

“Impact on Family Planning Services in Primary Healthcare Facilities in Rural Sindh – Secondary Data Analysis of Pre- and on-going COVID-19 Crisis Period”

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ABSTRACT

The current COVID-19 pandemic has devastated the improvements in family planning services during the past years. This study assessed the impact of the global pandemic that compromised the provision of family planning services in primary healthcare facilities in Sindh – Pakistan.

A retrospective data from District Health Information System (DHIS) before Covid-19 (January – February 2020) and during Covid-19 (March – June 2020) was extracted on the provision of family planning services in primary healthcare facilities in Sindh. The study was conducted to understand the impact of service provision through time-series trend analysis by comparing two health facilities i.e., BHUs and BHU plus facilities on monthly average visits (Jan-Feb average) and differences in percentage change over time on the uptake of short and long-acting family planning methods.

The findings suggested that due to lockdown and restrictive mobility, the family planning services have fallen drastically in terms of clients visit the health facility from the onset of the COVID-19 outbreak in the month of March 2020 and remain stagnant till June 2020 as compare to before COVID-19 period. The overall analysis revealed the largest decay in the uptake of family planning methods specifically, pills with 31% and 26% during April 2020 in BHU and BHU plus facilities. On the contrary, uptake of Implants showed 25% and 23% decline in the month of June and May in BHU and BHU plus facilities respectively, compared to the average percentage of the pre-COVID Period.

The COVID-19 pandemic has adversely affected the provision of family planning services and steeply decreased the uptake of Pills and Implants in primary healthcare facilities in Sindh. On the contrary, the disruption and decrease in services have provided an opportunity to undertake further research exploration to develop future strategies and policies to combat health challenging situations in such pandemics.

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Introduction

The largest global public health emergency of novel coronavirus (SARS-CoV-2) that causes COVID-19, has drastically shifted the attention of health disruption of women and children from being essential to non-essential priority. The disease been declared as a global pandemic by the World Health Organization (WHO) on March, 11, 2020, has shaken the economies as well as health care system functioning by putting them under severe stress [1,2]. Many countries across the globe have taken rapid public health actions and social measures to curb the transmission of the virus and provide care for many who have been already infected or susceptible to be affected by the disease [1]. The sudden increased in the transmission of disease and demand for care of people become challenge for health care systems around the

globe, leading to have adverse effect on overall routine primary health care delivery services including reproductive healthcare for women [2].

Reproductive age women have unique health needs to be provided during all situations even during the unforeseen circumstances; but in some cases, it becomes more difficult for them to receive treatment and services during global public health crisis specifically in Low Middle Income Countries (LMICs). Women become more vulnerable and less likely to have access to quality health services, particularly in the case for reproductive health, which include contraceptives, maternal health services, and services related to sexual health. Restrictive social norms and gender stereotypes are other factors that also limit women’s ability to access health services [3]. The impact of COVID-19 pandemic led to compromised reproductive health services and quality of care due to various other factors including redeployment and task shifting of medical personnel to respond to pandemic and

large numbers of health care workers themselves infected due to shortage of personnel protective equipment's. In addition, gender inequalities due to poor socio-economic resources of women in LMICs and disconnect between government and civil societies/organizations for swift and strategic responses to health emergencies are particularly vulnerable to the broader impacts of public health crisis.

Evidence shows that the impact of an epidemic on reproductive health drives not through the direct result of the infection, but instead the indirect consequences of strained health care system, disruptions in services and diversion of resources. All of this has particular impact on reproductive health during a widespread health crisis which often remained unrecognized not only in the current global pandemic of COVID-19, but even in previous public health emergencies such as Ebola and Zika [4]. Many studies found that the disrupted services and fear of seeking treatment caused an estimated 3,600 maternal deaths, neonatal deaths and stillbirths and rapid decline in contraceptive use and family planning visit during the Ebola virus in African countries [5,6].

Family planning is one of the cost-effective ways of improving women and child health, which bring transformative benefits to women, families, communities and society at large. However, due to the current COVID-19 crisis, Pakistan is experiencing imbalance in population's basic health need specifically related to family planning service provision delivery and access. Restrictions on public mobility due to lockdown has increased the risk of unhealthy practices and behavior of women to achieve their basic health need, particularly on usage of contraceptive method, delivery by skilled healthcare provider and safe abortion care services etc. A recent (April 2020) research by United Nations Population Fund, Pakistan (UNFPA) on current pandemic crisis has indicated that around 4.7 million pregnant women and 5 million current users of family planning will be in much needed services of antenatal, natal and postnatal care (which includes family planning) and shortage of contraceptive supplies will have an increase incidence of unplanned pregnancies and unsafe abortions which is already very high in Pakistan [7].

Pakistan is one of the countries, where women's reproductive health indicators remain much below the desired level when compare with countries with similar socioeconomic conditions [8]. According to Pakistan Demographic Health Survey (PDHS) data, contraceptive prevalence rate remains stagnated over the last 5 years, with 26% of women using a modern method in 2012-13 and 25% in 2017-18 [9]. Although, unmet need for family planning has declined from 20% in 2012-13 to 17% but still high in rural areas (19%) than urban area (15%). In Sindh, nearly half (48.6%) of the married women of reproductive age (15-49 years) want to space or limit the number of children they have, yet less than third (30.9%) are currently using a contraceptive method. Out of these, only 24.4% use modern methods of contraception [10].

PPHI response to provision of primary healthcare during COVID-19 emergency

The People's Primary Healthcare Initiative (PPHI) is a Public Private Partnership Programme of Government of Sindh, Pakistan. PPHI is a major player in the provision of primary healthcare services in Sindh through health facilities which provides numerous services which are not limited to antenatal, natal and postnatal care services, immunizations, facility-based delivery coverage as well as provision of family planning services since 2007. The current Covid-19 has drastically decreased the provision of routine primary healthcare services for women and children in

Sindh. The government decision of lockdown due to coronavirus has affected the overall service delivery and consumption of family planning services in particular. However, PPHI Sindh continued to organize health education sessions on coronavirus preventions and personal hygiene. Moreover, screening desks have been arranged at multiple sites and many PPHI Sindh staff members have been assigned to these points to ensure proper screening, and isolation during the lockdown due to coronavirus. PPHI is experiencing challenges in provision of health service delivery specifically for women to fulfill their family planning needs. Due to the gravity of the current pandemic of Coronavirus, there is a need to highlight the essential services such as family planning, which should not be discontinued or disrupted due to any health emergency crisis when the need of contraceptive use is in its zenith.

Based on the hypothesis that women's reproductive health complications due to unplanned /unintended pregnancies decreases as a result of improving the accessibility and availability of family planning services, this study strives to assess the provision and access of family planning services during the Covid-19 outbreak in the selected health facilities and how it impacted the services of family planning services in mostly the rural districts of Sindh. The outcome of the study will measure the impact on attendance of family planning clients, uptake of contraceptive methods / services and stock-out status of family planning products based on the DHIS data constructed in a time series to facilitate policy makers and direct the future interventions to deal with such pandemic.

Material and Method

Data

PPHI, holds a major share in the management of public primary health care facilities in the province of Sindh. Currently, it is operational in four-region i.e., Hyderabad, Mirpurkhas, Sukkur and Larkana excluding 6 districts of Karachi region. Of the total state-owned primary healthcare facilities, PPHI manages more than 60% (1174) health facilities that includes 861 Basic Health Units (BHUs) and 313 BHU Plus level facilities in Sindh. The District Health Information System (DHIS) portal of PPHI provides divergent information on primary healthcare service utilization within each of the PPHI healthcare facilities in Sindh. The PPHI health facilities data are compiled and recorded in the DHIS portal on monthly basis for evidence-based management and performance improvement of health facilities. Since the data was obtained from PPHI -DHIS portal and it did not involve any human experiment therefore, ethical approval was not required. The data enumerates the number of clients attending two types of health facilities (Basic Healthcare Unit-BHU and BHU plus facilities) before Covid period i.e., January – February 2020 and during Covid period i.e., March – June 2020. The data was analyzed for the following health service indicator:

1. Family planning visit clients in both BHU and BHU plus facilities
2. Family planning service consumption including Short term and long-term method in both BHU and BHU plus facilities.

The family planning services of BHU and BHU plus facilities were selected for analysis from the wider range of services recorded in the DHIS as family planning is related to one of the essential reproductive health components for women health.

Methods for analysis

Using a retrospective study design, the DHIS data of 713 health facilities including only 413 BHU and 300 BHU plus facilities from 21 out of 23 districts of PPHI Sindh were selected for the analysis, whereas, remaining 461 out of 1174 health facilities

were excluded due to missing values, other health facilities such as Rural Health Centers (RHCs), Maternal, Neonatal and Child Health (MNCH) centers and those operationalized after Covid outbreak period. The data from January – February 2020 (before coronavirus period) and March – June 2020 (during coronavirus period) were extracted from the DHIS system for a trend analysis on family planning (FP) services by clients i.e., married women of reproductive age (15 – 49 years).

The district wise average of Jan-Feb 2020 (before Covid period) was calculated which was used as the expected value for comparison with recorded values in DHIS. The percentage difference between the recorded and expected value for the month of March till June 2020 respectively (during Covid period) were calculated to determine the change in service utilization related to family planning due to COVID-19 pandemic. The extent of change was measured in both the BHU and BHU plus health facilities of PPHI Sindh.

Results

A total of 413 BHUs and 300 BHU plus facilities from Hyderabad, Mirpurkhas, Larkana and Sukkur regions of Province Sindh were analyzed. The primary health care facilities of PPHI Sindh includes Basic Health Units (BHUs) which provides routine health services, six hours a day, six days a week, whereas, BHU Plus facilities, provides round the clock (24/7) MNCH services. The PPHI health facilities are mostly located in rural areas across Sindh.

To obtain a complete depiction of family planning services before and during Covid-19 crisis, the monthly data was included from PPHI DHIS portal which cover the period of two months before Covid-19. i.e., January and February 2020 and during the declaration of outbreak i.e., from March 2020 till June 2020. The trends in family planning services below covers the entire period of interest and illustrate the data on family planning clients visiting the primary healthcare facilities and the provision of various methods of family planning in both the healthcare facilities in Sindh. Result depicted notable decline in number of clients accessing family planning services during Covid outbreak in all the four regions (Figure 1.1 and 1.2). Although a slight increase has been observed in BHU facilities during the month of May, but it has drastically reduced in June. The overall graph shows rapid decline in family planning clients from the month of March, when the outbreak was declared by World Health Organization (WHO) and remain stagnant during April till June 2020.

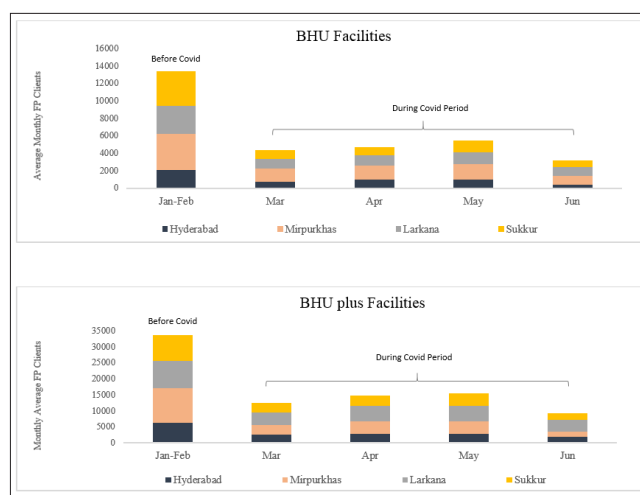
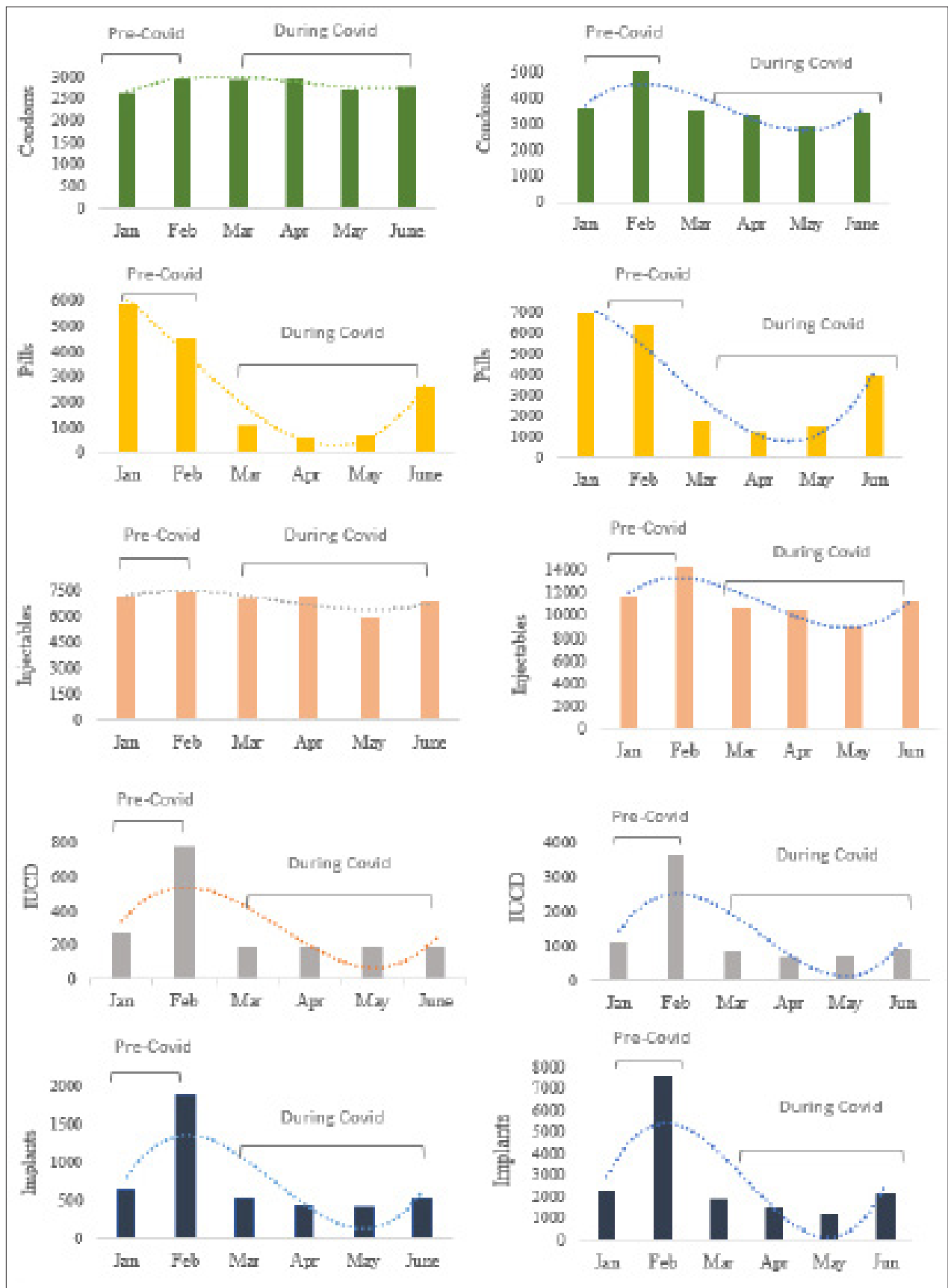


Figure 1: Average Monthly Clients of Family Planning (FP) before and during Covid period at BHU and BHU plus health facilities - Sindh

During the Covid crisis in BHU facilities, June 2020 marked the lowest level of family planning service utilization in all the four regions of Sindh, with an 82 percent reduction in Hyderabad followed by 75 percent in Mirpurkhas, 67 percent in Larkana and 80 percent in Sukkur compared to the 3-months (March 2020 – May 2020) average during the Covid period. Similarly, BHU plus facilities showed the down fall of family planning service in June 2020 was highest 69 percent in Hyderabad region, followed by 86 percent in Mirpurkhas, 58 percent in Larkana and 72 percent in Sukkur.

The Government of Pakistan data of Sindh showed that between April and June 2020 (when the number of Covid cases rose steeply from 4,719 to 36,439), had adverse effect on the family planning services. According the DHIS data, the monthly average utilization of FP services suddenly declined to (by using Jan-Feb as a reference point - average 13,445 clients), 4394, 4691, 5507 & 3231 from March till June 2020 in all the four regions of BHU facilities. On the contrary, BHU plus facilities had average of 33,699 clients (Jan-Feb reference point), utilized FP services, 12,514 (March), 14,788 (April), 15,431 (May) and 9,337 (June) respectively.

Figure 2: Monthly provision of contraceptive methods before and during COVID-19 in Sindh
Basic Health Units (BHU) Facilities **Basic Health Units (BHU) Plus Facilities**



Looking at individual methods, the largest decline was seen in pills during April 2020 in both the health facilities, when Covid cases were officially recorded by the government. On average, pills uptake during COVID crisis fell to 31 percent and 26 percent in both the facilities during April 2020, compared to the average percentage of pre Covid period (Jan – Feb 2020) in BHU and BHU plus facilities respectively. Similarly, IUCD fell to 21 percent in June 2020 in BHU facilities, whereas, equal percent decreased were observed in the month of April and May 2020 in BHU plus facilities. The largest decline in long-term method were saw in Implants with 25 percent in June 2020 in BHU and 23 percent in May 2020 in BHU plus facilities during COVID crisis.

While all methods saw declines in provision of family planning during the Covid crisis in BHU facilities, the declines were not as dramatic as those experienced in BHU plus facilities. Among the short-term methods, pills were the method with the sharpest decline, followed by injectables 3 percent and only 1 percent in Condoms of their pre-Covid levels in BHU facilities as compared to 7 percent in Condoms and 6 percent in Injectables in BHU plus facilities which provides 24/7 free of cost services to the community.

Discussion and Conclusion

This paper explores the situation of family planning continued short-term and long-term practices' trends amid the pre and post COVID-19 in the Sindh province, using two different time interval datasets. Two indicators i.e., clients' visits to both BHU /BHU plus facilities; and the prevalence rate of application of Short-term and Long-term family planning services utilization were considered to assess the impact of COVID-19 on the family planning services during Mar-June 2020 as compare to pre-COVID-19 situation during Jan-Feb 2020. Results indicates that there is steep decrease of clients' visits to both BHU and BHU plus facilities in all regions of Sindh i.e., Hyderabad, Mirpurkhas, Larkana and Sukkur. However, reasons behind this steep decrease are unknown and were not scope of this paper; though Sindh Government had introduced a complete Lockdown policy and had imposed restrictions on people's gatherings and movements, which may have contributed in the steep decreased in clients' visits to BHU/ BHU plus facilities. Therefore, no first-hand in-depth interviews were conducted during the lockdown period. However, a further qualitative study would help to better understand this dimension of steep decreased as represented by the results of this paper.

On the other hand, a similar trend has been observed on the prevalence rate of utilizing short-term and long-term family planning method by the reproductive age group women between 15-49 years. Four categories data on Short-term and Long-term methods i.e., Condoms, Pills, Injectable, IUCD and Implants were analyzed to assess the trend on these services' consumption and utilization. The results show that there is considerable decrease in either acquiring services for or utilizing methods of Pills, IUCD and Implants as compare to the consumption of Condoms and Injectable in post-COVID-19 duration (March-June 2020). Whereas, there is slight decrease in usage of Condoms and Injectable and this offers an interesting avenue to further explore correlation amongst these five preventive methods; where results show sharp decrease in usage of Pills, IUCD and Implants vis-à-vis as compare to a slight decrease in Condoms and Injectable.

The trend pattern results presented in this paper show that COVID-19 has adversely affected the fragile and weakened health system of the Sindh province; especially on the family planning

services in global pandemic on an unprecedented scale. Though, PPHIs have been continuously providing family planning services even during the lockdown and imposed restricted movement and has been updating the DHIS database on the monthly basis during COVID-19 crisis. The DHIS database has provided key datasets on the pre and post COVID-19 situations to draw some trends on the Short-term/ Long Term services utilization and clients' visits to the BHUs. The research design for this study was developed while considering the available datasets with on PPHI on various indicators; however, qualitative data gathering and analysis was excluded from the scope of this study due to official restrictions on the first-hand social interaction. Further, this COVID-19 crisis has provided an opportunity to undertake further exploration of trends' results to assess the factors and reasons behind impact of COVID-19 on the family planning services in order to develop robust tools and strategies to reduce the impact of any future pandemic on the family health services provisions in a situation like of Sindh province.

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