types of facilities under DGHS, there has been a decline in rate of acceptance of tubectomy over time in all types of clients. However, in private facilities in PPFP clients, tubectomy acceptance rate increased from 9% to 18% between 2018 and 2020, though in interval clients there has been a decline of the same from 11% to 2% (**Figure 12**).

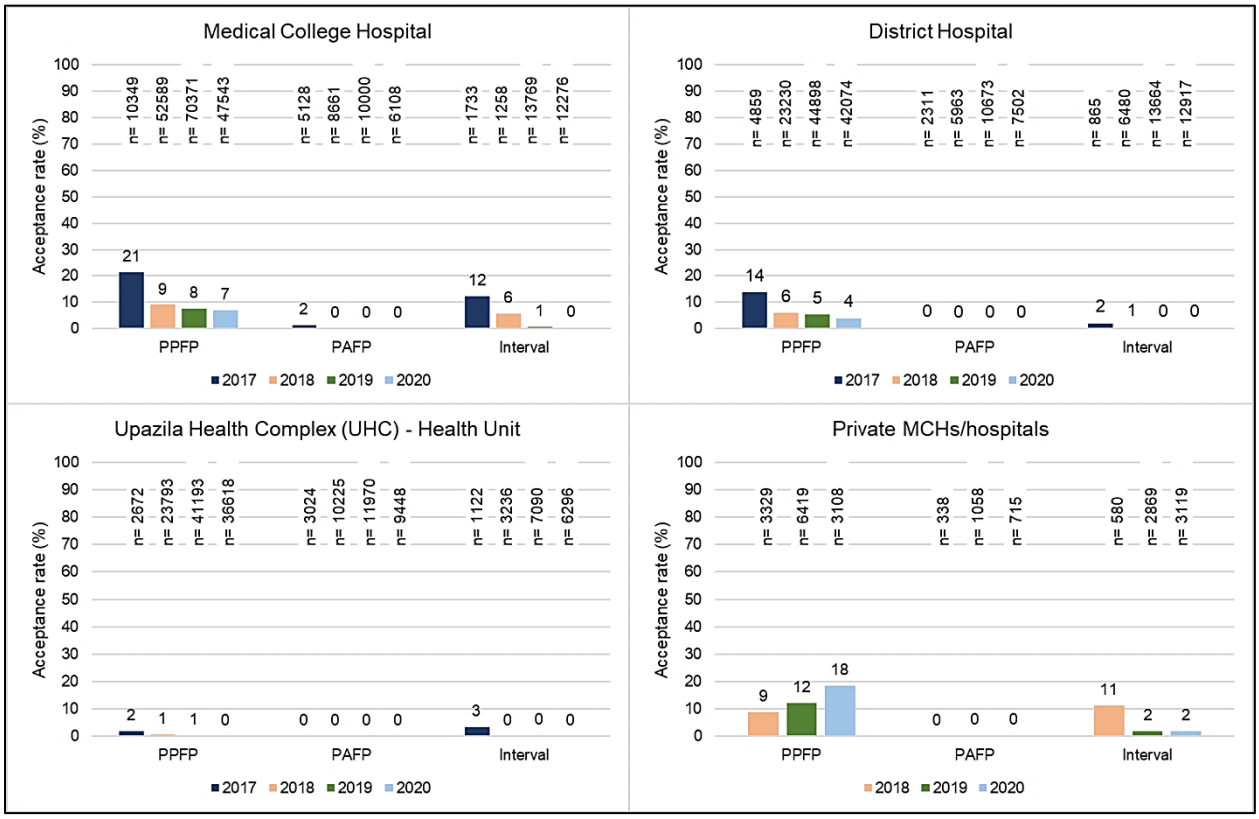

Figure 12: Acceptance rate of tubectomy services by FP client type during the QFP project period time (2017- 2020) by type of facilities.

4.2. Determinant analysis for LARC and PM FP methods in Ipas intervention facilities under DGHS and private sectors

The results from our determinant analysis to identify the potential factors for acceptance of LARC and PM in all Ipas intervention facilities under DGHS and private sectors are shown below**.**

Table 12: Factors associated with utilization of LARC & PM in Ipas intervention facilities under DGHS and private sectors.

Potential Factors	n	LARC and PM (%)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age (in years)				
<= 19 years	54494	4.4	Ref	Ref
20-24 years	201093	6.4	1.50 (1.43-1.57)	1.61 (1.52-1.71)
>=25 years	337856	14.2	3.64 (3.49-3.80)	3.37 (3.19-3.57)
Project year				
Year 1	32063	20.9	Ref	Ref
Year 2	139682	10.6	0.45 (0.43-0.46)	0.80 (0.76-0.84)
Year 3	233974	10.3	0.43 (0.42-0.45)	0.85 (0.81-0.88)
Year 4	187724	9.5	0.40 (0.38-0.41)	1.32 (1.25-1.39)
Site category				
Primary	156687	3.8	Ref	Ref
Secondary	166856	11.9	3.41 (3.31-3.52)	1.53 (1.47-1.59)
Tertiary	269900	13.9	4.06 (3.95-4.18)	0.63 (0.61-0.66)
Provider type				
Nurse/Midwife	438665	2.5	Ref	Ref
FWV/SACMO/Paramedics	74232	2.2	0.85 (0.80- 0.89)	1.16 (1.10-1.23)
Doctor	80546	62.8	64.76 (63.25-66.31)	164.39 (158.97-170.00)
Ipas trained provider				
No	379903	12.9	Ref	Ref
Yes	213540	6.8	0.49 (0.48-0.50)	1.12 (1.09-1.16)
Patient type				
Interval	87274	7.1	Ref	Ref
Postpartum	413045	12.0	1.78 (1.73-1.83)	1.22 (1.17-1.28)
Post-abortion	93124	7.9	1.12 (1.08-1.16)	0.13 (0.13-0.14)
Client type				
Adopters	555117	11.2	Ref	Ref
Changers	4790	12.4	1.12 (1.03-1.22)	1.07 (0.94-1.22)
Continuers	33536	1.2	0.09 (0.08-0.10)	0.16 (0.15-0.19)

From our determinant analysis we found that after adjusting with other covariates, >=25 years age group clients were more likely to be accepting LARC and PM compared to <=19 years clients (Adj. OR= 3.37, 95% CI: 3.19 – 3.57) and for 20-24 years age group clients the odds were 1.61 times higher than the reference group (Adj. OR= 1.61, 95% CI: 1.52 – 1.71). In the last year (Year 4) of the project, the odds of utilization of LARC and PM was 1.32 times higher compared to base year (Year 1) (Adj. OR= 1.32, 95% CI: 1.25 – 1.39). The clients who sought services from secondary level facilities were more likely to accept LARC and PM compared to those who sought care from primary category facilities (Adj. OR= 1.53, 95% CI: 1.47 – 1.59), though the clients who sought care from tertiary level facilities were less likely to accept LARC and PM compared to that of primary level facilities (Adj. OR= 0.63, 95% CI: 0.61 – 0.66).

Among postpartum clients, the odds of utilizing LARC and PM was found to be higher compared to interval clients (Adj. OR= 1.22, 95% CI: 1.17 – 1.28), though in post-abortion clients the scenario was opposite. The odds of providing LARC and PM services for doctors were higher compared to other providers. In our study, Ipas trained providers (Adj. OR= 1.12, 95% CI: 1.09 – 1.16) were more likely providing LARC and PM to clients compared to providers not trained by Ipas. We found odds of accepting LARC and PM among changers clients were higher than the adopters (Adj. OR= 1.07, 95% CI: 0.94 – 1.22); however, for continuers the findings were opposite (**Table 12**).

Table 13: Factors associated with acceptance of LARC and PM in Ipas intervention facilities under DGHS.

Potential Factors	n	LARC and PM (%)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age (in years)				
<= 19 years	53346	4.3	Ref	Ref
20-24 years	194694	6.3	1.49 (1.42-1.56)	1.60 (1.51-1.70)
>=25 years	323868	14.0	3.59 (3.44-3.75)	3.32 (3.14-3.51)
Project year				
Year 1	32063	20.9	Ref	Ref
Year 2	135435	10.6	0.45 (0.43-0.46)	0.85 (0.81-0.89)
Year 3	223628	10.0	0.42 (0.41-0.44)	0.86 (0.82-0.90)
Year 4	180782	9.2	0.38 (0.37-0.40)	1.39 (1.32-1.46)
Site category				
Primary	156687	3.8	Ref	Ref
Secondary	165613	11.9	3.39 (3.29-3.49)	1.53 (1.48-1.60)
Tertiary	249608	13.8	4.04 (3.93-4.16)	0.66 (0.63-0.69)
Provider type				
Nurse/Midwife	427455	2.6	Ref	Ref
FWV/SACMO/Paramedics	69192	2.1	0.82 (0.78-0.87)	1.15 (1.09-1.22)
Doctor	75261	63.2	64.54 (63.01-66.11)	167.49 (161.81-173.37)
Ipas trained provider				
No	362170	12.7	Ref	Ref
Yes	209738	6.7	0.49 (0.48-0.50)	1.16 (1.12-1.20)
Patient type				
Interval	80706	6.7	Ref	Ref
Postpartum	400189	11.9	1.87 (1.82-1.93)	1.28 (1.22-1.35)
Post-abortion	91013	8.0	1.21 (1.17-1.25)	0.14 (0.13-0.15)
Client type				
Adopters	535995	11.1	Ref	Ref
Changers	4654	11.4	1.03 (0.94-1.13)	1.02 (0.88-1.17)
Continuers	31259	1.1	0.09 (0.08-0.10)	0.16 (0.14-0.18)

After adjusting for other co-variates from our determinant analysis, we found that in DGHS facilities the odds of utilization of LARC and PM in year 4 was about 1.4 times (Adj. OR= 1.39, 95% CI: 1.32 – 1.46) higher compared to year 1 of the QFP project (**Table 13**).

Table 14: Change in acceptance of LARC and PM by type of FP method adjusted for other covariates in Ipas intervention facilities under DGHS.

Project year	N	Acceptance rate %	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
For IUD				
Year 1	32063	7.6	Ref	Ref
Year 2	135435	3.7	0.46 (0.44 - 0.49)	0.64 (0.61-0.68)
Year 3	223628	3.4	0.43 (0.41 - 0.45)	0.62 (0.59-0.65)
Year 4	180782	3.7	0.47 (0.44 - 0.49)	0.73 (0.69-0.77)
For implant				
Year 1	32063	3.0	Ref	Ref
Year 2	135435	2.1	0.69 (0.64 - 0.74)	0.86 (0.80-0.93)
Year 3	223628	3.0	0.97 (0.90 - 1.04)	1.19 (1.11-1.28)
Year 4	180782	2.6	0.86 (0.80 - 0.92)	0.84 (0.78-0.90)
For tubectomy				
Year 1	32063	10.2	Ref	Ref
Year 2	135435	4.8	0.44 (0.42 - 0.46)	0.40 (0.39-0.42)
Year 3	223628	3.6	0.33 (0.32 - 0.35)	0.31 (0.29-0.32)
Year 4	180782	2.9	0.26 (0.25 - 0.27)	0.18 (0.17-0.19)

After stratification by type of LARC and PM, adjusted for other covariates[4], revealed that in Ipas intervention facilities under DGHS, as compared to year 1, the odds of acceptance of implant was 1.19 times higher in year 3, though in year 4 the odds was 0.84 times lower. On the other hand, for each IUD and tubectomy as compared to the base year, the likelihood of acceptance of the corresponding odds were 0.73 times and 0.18 times lower in year 4, which were statistically significant **(Table 14)**.

[4] Other covariates: Age, project year, site category, provider type, Ipas trained provider, patient type, client type

Table 15: Factors associated with acceptance of LARC & PM in Ipas intervention facilities in private sector.

Potential Factors	N	LARC and PM (%)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age (in years)				
<= 19 years	1148	4.9	Ref	Ref
20-24 years	6399	7.8	1.65 (1.24-2.19)	2.63 (1.84-3.77)
>=25 years	13988	19.2	4.62 (3.52-6.07)	8.06 (5.71-11.37)
Project year				
Year 2	4247	11.6	Ref	Ref
Year 3	10346	15.5	1.40 (1.26-1.56)	3.72 (3.13-4.41)
Year 4	6942	16.4	1.49 (1.33-1.67)	2.57 (2.15-3.07)
Provider type				
Nurse/Midwife	11210	0.7	Ref	Ref
FWV/SACMO/Paramedics	5040	2.4	3.59 (2.69-4.78)	1.97 (1.44-2.70)
Doctor	5285	57.5	195.48 (155.21-246.20)	349.15 (274.42-444.22)
Ipas trained provider				
No	17733	15.9	Ref	Ref
Yes	3802	11.2	0.67 (0.60-0.74)	0.46 (0.38-0.55)
Patient type				
Interval	6568	12.6	Ref	Ref
Postpartum	12856	18.0	1.52 (1.39-1.65)	0.50 (0.42-0.60)
Post-abortion	2111	4.6	0.34 (0.27-0.42)	0.02 (0.01-0.02)
Client type				
Adopters	19122	16.4	Ref	Ref
Changers	136	49.3	4.96 (3.54-6.96)	5.66 (2.92-10.95)
Continuers	2277	1.8	0.10 (0.07-0.13)	0.23 (0.16-0.35)

In our determinant analysis on acceptance of LARC and PM in private facilities, after adjusting for other co-variates, the odds of utilization of LARC and PM in year 3, was about 4 times higher (Adj. OR= 3.72, 95% CI: 3.13 – 4.41) and in year 4 it was about 2.5 times higher (Adj. OR= 2.57, 95% CI: 2.15 – 3.07) compared to year 2 of the QFP project (**Table 15**).

Table 16: Change in acceptance of LARC and PM by type of method adjusted for other covariates in Ipas intervention facilities under private sector.

Project year	N	Acceptance rate %	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
For IUD				
Year 2	4247	2.0	Ref	Ref
Year 3	10346	2.7	1.34 (1.05 - 1.71)	1.33 (1.04-1.72)
Year 4	6942	2.6	1.27 (0.98 - 1.65)	1.43 (1.09-1.88)
For implant				
Year 2	4247	1.1	Ref	Ref
Year 3	10346	4.6	4.34 (3.21 - 5.87)	2.94 (2.14-4.04)
Year 4	6942	4.7	4.37 (3.21 - 5.96)	3.61 (2.61-4.99)
For tubectomy				
Year 2	4247	8.5	Ref	Ref
Year 3	10346	8.2	0.96 (0.85 - 1.10)	1.72 (1.50-1.98)
Year 4	6942	9.1	1.09 (0.95 - 1.25)	1.68 (1.45-1.94)

After stratification by type of LARC and PM adjusted for other covariates[5], revealed that in Ipas intervention facilities under private sector, the odds of acceptance of each IUD, implant and tubectomy were significantly higher in both year 3 and year 4 than the corresponding base year (year 2) **(Table 16)**.

[5] Other covariates: Age, project year, provider type, Ipas trained provider, patient type, client type

5. Discussion

Based on findings of trend analysis of secondary data of QFP project of Ipas during 2017 and 2020, there is a clear indication of increased number of LARC and PM service provision for each PPFP, PAFP and interval clients in the facilities under both DGHS and private sectors. Although there has been a drop in the respective services in 2020, this is most likely related to COVID-19 pandemic situation for which there had been drastic fall in accessibility to the health facilities by the clients. Which is corroborated by the qualitative findings, the providers' unavailability and restrictions related to patient contact and lack of supply of logistics were contributing factors for low utilization of LARC and PM in 2020 due to COVID-19 pandemic. It is also evident from the secondary data analysis that during the COVID-19 pandemic crisis period, the low utilization of LARC and PM was compensated to some extent by higher utilization of short acting method [9]. Moreover, during the COVID-19 lockdown period the service provision of MR service had decreased and care seeking for PAC services had increased [9].

Of all the LARC and PM services provided among the PPFP clients from QFP project under facilities of DGHS and private sectors during February 2017 and December 2020, 95.4% were provided from DGHS facilities. Of these, 59.2% were from MCHs (39 services/month/facility) and 33.4% from DHs (9 services/month/facility) and only 7.3% from health unit of UHCs (less than 1 service/month/facility). Similarly, of all the LARC and PM services provided among the PAFP clients, 98.7% were provided from DGHS facilities. Of these, 47.8% were from MCHs (5 services/month/facility), 31.1% from DHs (1 service/month/facility) and 21.1% from health unit of UHCs (less than 1 service/month/facility). The reason for good performance of MCHs for both PPFP and PAFP are higher patient flow and better availability of trained providers as compared to DHs and UHCs. In addition, complicated pregnancy and abortion cases are also referred to MCHs from lower level facilities that brings an opportunity for offering LARC and PM to the eligible clients. Moreover, in MCHs there are TOTs, that gives an advantage for continuous training and mentoring of the service providers for PPFP and PAFP. In MCHs, intern doctors also get opportunity of having training on PPFP and PAFP and engaged in delivering the services accordingly. These could be the probable reasons for high performance of LARC and PM from MCHs among PPFP and PAFP clients.

Relatively poor performance of DHs in providing LARC and PM is also likely to be related to low patient flow and unavailability of trained providers. In many DHs, due to unavailability of specialist providers, complicated cases including those requiring CS are referred to either MCHs or private hospitals/clinics. Moreover, due to roaster duty of the nurses, those who are trained, are relocated to other wards and cannot be used for the PPFP and PAFP services on which they had been trained. In addition, transfer of the trained doctors also have negative impact in performance of LARC and PM. To address the problem of transfer/attrition/workload of providers, the scope of training need to be enhanced by training adequate number of providers in each facility. This will help make the trained providers available round the clock as

delivery care is an emergency service. So, this will help promote PPFP after normal delivery as well as CS.

The poor performance of health unit of UHCs when it comes to providing LARC and PM services can be related to low patient flow and unavailability of providers. About two-thirds of the designated UHCs are non-functional for comprehensive emergency obstetric and newborn care (EmONC), due to unavailability of specialist providers [10]. Thus, these facilities neither can perform the CS nor manage the severe maternal complications and refer the cases to higher level public or private facilities. As Govt. has deployed diploma midwives in UHCs who are responsible for maternal health care including antenatal, delivery and postnatal care services, there should be a plan to train this new cadre of midwives for LARC. This will help address the problem of shortage of providers for the related services at the UHCs.

On the other hand, each of the private facilities under the QFP project on an average serve 3 and 1 clients for LARC and PM in PPFP and interval clients respectively. The stake of the private facilities is low as only 19 private MCHs/hospitals have been covered under QFP project between 2018 and 2020. However, based on findings of our determinant analysis in private facilities, there has been improvement in acceptance of each IUD, implant and tubectomy over time. Greater engagement of private facilities has a potential for increasing the service provision for LARC and PM. Besides, private facilities along with health unit of UHCs should be brought under the new provision of Imprest fund, as the current arrangements for getting incentives from the DGFP is too bureaucratic, often discourages the providers to avail the related benefits. This will encourage both the providers and clients in these facilities for further uptake of LARC and PM.

Of the LARC and PM in interval clients in DGHS facilities, about half of the services (49.3%) were from model clinics based in MCHs. The reason for 32.8% and 18.0% of LARC and PM services from DHs and health unit of UHCs among the interval clients is not clear which needs further exploration as there is no policy for providing LARC and PM as interval method from these facilities. Based on our findings from qualitative study, from DGHS facilities, sometimes clients with 3 or more living children demand for CS without having indication for getting the opportunity of tubectomy service. As there is no policy for providing tubectomy after normal delivery from DGHS facilities, the clients are referred to DGFP facilities. To further increase the performance of LARC and PM among the interval clients in DGHS facilities, there has been a suggestion for introducing a new policy for providing LARC and PM for the interval methods from DGHS facilities as well.

Though there has been improvement in number of LARC and PM services over time for different types of facilities, however, in terms of rate of acceptance of LARC and PM, there has been a decline over time specifically in DGHS facilities for each PPFP, PAFP and interval clients. Moreover, according to determinant analysis by type of LARC and PM, DGHS facilities could demonstrate improvement in acceptance of implant only in year 3. This can be explained by the problem of retention of trained providers in public facilities. On the other hand, in private facilities the scenario is a bit different, as in

these facilities actually the rate of acceptance of each of methods of LARC and PM has increased over time. Which is supported by the findings of the determinant analysis. This is because retention of trained providers in private facilities is not that acute as that of public facilities. Therefore, we strongly recommend to have a plan of periodic training of providers in public facilities. Besides, according to qualitative findings, the current number of trained providers for LARC and PM services is not adequate. A system should be developed and implemented for periodic refresher training (at least once a year) on LARC and PM. In consideration of workload and scarcity of doctors at health facilities, a policy advocacy is also needed for task shifting of implants to the nurses, midwives and FWVs.

Moreover, due to heavy work load of the providers, it was not possible to conduct quality counseling. Thus, there is a need of appointing dedicated counselor in each facility for quality counseling that will have impact in improving acceptance of LARC and PM. There is also a need of recruitment of separate counselor for each of the facilities and engage them specifically for counseling along with a plan to monitor the quality of counseling. In each facility there also should be a counseling corner for FP methods.

The study recommends to establish collaboration with the community based program to counsel the targeted clients from the community level and refer to designated facilities for the related services. Also, there should be a plan to counsel the pregnant women during the antenatal check up to motivate them for LARC and PM. Because counseling at the time of delivery is neither appropriate nor allow adequate time to effectively counsel and motivate the clients for LARC and PM. Project like QFP also needs to closely work with community based intervention program by engaging the influential community people including religious leaders to motivate husbands and mitigate misconception about the LARC and PM. The counseling program also needs to be strengthened to eliminate the misconception regarding LARC and PM by involving husbands.

According to secondary data of QFP Project, the acceptance of LARC and PM in Dhaka, Chattagram and Sylhet were higher as compared to Rangpur, Rajshahi and Barisal. Based on our field experience in Rangpur, the low utilization of LARC and PM in Rangpur MCH may be related to inability of operationalizing the provision of Imprest fund and thus, the providers are demotivated for the related services. Therefore, there is a need of organizing orientation program for the managers and related providers for effective management of Imprest fund.

Of all the FP method acceptors of QFP project during 2017 and 2020, from DGHS facilities only 11.9% and 8.0% accepted LARC and PM as PPFP and PAFP respectively and the rest had a short acting FP method. There is a need of further exploration of characteristics of these short term FP acceptors to develop a targeted approach for motivating this group for LARC and PM.

6. Conclusions and recommendations

Overall, the QFP project had an effect in increasing the service provision of LARC and PM during the lifetime of the project from facilities under both DGHS and private sectors. However, component-wise analysis of service provision of DGHS reveals no improvement in acceptance of IUD and tubectomy independently, though there is an evidence in improvement in acceptance of implant. Nevertheless, the study demonstrates that the intervention had an impact in improving the acceptance of each IUD, implant and tubectomy in private facilities.

The key barriers identified in effective service delivery are i) heavy workload and lack of manpower in public facilities ii) problem of retention of trained manpower in public facilities iii) no dedicated counselor for FP service provision iv) no provision of independent management of Imprest fund in UHCs and private facilities iv) misconception and stigma of the clients and their family members about LARC and PM.

To promote LARC and PM by addressing the above problems the study recommendations are:

1. Scope of training needs to be enhanced by training adequate number of providers in each facility.
2. A system should be developed and implemented for periodic refresher training on LARC and PM
3. There should be a plan to train the new cadre of midwives for LARC.
4. As a long-term solution should introduce in-service training of relevant providers on LARC and PM.
5. Policy advocacy is needed for task shifting of implants by the nurses, midwives and FWVs.
6. There is a need of recruitment of separate counselor for each facility for LARC and PM services.
7. To improve the quality of counseling in each facility, there should be a counseling corner
8. Establish collaboration with the community based program to counsel the targeted clients from the community level
9. A targeted approach to be developed after critical analysis of the characteristics of the clients who are accepting short term FP methods.
10. Private facilities and health unit of UHCs should be brought under a mechanism of Imprest fund management to overcome the current barriers in receiving the incentives
11. An orientation program is needed for the managers and providers for effective management of Imprest fund in DGHS facilities
12. A new policy is needed for providing LARC and PM to interval clients from DGHS facilities.

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