REVIEW ARTICLE

Family planning trends and programming in Pakistan

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Abstract

Objective: Pakistan's struggle to revitalize its family planning is reflected in a very slowly rising Contraceptive Prevalence Rate (CPR) over the past decade and little change in demand indicators such as ideal family size and total fertility, despite considerable funding, limelight and resources. This review explores nationally available data to understand the causes for this limited success of family planning programming.

Methods: This is a thematic review of Pakistan Demographic and Health Surveys 2007, 2012 and 2017, with some illustrative examples from other local studies or evaluations.

Findings: National CPR changed from 30% in 2007 to 35% in 2012 and 34% in 2017 while CPR for modern methods changed from 22% to 25% and then remained unchanged. This corresponds to around 11.36 million users of FP but only 4.9 million that avail any family planning services each year - the rest had received a permanent or long-term method in a previous year. This means that only 15% of all Married Women of Reproductive Age (MWRA - i.e., married women between the ages 15-49) avail FP services each year - a proportion that has remained unchanged since 2007. Nearly half (44%) of all those who avail services buy a product directly from a store. The method mix is dominated by condoms and tubal ligation and does not change much by age, parity or when women say they want to space or limit children. Age of peak fertility remains in the 25-29 year bracket while age of peak family planning increased from 35-39 bracket to 40-44 in 2017. Although much of programming is supply driven, contraceptive supplies data do not match community uptake (as estimated from PDHS 2017) and mismatches vary from 16% to 1100% depending on the method.

Conclusions: Key factors in lack of progress are limited demand creation, a lack of response to women's preferences during service delivery and the lack of consideration of coverage in programmes. Current programmes serve around 4.9 MWRA each year while an additional 12.8 million women must be served annually to reach Pakistan's goal of 50% CPR. To do this, a number of changes are needed, including demand creation, community contextualized programming, more accurate data about programming and commodities, and better use of this data in making programming and allocation decisions.

Keywords: Family Planning Programming, Coverage, Effective Programming, Pakistan, DHS Comparison.

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Introduction

A regional pioneer in family planning (FP) programming since the 1950s,[1] Pakistan has lately trailed its neighbours in curbing population growth. Along with Nigeria, it is the only country among the ten most populous countries that has a population growth rate above 2%.[2] At the 2012 London FP summit Pakistan committed to raise its CPR to 55% by 2020.[3] Although this was later revised down to 50%, this latter target has been institutionalized nationally as recommendations of the Council of Common Interest, thus ensuring considerable political support for promoting FP funding, services and infrastructure.[4]

The rise of FP worldwide has been predominantly rights based. Rising empowerment of women has been linked with their ability to control their fertility and use family planning. Indeed, women's entrance into the workplace is a key driver of their empowerment and has been directly linked with the use of family planning. As women rely less on income from children and became more sensitive to the increased opportunity cost of their time away from work, their fertility reduces and the use of family planning rises.[5,6] By contrast, in many of the developing countries where women have lesser autonomy and ability to exercise their rights, the push towards contraception has come either from governments or from donors,[7,8] with a few exceptions of demand led approaches.[9] In these circumstances, either because government driven programmes focus on one or few methods, or because women with limited autonomy passively receive methods that are given to them, method mix is narrow.[7-10] A more diverse method mix is often associated with higher FP use.[11]

FP programming in Pakistan has been predominantly supply-sided, although some recent experience has been demand-driven, rights-based and consumer-oriented.

The for-profit market for contraceptives is very small.[12] We triangulated data from multiple sources including the Pakistan Demographic and Health Surveys (PDHS), commodity supplies databases, and research studies to understand how FP programming landscape has evolved and why family planning has remained stagnant in Pakistan despite receiving considerable funding and commitment.

Methods

Comparisons were conducted using datasets from the PDHS 2006-7, 2012-13 and 2017-18,[12-14] to understand MWRA/couples' actions, behaviours and attitudes towards FP and their trends over time. Other data include: contraceptive supplies data from the exit report of the central warehouse and the contraceptive logistics management system (cLMIS). Individual studies have also been cited to illustrate particular The Pakistan's Bureau of Statistics biennial National Health Accounts reports were used for data on financing.

The number of FP users that availed FP services in a given year were estimated by multiplying survey percentages with population figures from the Bureau of Statistics, in order to depict "uptake of FP services".[15] Each MWRA reporting condoms, pills or injections as their current method was counted as one user. Those reporting tubal ligation were multiplied by 0.08, since DHS shows that 8% of all MWRA that received tubal ligation had done so in the past 12 months. Those using Intra-Uterine Devices (IUD) were divided by 3.5 and those with an implant 5 to account for method durations of 3.5 and 5 years, respectively.

In Pakistan, nearly all commodities come to a central warehouse in Karachi and are then distributed to public and private providers. While, some NGOs have recently imported contraceptives directly, this has been sporadic and small given the national scale. Records of commodities exiting the warehouse are reported quarterly by the Pakistan Bureau of Statistics as "contraceptive performance report". Additionally, a contraceptive logistics management information system (cLMIS) was developed to provide more granular and real-time details of the same data down to the facility level. The quantities of commodities reported by the Logistics Management Information System (LMIS) system were used to estimate the number of FP services provided. Number of users of commodities were estimated by applying the Couple Years of Protection (CYP) multipliers to contraceptives. For e.g., 120 condoms or 13 cycles of oral pills or 4 injections meant one user. For multi-year methods such as implants, IUD or sterilization surgery, each encounter was counted as one user served in that year.

There are a number of limitations. This review is based on available data. For e.g., national surveys such as the DHS include only married women rather than all women of reproductive age. There are other issues that relate to the quality of data, particularly for service, supplies (e.g., in the contraceptive LMIS) and financing data.

Results

Contraceptive Prevalence Rate has remained unchanged since 2012

Pakistan's national contraceptive prevalence rate (CPR) increased from 29.6% during PDHS 2007 to 35.5% in PDHS 2012 and then declined slightly to 34.3% in 2017-18; although the change from 2012 is not statistically significant. Furthermore, there is considerable interprovincial variation from 46% in Islamabad and 38% in Punjab to 20% in Balochistan. More importantly, CPR for modern methods (mCPR) increased only slightly from 22% in 2007 to 25% in 2012 but has remained unchanged thereafter.

These rates correspond to an increase from 6.98 million FP users in 2006-07, to 10.42 million in 2012-13 and 11.36 million in 2017-18. In 2017 there were approximately 8.9 million users of a modern method and of these 4.9 million had received their method in the past one year. Of the 0.94 million additional users (FP users in the current period minus users in previous period) added during the 2012-18 period, 1.07 million were for a modern while those opting for a traditional method declined by 138,982.

Condoms and female sterilization dominate both the method mix and the service mix

Condoms and female sterilization are the commonest modern methods availed. Condoms are used by a quarter of all couples that use any modern method (Figure-1), and are preferred in urban areas. They are provided mainly through social marketing and by the lady health workers. Sterilization is more common in rural locales and often happens late, so that women with sterilization are a median of 39 years and have 5 children, slightly fewer than in 2012.[16] On the other hand, IUD, implants and injections are making inroads. In particular, women are increasingly saying in local surveys and qualitative studies that they turn to injections for their certainty and privacy.

Since some of the contraceptive methods such as IUD and sterilization surgeries (for men or women) are multi-year in that once someone receives these, they continue to be

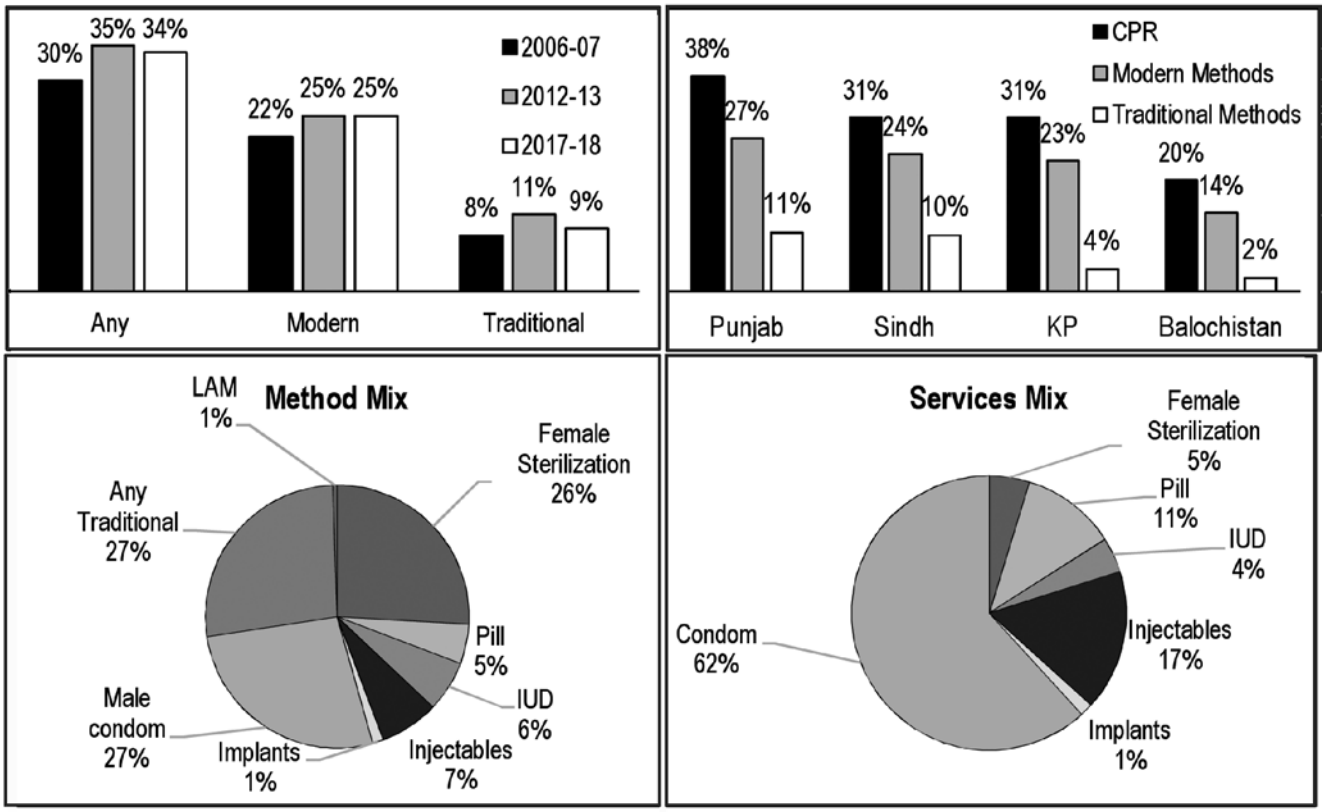


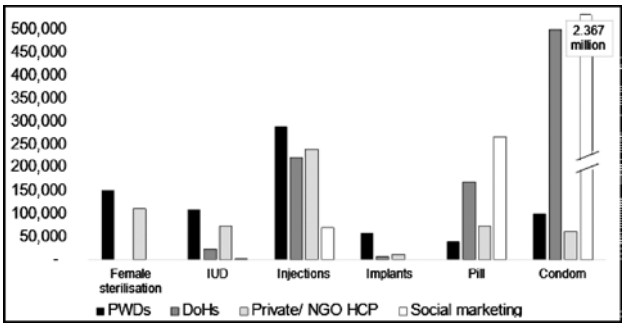
Figure-1: Changes in Contraceptive Prevalence Rate (CPR) over time and Differences in Methods Mix across provinces.

counted in the CPR for many subsequent years, it is useful to distinguish overall users of modern methods from those that acquired their method within a given year, to arrive at the quantum of FP services provided annually. Such a "Service Mix" (Figure-1) shows condoms are availed by 62% of all couples availing any modern contraceptive each year, followed by injections (17%). Only 5% of all those who avail any FP services receive female sterilization and 4% receive an IUD.

Increasing wealth, education and urban residence are all associated with increased use of FP but method mix does not change for any of these factors. Traditional methods account for around a third of methods (Figure-1) and are used nearly as often as condoms in all locales (by province, urban or rural), and their use is higher among the more educated women.

Fertility preferences

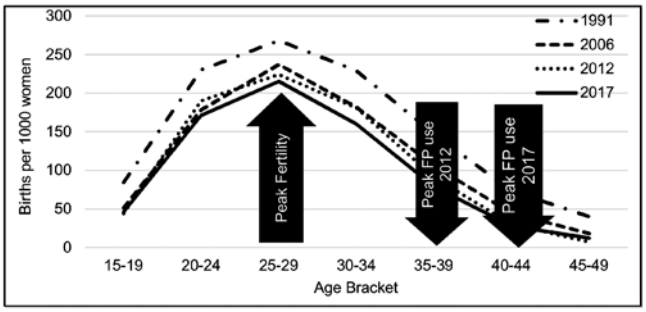
The overall fertility rate has declined from 4.3 in 1990 to 2.9 in 2017-18. Today, 44% of all women don't want any more children and this proportion increases with age and parity. Fertility preferences vary by context, as 57% MWRA from Islamabad, 44% from AJK, but only 31% form Balochistan and 25% from the former FATA want to limit



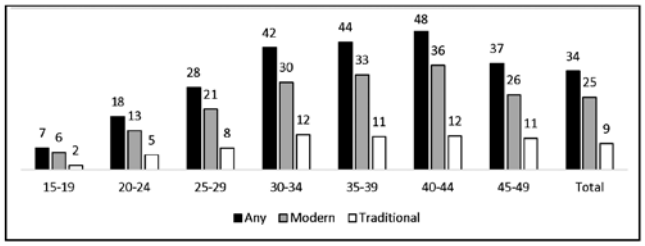
PWD: Population Welfare Department. DoHS: Department of Health Services. NGO: Non-Governmental Organisation. HCP: Health Care Provider.

Figure-2: Number of Married Women of Reproductive Age served by Method and Source.[12]

further births. Men are more likely to want another child. Ideal number of children that women want is 3.9 — down minimally from 1990 when it was 4.1, and unchanged since 1990 for men at 4.3. Not surprisingly then, the desire to limit births only starts after the fourth child. Many qualitative studies highlight that many couples feel that a complete family has a balance of two boys and two girls. Irrespective of age (including those 45 or older) or parity, more than 70% all MWRA felt that if they had any birth



Sources: Pakistan Demographic and Health Surveys 1990 to 2017.[12-14,23]
FP: Family Planning.



Source: Pakistan Demographic and Health Survey 2017-18.[12]

Figure-3: Peak of fertility, family planning use and method mix among different age brackets.

within past five years, it was "wanted". Most FP decisions are made jointly (86-88%), compared to decisions about seeking other healthcare where husbands decide solely (36-42%).

Peak of fertility has happened in the 25-29 group and has remained unchanged since 1990. However, peak use of FP was observed in the 35-39 group in 2012 and is now in the 40-44 group, suggesting that perhaps the entire cohort of FP users is aging and younger MWRA are not adding significantly to FP users (Figure-3).

Very little is known about demand for FP in communities. For e.g., couples that pay at least one PKR for the education of an older child (~ 67% across Pakistan) are twice as likely as their neighbours to use FP (manuscript in preparation). However, such attributes of demand for FP, what leads couples to choose FP or particular methods and how they vary across the country are not well-studied.

Urban CPR is higher but choices and decision making are similar

Around a third to half of Pakistan's population is urban.[17] Compared to their rural counterparts, urban MWRA are slightly older (32.9 vs. 32.1 years, p: <0.001), more educated (6.2 vs. 3.1 years of education), have fewer children (3.1 vs. 3.4, p: <0.001) and lower ideal number of children (3.5 vs. 4.2).

Urban CPR is higher (35.7% vs. 26.0%). Compared to rural women, women from urban areas prefer short term (condoms: 12% vs. 5%) and traditional methods (11% vs. 6%). Injections and IUD account for 2-3% each in either location, while 5-7% MWRA have undergone tubal ligation.

Family Planning programming is mostly supply side

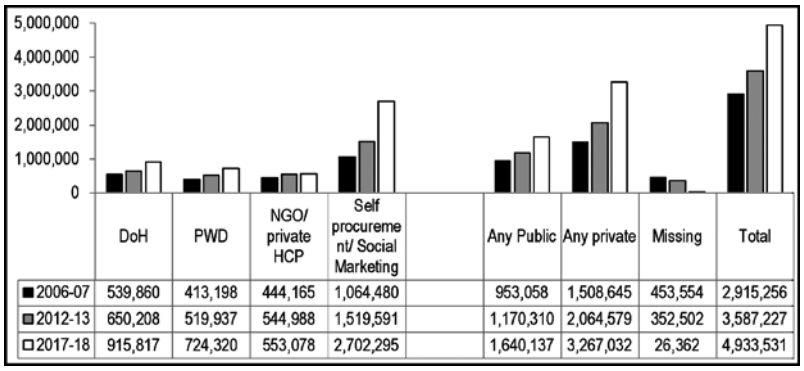
FP interventions have mostly been supply-sided, i.e., mostly health facility-based services that have infrequently incorporated aspects of demand creation/ factors, addressed refusals, discontinuations, overcome misconceptions or applied novel counselling techniques etc. IEC materials, an emphasis on the quality of counseling, and even outreach, which individualizes services and has been a central part of all successful FP interventions in the past 3 decades, are either minor parts or altogether absent from many FP programmes.

CPR plus Unmet Need — a measure of current and potential future users — remained unchanged at 55% in 2006 and 2012 and then dropped to 51% by 2017, suggesting falling demand, for unclear reasons. Some evidence suggests that for most part programmes succeed in initiating users but 30% discontinue (at 12 months). Discontinuations are higher for pills and injections (47%). Among those that initiated FP use, 44% stop FP to become pregnant again, and 19% due to side effects. Discontinuation due to side effects is the highest among hormone (injections and pills) users. Method failure which happens for 16% of users - is the commonest among those practicing withdrawal, or using pills or condoms.[12]

Young couples are excluded from programming. There was a 10-year delay between the peak of fertility vs. the peak of CPR in 2012, this shifted further to 15 years in 2017 (Figure-3). Couples with no or few children and those within 5 years of marriage are systematically ignored by providers and often discouraged from using FP by providers. One study found that young women first acquire actionable information about FP approximately 10 years after marriage, when they have 3 or more children (Khan et al, manuscript under preparation).

Self-procurement/ social marketing accounts for more than half of all modern methods while the public sector provides most services

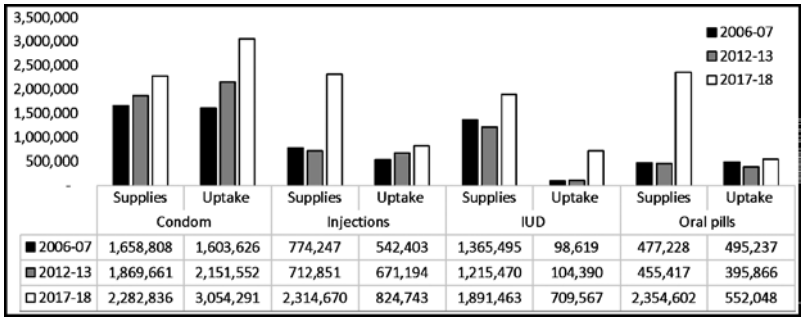
Adjusting for those users that received their modern method within the past 12 months allows estimation of



	DoH	PWD	NGO/ private HCP	Self procurement/ Social Marketing	Any Public	Any private	Missing	Total
2006-07	539,860	413,198	444,165	1,064,480	953,058	1,508,645	453,554	2,915,256
2012-13	650,208	519,937	544,988	1,519,591	1,170,310	2,064,579	352,502	3,587,227
2017-18	915,817	724,320	553,078	2,702,295	1,640,137	3,267,032	26,362	4,933,531

DoH: Department of Health. PWD: Population Welfare Department. NGO: Non-Government Organisation. HCP: Health Care Provider.

Figure-4: Sources of contraceptives.[12]



	Condom		Injections		IUD		Oral pills	
	Supplies	Uptake	Supplies	Uptake	Supplies	Uptake	Supplies	Uptake
2006-07	1,658,808	1,603,626	774,247	542,403	1,365,495	98,619	477,228	495,237
2012-13	1,869,661	2,151,552	712,851	671,194	1,215,470	104,390	455,417	395,866
2017-18	2,282,836	3,054,291	2,314,670	824,743	1,891,463	709,567	2,354,602	552,048

IUD: Intra Uterine Device.

Figure-5: Comparison of commodity data with estimated users.[12]

"services" of FP that are provided in a year. These increased from 2.91 million in 2007 to 3.65 million women in 2012 and 4.94 million in 2017; or around 15% of MWRA in each of these years. This proportion has remained unchanged due to increase in the total population of MWRA (Figure-4).

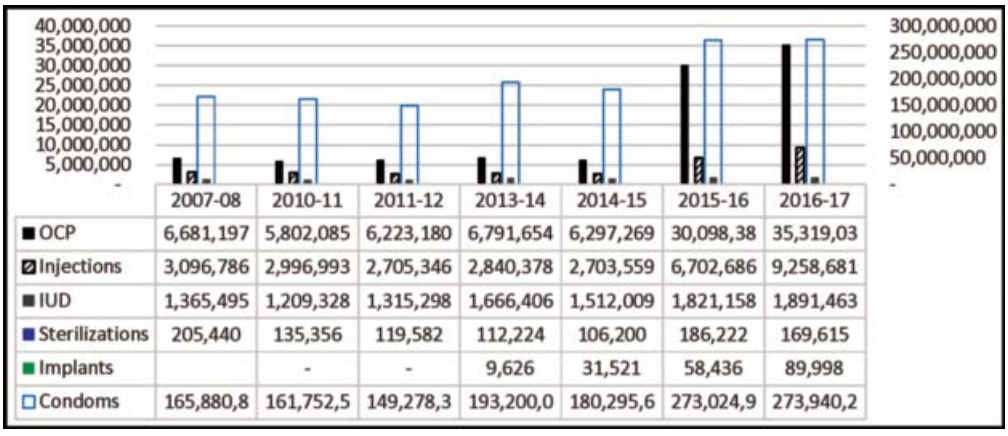
The bulk of FP was self-procured from social marketing outlets. This now reaches 2.7 million women (8% of MWRA), or double the number of women as compared to 2012. Contribution of private sector facilities (including NGO supported social franchising outlets) remains unchanged since 2012 at 0.55 million women each year. The two public sector departments (Health, mainly via their lady health workers, and Population Welfare through their clinics) combine to serve around 1.7 million women or around 5% of MWRA — unchanged since 2007 — albeit with a slightly shrinking role of DoH that is taken up by Population Welfare Department (PWD).

Supplies data are inconsistent

Data about commodities come from exit records of the central warehouse of the Population Welfare Department and is supposedly more accurate for public sector than private sector supplies. There are two sources of these data: the quarterly and annual "contraceptive performance reports" issued by the Pakistan Bureau of Statistics and the Contraceptive Logistics Management System that is maintained by the Planning and Development Ministry. Detailed analysis suggests that only partial data from the private sector are entered into the system and even for the public sector, entire districts may be missing. While both, Contraceptive Performance Reports and cLMIS, supposedly report from the same source, i.e., the exit records of the central warehouse, there is at least a 20% difference in quantities of most contraceptives, suggesting the need for a better record keeping mechanism and periodic review and use of these data in programming decisions.

Commodity supplies doesn't match their estimated uptake

Over the years, supplies of contraceptives (from supply data) have increased slightly and have remained higher than their estimated uptake from community surveys



	2007-08	2010-11	2011-12	2013-14	2014-15	2015-16	2016-17
OCP	6,681,197	5,802,085	6,223,180	6,791,654	6,297,269	30,098,38	35,319,03
Injections	3,096,786	2,996,993	2,705,346	2,840,378	2,703,559	6,702,686	9,258,681
IUD	1,365,495	1,209,328	1,315,298	1,666,406	1,512,009	1,821,158	1,891,463
Sterilizations	205,440	135,356	119,582	112,224	106,200	186,222	169,615
Implants		-	-	9,626	31,521	58,436	89,998
Condoms	165,880,8	161,752,5	149,278,3	193,200,0	180,295,6	273,024,9	273,940,2

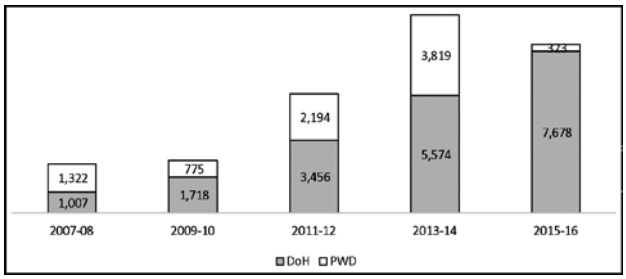
Source: Contraceptive LMIS and PDHS 2017-18.[12]

Figure-6: Trends of commodity supplies over time.

such as the DHS; despite under reporting for the public sector in at least several districts and for the private sector (private communications Khan et al). The oversupply is around 20-30% for condoms and 400% or more for pills and IUD. The discrepancy for IUD is around 1200% for records from the Bureau of Statistics. The mismatch is not predictable in that it varies for various contraceptives but generally there are more contraceptives given out than there is evidence for their uptake on surveys.[18] Additionally, if one includes the fact that only a small fraction of contraceptives sold/ given to the private sector are included in the records, the discrepancy between records of supplies and their uptake based on survey data increases further (Figure-6).

Funding for FP

Despite a significant national commitment at the London summit in 2012, public sector allocations (estimated from National Health Accounts) have fluctuated. Funding for the DoH (estimated as a fixed fraction of overall DoH budget) continues to rise steadily but PWD funding



DoH: Department of Health. PWD: Population Welfare Department.

Figure-7: Public sector allocation of funds for family planning.[24-28]

dipped sharply in 2015-16. Additionally, around 95% of allocated funds are spent on personnel and overheads with under 5% being used for commodities (Figure-7).

Discussion

For Pakistan to reach its FP2020 pledge of 55% CPR by 2020, 12.8 million additional users must start using FP. This is more than double the number of the current women that avail FP services in a given year. Doing so would require a serious upgrade of public and private sector family planning services and commodity supply infrastructure and demand generation.

Programming in Pakistan is predominantly supply driven with a number of key gaps in implementation, including piecemeal programming that does not translate into geographic coverage, a factor that likely explains the low impact of interventions on CPR in national surveys. Uptake of FP by couples is remarkably indifferent to their situation and needs.

Fertility choices and family planning uptake

As expected, use of modern FP correlates with wealth, education, urban residence and age.[19] However, the use of FP and of particular methods is indifferent to the particular needs of MWRA/ couples. For e.g., the method mix is predominated by condoms and traditional methods (sterilization constitutes 26% of the method mix, down from 38% in 2007 and 33% in 2012, but only 5% of the services in a given year) and remains unchanged across all age brackets and even among couples who say they have completed their families, reflecting poor understanding of contraception or of matching specific methods to individual needs and suggesting poor communication about FP. Furthermore, the peak of FP usage shifted from the 35-39-year age bracket in PDHS 2012 to the 40-44-year bracket in DHS 2017, depicting little demand creation in the previous 5 years. On the other hand, the biggest gains occurred in "self-procured" (42%) methods and multiple studies show that young users may be more receptive to spacing messages. However, messaging remains insensitive to age, education or ethnicity etc. of users and features mostly limiting rather than spacing. This suggests that any gains in FP use, may have been due to secular trends rather than due to programming and more nuanced programming, and research to explore these nuances may be needed.

Service delivery, programming and measurements

The concept of coverage has been widely used in public health including insurance and universal healthcare,[20-22] and refers to the proportion of potential beneficiaries that access the service. In order to be effective, programming must serve a significant number of potential beneficiaries in any geographic area (e.g., a union council or higher). Current FP programmes in Pakistan often show individual provider level success but with little community level impact; often because they support 1-2 (public or private) providers (each of who may serve 300-400 clients a year, RADS evaluation work, personal communication) to serve a community of thousands. In order to have an impact, the government, donors, and NGOs must re-consider programming to cover nearly all MWRA in a geographic area.

The ability to measure outcomes is related to the coverage question. Surveys such as PDHS are infrequent and not granular to the level of districts. Programming data such as the DHIS or the cLMIS can fill this niche, but are of poor

quality in their current state; reflecting their lack of use in programming and therefore an absence of feedback about their accuracy. This accuracy should increase if they are used in programming. However, their ultimate test of accuracy would be when their data start corresponding with results from surveys such as the PDHS.

Urban slums - easy to reach but systematically ignored

Strategic priority of programming must shift to urban slums. Nearly half of Pakistan's poor and marginalized live within large cities,[17] while urban slums have only slightly higher CPR and other reproductive health indicators than the poorest rural locales. This means that around a third of all very poor and marginalized Pakistanis live, in dense clusters, right next to where many of the resources are already present and deployed. In essence reaching out to these will be like capturing "low hanging fruit". However, doing so would require advocacy to the government to rethink how it operates. Many of these localities are undocumented and often considered illegal. The government would need support to re-strategize how to bring such communities into the fold of public sector services.

Local context and the role of outreach

Programmes must be locally contextualized; i.e., programmes must be conceived and designed at the community level — to address local nuances — rather than through a "master plan that fits all country or province." This suggests a greater role of grass roots NGOs than has been the case thus far.

Outreach to households has been a key component of all successful programmes in Pakistan. This likely reflects the limited mobility of women and low demand for family planning, and for the moment must be an integral part of any FP programme.

Role of the private sector

NGOs and the private sector accounts for around 65% of FP services (which adds up to 10% of MWRA served in any given year), 90% of birthing and 80% of medical outpatient services. However, they face many regulatory limitations, from registrations to operations. Permissions are required for each household survey — which are crucial to measure the impact of programming — and sometimes for specific services such as post-abortion care and use of certain medicines, or sometimes to even open clinics. Imports of contraceptives and supplies is also regulated, often on a consignment basis. Such permissions take up considerable time and resources, add uncertainty to the approval process, and cause delays. The considerable regulatory bar limits smaller NGOs and "for-profit" companies from entering and working in this domain. The regulatory process must be rationalized.

Training for clinical care has been the mainstay of much public or donor funded programming. Given its limited effectiveness thus far, its continued implementation must be rationalised to include components and uses that work and to stop those which do not.

Successful sales of contraceptives to higher and mid-level clients by at least one company suggests the potential for commercial sales of FP supplies. However, it is unclear to what extent such sales can become a part of the mix of contraceptives available, or whether such sales can be affordable and accessible to poorer clients.

Commodity supply, Data Management and Use

An elaborate and modern system was established with support of the USAID to track supplies using pellet tracking and MIS. Since nearly all supplies are routed via one central warehouse, contraceptives are tracked as they exit the warehouse. However, the accuracy of LMIS has not changed substantially over the previous paper-based system, and is off by 15-1100%.

The system operates on a "push system", sending a predetermined number of contraceptives to facilities periodically. As supply and use tracking improves, this must transition to a demand-based "pull" system based on actual utilization by each facility. Perhaps technology can play a role. Using a machine learning system that uses cLMIS data at the facility level would help identify and overcome gaps in the current data and determine needs of contraceptives at individual facilities while accommodating local factors, such as seasonality, secular events such as draughts or migrations etc., and would do so with minimal human involvement or error.

Frequent shortages of contraceptives have led many experts to ask for endogenous contraceptive production to be established. In the absence of a commercially viable contraceptive market, this will likely require government subsidy to potential manufacturers, which in turn runs the risk of creating a monopoly or a cartel, driving up costs and diminishing sustainability. A more reasonable option would be to reduce regulatory barriers and tariffs to imports of contraceptives from international markets.

Government Stewardship Role, Funding and Advocacy

While the government has repeatedly committed to many treaties and goals such as FP2020, MDGs and SDGs, these have not translated into financial allocations or programmatic achievements. On the other hand, there has been very strong donor commitment (UKAid/FCDO, USAID, KFW and others). However, as donor funding has increased, government funding, at least for DoHS, has declined. Typically, much of public sector funding pays for salaries at fixed facilities that are overstaffed and serve too few. Public sector has tried to overcome these inefficiencies by integrating FP with services such as antenatal care and immunization. Such integration needs to be implemented consistently and its efficacy needs to be evaluated.

A key opportunity for advocacy to government would come from establishing systems that allow feedback from beneficiaries to government policy makers and implementers, and enhance accountability. This means investment and attention to improving the quality of data management and use. Considerable data are available in Pakistan about uptake of reproductive health (RH) and FP services in communities from survey such as PSLM, PDHS, etc. Additional data include supplies data from the central warehouse/Pakistan Bureau of Statistics and economic data such as the Household Integrated Economic Survey (HIES), Pakistan economic survey etc. that has some relevant information about RH and FP. Groups within Pakistan have expertise in triangulating these databases to develop a "contextual overview". These should be supported to work with the government (i.e., mentoring government agencies to work with data) or independently to produce regular reports that include such higher-level analyses.

Conclusions

In conclusion, stagnant CPR despite considerable resources and normative commitments suggests the need for significant reform. Key changes needed are to re-think programming as ground up and responsive to local contextual needs of clients, and for interventions to be deployed to cover discrete areas or populations rather than establishing individual providers or clinics. Any programming must be designed to show its effect at a population level, rather than efficacy or quality at a clinic or facility. There is a need to better understand the context of why and how couples would choose FP and to employ this information in creating demand for informed FP. The government must reconsider its role to diminish regulatory hurdles to programming by the private sector, and recast its services as the means of last resort — i.e., services in locations or for groups that are not easily reached by the private sector — and match its commitments with appropriate funding and programmatic actions. Finally, more research is needed to explain the disconnect between couples' expressed fertility preferences for spacing or limiting, and their choices of methods. This is specially puzzling in an age where young people are better informed and are increasingly knowledgeable consumers across nearly all other domains in their lives.

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Conflicts of Interest: None.

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