

Special Publication

Operations Research Project
Health and Population Extension Division

**Developing Strategies for
Improving the Quality and
Performance of Clinical
Contraceptive Services:
A Review**

**Ali Mehryar Karim
Shameem Ahmed
Farzana Sobhan
Abu Jamil Faisel**



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Summary

The Bangladesh national family planning programme has made significant progress over the last two decades. The contraceptive prevalence rate (CPR) has risen six-fold from 8% in 1975 to 49% in 1996-1997. Correspondingly, there has been a sustained fertility reduction; the total fertility rate (TFR) has declined from 6.3 to 3.3 during this period. To attain the goal of replacement-level fertility by 2005, the CPR must be increased to at least 67% with relatively greater share of the longer-acting contraceptive methods in the method-mix. However, over the past three years, the Bangladeshi couples in the reproductive age group have been relying more on short-term methods, such as pills and injectables, with lesser preference to long-acting methods, such as intrauterine device (IUD) and female sterilization. The unmet need is 13% among the married women aged 30-49 years; these women are the potential clients for clinical contraception¹. The method discontinuation rate still remains high. The first-year contraceptive discontinuation rates are highest for condoms (65%), followed by injectables (51%), pills (44%), and IUDs (41%). About 86% of the IUD and 70% of the injectable users discontinue mostly due to side-effects and ill health.

The studies conducted in Bangladesh reveal that both supply and demand- side factors are largely responsible for the poor performance of national family planning clinical services. On the demand side, certain social barriers to clinical contraception exist in rural Bangladesh where family planning is considered to be, in some ways, sinful. Also, there are perceived side-effects of male sterilization, and many couples still believe that vasectomy causes loss of weight, sexual desire, and the ability to work.

On the supply side, the specific barriers to clinical contraception include: poor staff motivation, weak supportive supervision, lack of technical competence, proper screening, counselling and supplies, and ineffective behavioural change communication (BCC). Safer male sterilization procedures, such as non-scalpel vasectomy (NSV), is still not widely available. Availability of norplant services is limited, and now under gradual expansion to all the thanas of the country. Other barriers to the quality of clinical contraceptive services are the bias of service providers and their supervisors toward a particular method due to misinterpretation of the national family planning guidelines and outdated contraindications. An inadequate coordination between the personnel of family planning and health services at

¹ For the purpose of this review report, the injectable, IUD, norplant, male and female sterilization have been referred to as clinical contraception.

most levels and a considerable misunderstanding between the medical and the non-medical staff within the Directorate of Family Planning are supply-side operational barriers to clinical contraception.

The major activities of the national family planning programme to ensure the quality of clinical contraceptive services include: development of manuals on standards and protocols, training, and quality assurance by its family planning clinical service programme (FPCSP). The government eliminated fixed targets for the field workers and per-case payments to referral agents, and made temporary methods more easily available to improve client choice and promote volunteerism. The Systems Approach Programme, implemented by the AVSC International to improve the quality of GoB family planning services, has contributed to the performance of clinical contraceptive services in the intervention thanas. Involving the project staff in monitoring the quality of care (QoC) indicators in family planning services by the Pathfinder-supported NGOs has also contributed to improved performance of clinical contraceptive services. Other activities on the QoC of the Pathfinder International include: development of modules for infection prevention, training of service providers, and establishment of referral and linkage for the management of contraceptive-related side-effects.

The future need is to develop strategies to remove the existing barriers to solve the problem of method discontinuation, improve side-effects management and referral linkages with higher-level institutions. Religious beliefs and social customs as well need to be addressed. Availability of technically competent staff (both doctors and paramedics) in counselling, interpersonal communication, screening, and service-delivery, including compliance with infection prevention at the different service-delivery tiers and facilitative supervision, also needs to be ensured, along with regular supply of medical and surgical requisites (MSR).

Considering the low levels of literacy, especially of the rural population, pictorial and narrative booklets are required to be developed for users. Males should be involved in the family planning programme. They should also be motivated themselves and be involved in motivating other males. The BCC activities need to be coupled with improved QoC of clinical contraceptives. The duplicity of structures that impedes the use of all available manpower and resources has to be addressed too.

Additional important issues that should be addressed when formulating an intervention are: (a) promoting switching from temporary to semi-permanent and permanent methods; (b) service providers' bias on methods; (c) incentives to use specific services; (d) BCC to promote long-term male methods; (e) system to follow-up clinic clients; and (f) clients' choice and their rights.

Background

Bangladesh was the first Asian country to recognize the need of reducing its population growth rate. The actual movement was started, in fact, in 1953 by the Family Planning Association of Bangladesh (FPAB), a national NGO. When the National Family Planning Programme of Bangladesh was initiated in 1965, its central aim was to develop an infrastructure of personnel and facilities that could make family planning information and services readily available to the general public [1]. Since its inception, the programme has made significant progress. During the past two decades, the country has experienced a rapid fertility decline, with the total fertility rate (TFR) dropping by half (from 6.3 in 1975 to 3.3 in 1996-1997), and six-fold increase (from 8% to 49%) in the contraceptive prevalence rate (CPR) [2]. Bangladesh is the only country among the 20 poorest, where sustained fertility reduction has taken place over the past 15 years, despite slow socioeconomic development [3]. The most important finding of the 1996-1997 BDHS was the continued fertility decline. The decline in fertility over the past two decades is equal to three-quarters of the decline needed to achieve the replacement-level fertility. Therefore, attention must be given toward assessing whether the present conditions are conducive to further decline in fertility.

While fertility has declined rapidly, it is apparent that the Bangladeshi couples want to embrace this sense of control. A majority of them consider that the ideal family should have two/three children. The growing proportion of women now want fewer children than before. In fact, if the couples could control their fertility such that they could give birth to only that number of children which they actually desired, the TFR would now be 2.5 [2].

A vast service-delivery and logistics system has been developed in the country to expand the Programme's service-delivery capacity to cover married couples of reproductive age [4]. Furthermore, the current contraceptive method-mix is varied, offering the potential clients a wider range of services than ever before. This has brought about a different type of change with an increased use of short-term methods, such as pills, condoms and injectables, and a decreased use of longer-acting ones, such as IUDs and sterilization. Moreover, the contraceptive discontinuation rate continues to remain high. Although the Bangladesh sterilization programme became increasingly popular until 1987, it has gradually declined [5]. The pattern of decreasing reliance on sterilization, from almost two-fifths of users a decade ago to only one-fifth in 1993-1994, may be partially due to the discontinuation of recruiter-incentives in the late 1980s, and lack of effective and explicit information, education and communication (IEC) activities on sterilization [6]. This could also be due to reporting of dubious coverage in earlier years.

One of the future challenges of the national population programme is to achieve the replacement-level fertility by the year 2005 [7]. To attain it, the CPR must be increased to at least 67 percent [4]. Also, the relative share of the longer-acting methods in the method mix needs to be increased. The long-term vision of the Health and Population Sector Strategy (HPSS) of the Government of Bangladesh (GoB) is to be responsive to the needs of clients, especially women, to provide quality services, have adequate service-delivery capacity, and be financially sustainable. The HPSS plans to provide a range of reproductive health services focusing on client needs, rather than demographic targets, increase the use of available services, and make them more cost-effective and sustainable [3].

Unfortunately, even if the current programme trend continues and the net reproductive rate falls from 1.5 to 1 per woman by 2005, due to the population momentum, the country will still have to wait another 40-45 years to stabilize its population at around 170 million. Any delay in achieving the country's demographic goal means a heavy time penalty and serious implications for socioeconomic development of Bangladesh. Thus, population continues to be the nation's "number one problem" [7].

The main objective of the fifth five-year plan is to create a greater degree of public awareness about the population problem through a social movement and nation-wide approach. Full participation of the people will be vital to achieve of the demographic goal of the net reproductive rate (NRR) of one by the year 2005. Rapid population growth will be contained through a strong maternal and child health (MCH)-based family planning programme within the framework of reproductive healthcare and the reorganized health and family planning service-delivery system. Thus, the population growth rate is expected to fall from 1.8 percent in 1996 to 1.32 percent by 2005. The TFR is also expected to fall from 3.3 in 1996-1997 to 2.2 in 2005. The method-mix is expected to shift to provide 40 percent of clinical methods in 2002, as opposed to 31 percent in 1997 [7].

The population programme managers are required to face the challenge to increasing the demand for long-acting and permanent methods, with better behavioural change communication (BCC) and improved skill of providing quality services, to generate an increased level of acceptance for clinical contraception, and to create a positive attitude in this context. Meeting this challenge will need a considerable improvement in the operation and outputs of the various systems and subsystems of the national family planning programme.

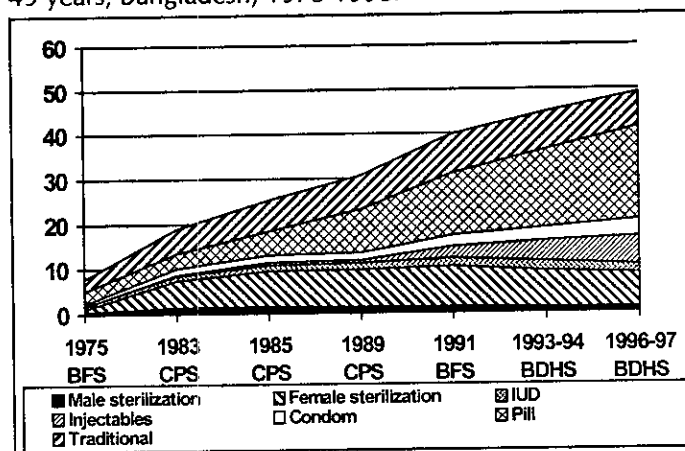
Levels and Trends

Contraceptive use

According to the BDHS 1996-1997, fertility has declined sharply from 6.3 in 1971-1975 to 3.3 in 1996-1997. The pace of fertility decline has slowed recently compared to the exceptionally rapid decline during the late 1980s and early 1990s. This decline has been steepest among the older women. Nevertheless, the CPR has increased six-fold from 1975 to 1997, and the rise (10%) has been remarkable in the past three years. The current CPR in Bangladesh is 49 percent, and the most widely used method is the pill (21%), followed by female sterilization (8%), injectable (6%), periodic abstinence (5%), and condom (4%).

There has already been a big change in the method-mix over time, with an increased dependence on short-term methods, such as pills and injectables (Fig. 1). Use of pills has increased from 17 percent to 21 percent of married women since 1993-1994, and now accounts for 42 percent of all contraceptive use. In 1993-1994, sterilization accounted for 18 percent of contraceptive use, and dropped to 15 percent by 1996-1997 [2]. Between 1989 and 1996-1997, the use rate of injectables increased ten-folds, and that of IUD rose comparatively in a slower pace (29%). There has, however, been a decline in sterilization; the annual rate has declined by 1.6 percent for tubectomy and 1.1 percent for vasectomy. The Bangladesh sterilization programme, launched in 1966 with vasectomy, followed by tubectomy in 1972, reached its peak in 1983-1984 with 552,167 sterilizations performed, decreasing to 225,062 in 1989-1990, and further to about 114,000 in 1992-1993 [8].

Fig. 1. Trends in current use (percentage) of family planning methods by currently married women aged 10-49 years, Bangladesh, 1975-1996.



(CPS: contraceptive prevalence survey; BFS: Bangladesh fertility survey; BDHS: Bangladesh demography and health survey)

Unmet need

The unmet need has declined recently from 19 percent of married women of reproductive age (MWRA) in 1993-1994 to 16 percent in 1996-1997 [2]. However, the unmet need is still as high as 13 percent even among women aged 30 years and above who are the potential clients for longer-acting clinical contraceptives (Table 1).

Table 1. Comparison of unmet need for family planning among married women of reproductive age between BDHS 1993-1994 and 1996-1997

Age group (years)	1993-94	1996-97
10-29	21.5	18.2
30-49	16.3	12.5
Total	19.4	15.8

Contraceptive discontinuation and side-effects

Nearly half of all the contraceptive users in Bangladesh stop using a given method within 12 months of starting its use. The discontinuation rates are highest for condom (65%), followed by injectables (51%), pill (44%), and IUD (41%). Eighty-six percent of the IUD and 70 percent of the first-year injectable discontinuers discontinue due to side-effects or ill health (Table 2).

Table 2. The first-year contraceptive discontinuation rates due to method failure, desire for pregnancy, health reasons, or other reasons, according to specific methods

Method	Reasons for discontinuation				All reasons
	Method failure	To become pregnant	Side-effects/ health	All other reasons	
Pill	2.9 (6.5)	7.0 (15.8)	24.2 (54.5)	10.3 (23.2)	44.4 (100)
IUD	0.0 (0.0)	2.5 (6.1)	35.5 (86.0)	3.4 (8.2)	41.3 (100)
Injectables	1.3 (2.5)	5.1 (10.0)	35.6 (69.8)	9.0 (17.6)	51.0 (100)
Condom	6.4 (9.9)	10.3 (15.9)	11.4 (17.6)	36.7 (56.6)	64.8 (100)
Total	3.8 (8.1)	7.1 (15.1)	21.5 (45.8)	14.5 (30.9)	46.9 (100)

Note: Figures in parentheses are the percentage distribution of discontinuers in each method by cause.

Source: BDHS, 1996-1997 [2].

There has been little improvement in the discontinuation rates since 1993-1994. The rate for all reversible methods combined remained constant between 1993-1994 (48%) and 1996-1997 (47%) (Table 3). However, there has been slight decline in the discontinuation rates for injectables (from 58% to 51%) and condoms (from 72% to 65%). Side-effects of contraceptives and ill health are the main reasons for contraceptive discontinuation.

Side-effects of contraceptives and ill health are the main reasons for contraceptive discontinuation.

Twenty-four percent of the current users of family planning are still having problems with their methods. The percentage having problems is highest (34%) among the injectable users, followed by the female sterilization users (33%), pill users (23%), and IUD users (20%). The major problems among female sterilization are abdominal pain (19%), followed by weakness (18%). Among the injectable users, the major problems were cessation of menstruation (18%), followed by weakness (14%) and headache (12%). Among the pill users, the major problems were headache (16%), weakness (13%), and nausea (6%), while among the IUD users, the major problems were excessive bleeding (9%), weakness (8%), and abdominal pain (7%) [2].

There has apparently been a decline in reported health problems with methods between the BDHS 1993-1994 and 1996-1997 (Table 4). Differences may be due to the use of slightly different questions in the two surveys, but they may also indicate that there has been at least some improvement in the quality of care in the delivery of family planning services [2].

Table 3. Comparison of the first-year contraceptive discontinuation rates between BDHS 1993-94 and 1996-97

Method	1993-1994	1996-1997
Pill	45.0	44.4
IUD	37.1	41.3
Injectables	57.6	51.0*
Condom	72.0	64.8*
Total	47.8	46.9

* Significantly decreased from 1993-1994

Table 4. Comparison of problems with current method of contraception between BDHS 1993-94 and 1996-97

Method	1993-1994	1996-1997
Pill	32.7	23.2
IUD	35.9	20.2
Injectables	47.7	34.2
Condom	4.3	2.9
Female sterilization	47.2	32.8
Male sterilization	14.5	13.1
Total	29.1	24.4

Review of Centre and Project Work

Operational barriers

One of the operational barriers to providing high-impact health and family planning services is an inadequate coordination between the personnel of family planning and health services at most levels [9]. The misunderstanding between the medical and the non-medical staff within the Directorate of Family Planning further hinders the clinical contraceptive programme of the country. This occurs primarily between the TFPOs and the MO-MCH with regard to: pay-scale and status, financial drawing and disbursing authority, and career advancement opportunities. It is believed that, due to this misunderstanding, the non-medical staff are reluctant to engage in activities to improve the performance of clinical contraception which they think would project the performance of the medical staff.

Ensuring the availability of sterilization services and longer-acting methods has been another concern among the national policy-makers and programme managers. Studies on norplant services in Bangladesh reported that the method is acceptable to women and the majority of the clients were satisfied with the service received [10]. However, its availability is nationally limited, and now under gradual expansion to all the thanas of the country [4]. Safer male sterilization procedures, like non-scalpel vasectomy, are still not widely available due to the non-availability of adequate number of trained doctors. Even tubectomy, vasectomy and IUD, which are supposed to be widely provided by the government family planning programme, are not always available due to lack of trained staff and supplies.

Poor staff motivation, weak supportive supervision, and lack of technical competence and supplies are some specific operational barriers to clinical contraception. In spite of the relatively high field worker-to-population ratio client-worker relationships are weak, and staff lack the motivation to be sympathetic toward the clients' needs. Less than half of the women in one study reported having a conversation with the worker during her last visit. Direct observation of the field workers showed a lack of screening capabilities and technical competence, leading to the use of inappropriate family planning methods which, in turn, results in method discontinuation [11].

An assessment of the Programme's needs in urban areas of the country showed that barriers to access to services exist, despite a high concentration of service providers. Lack of coordination between the service providers creates gaps and overlaps in coverage [12].

A report on strengthening front-line supervision in the field workers' activities showed that although some Family Planning Inspectors (FPIs) are considered to be good workers, most are reluctant to perform their mandated responsibilities [13]. This may be due to constraints, such as job motivation and little investment of the national FP-MCH programme in the professional development of FPIs. A study conducted by the Ministry of Planning of the GoB, however, reveals that although the FPIs allocated an average of 19 days each month to field activities, they actually used only 30 percent of this time for actual allocated time for the activity [14].

According to Khan, 1997 [15], the use of injectable contraceptives and IUDs was found to be higher among the women who visited the fixed-site service centres, and by relatively younger mothers or those with fewer children, whereas the use of permanent methods was more common among the older women and those with more children. The study suggests that increasing the BCC activities in regard to the availability of clinical methods at the fixed-site service centres can further enhance the use of clinical contraceptives. It also suggests that the improved management and quality of service at the fixed-site service centres will increase the use of service utilisation of these centres, thereby raising the acceptance of injectables and IUDs.

Social barriers

Evidence from a study conducted in Matlab by Rahman, 1992 [16] suggests that gender preference – desire for two or more sons – represents a significant barrier to fertility regulation in rural Bangladesh, since this has a dampening effect on the impact of the national family planning programmes effort.

Certain social barriers to clinical contraception exist in rural Bangladesh where family planning is considered to be, in some ways, sinful. Permanent methods are often seen as more overtly challenging God's rights over procreation, because they eliminate the possibility of any future offspring. Also women hesitate to seek clinical contraceptive services, such as IUD and tubectomy, outside their homes for fear that they may have to receive services from a male doctor [17]. There are perceived side-effects of male sterilization; many couples still believe that vasectomy causes loss of weight, sexual desire and the ability to work. These are social barriers to clinical contraception that need to be addressed to increase the use of long-term family planning methods, including sterilization.

A needs assessment survey conducted in rural Chittagong showed a high prevalence of reported contraceptive side-effects, which might have led to high discontinuation of methods, resulting in a low CPR. Also, attendance at the

Satellite Clinics (SCs) was very low, and the most important reason for this, as cited by the respondents, was limited awareness of the types of services provided there and limited awareness about the location. As clinical contraceptive services are provided at these SCs, among other services, this could be cited as one of the social barriers to clinical contraception. The study suggests to strengthen the field activities by improving client-worker contacts and the management of the fixed-site service centres through enhanced supervision [18].

Contraceptive discontinuation and side-effects

Experience from a study conducted in Matlab on the use-effectiveness of the copper T200 in rural Bangladesh showed that side-effects – especially bleeding, pain, and weakness – were the major causes of method discontinuation. Therefore, management of side-effects is an important determinant for a better programme performance. The study suggests that lack of motivation and regular supplies are the two important barriers to using long-term contraceptive, such as copper T200. Moreover, care of and attention to users should be ensured for the success of the programme [19]. This concurs with the findings of another study in the same area conducted in 1984 to assess the contraceptive-use patterns in rural Bangladesh [20]. The study identified the involvement of respected and trained local women as field workers, high frequency of home visits, and a greater degree of supportive supervision as important elements for increasing contraceptive acceptance and for reducing dropouts. A similar study conducted in 1990 also suggests that the contraceptive use can be enhanced by making contraceptive service readily available [21].

Rahman *et.al.*, 1996 [22], in their study on the prevalence and continuation of injectable contraceptives, showed that the programme managers need to focus on extending continuation of injectables beyond 18 months and improving management of side-effects. According to their study side-effects (almost 26%) were one of the key reasons for method discontinuation. Another important cause for method discontinuation was child mortality. The death of a child has been found to have a very large negative and highly significant effect on contraceptive use regardless of the number of living children, and a positive, large and very significant effect on contraceptive discontinuation for parents with four or fewer children. The study concludes that the family planning workers should direct special attention (such as counselling, motivation and contraceptive supplies) to the grieving parents.

Results of a study conducted in the ICDDR,B's Matlab MCH-FP area showed that the injectable contraceptive (DMPA) users, who had side-effects, used the method for a shorter period than those who had no side-effects. Also,

women whose husbands favoured family planning used DMPA significantly longer than those whose husbands did not. The study highlighted the need of expanding counselling on side-effects for women and their husbands in Matlab [23]. Barkat-e-Khuda and Mirza, 1994 [24] working in the MCH extension areas have also shown side-effects as a significant cause of discontinuation among the injectable users.

Method-switching is another concern of the family planning programme. About half of the contraceptive users (female) in two rural areas of Bangladesh, Abhoynagar and Sirajganj, between 1982 and 1993, had switched methods at least once [25]. The most frequent method-switching occurs between the pill and the injectable users. Side-effects and the need for more convenient methods were the main reasons for method-switching; another reason was the shortage of supply. However, the findings of the study showed that switching from hormonal to long-term methods was very rare. The study recommends that the Bangladesh family planning programme be further strengthened to address the special and changing contraceptive needs of each couple – be it through better supervision of long-term methods at the outreach centres, or through improved screening and counselling of couples on the effectiveness, correct use and side-effects of the various methods.

Quality of care and contraceptive use

Findings of a study on the relationship among the quality of care, client satisfaction, and the contraceptive use in rural Bangladesh showed that the use of modern family planning methods was positively associated with the quality of care provided by the field workers at the Health and Family Welfare Centres (H&FWC), and field worker-client interactions. The quality of care was also positively associated with the intention to use modern methods in the future by the current non-acceptors. The study concluded that improved client-provider interactions and quality care at the fixed-site service-delivery points will improve the use and continuation of modern family planning methods, especially clinical contraceptives [26-27].

Quality contact with the field workers, along with husbands' involvement in method choice, lead to lower reported side-effects and lower discontinuation of pills and injectables. The likelihood that a pill or injectable user reports a side-effect is about 45 percent lower if she is served by an FWA who provides a high-quality contact. The occurrence of side-effects and the discontinuation of pills and injectables due to side-effects may result from a combination of personal and programmatic factors. A woman whose husband is already convinced of the advantages of a small family is likely to be in a position to space or limit births,

because her husband is more likely to support her. In cases where the husbands are involved in choosing a method, it is very likely that they will be more attuned to the side-effects as they appear, and will ensure that their wives receive counselling, advice, or treatment.

Programme managers should, therefore, design strategies to improve the quality of provider-client contacts and promote men's involvement and support in family planning to help reduce the perceived side-effects and, therefore, method discontinuation. Clinical side-effects can be handled either (a) by the field workers, following skill-development training on client screening and side-effects management; or (b) by referral to the doctors/paramedics at the fixed-site service-delivery centres [28].

Successful management of side-effects and involvement of husbands in family planning have been cited as two important elements for improving contraceptive use among the newly-weds and the young married women in a study conducted by Islam, 1997 [29]. The study suggested that, to better meet the family planning and reproductive health needs of younger women, the family planning field workers are required to increase their efforts to extend their services to this group. Supervisors need orientation on providing family planning services to this group, especially motivation, counselling and side-effect management and improved and targeted BCC. The study also showed the importance of improved educational status of women in the decision to delay marriage and childbearing. Although the current national family planning programme is more geared toward fixed-site service-delivery, the study suggested that continued targeted service-delivery at the doorstep for the young women and the newly-weds may help increase the contraceptive prevalence significantly among this group of women.

Referral and linkages

An assessment of the programme needs in the urban areas of the country showed that 70 percent of the women used a modern method at some point in their reproductive lives, although 34 percent dropped out, 31 percent of whom discontinued due to side-effects. None of the acceptors of pills, injectables, or IUD were screened according to standard procedures. Side-effects were explained to a little more than half the clients, while less than a quarter were told what to do in case of side-effects, and only 8 percent were informed about the warning signs of each method. The study also pointed out an inadequate referral mechanism [12].

Not much research has been done to evaluate the efficiency of the referral and linkage system for clinical contraceptive services. Moreover, the health and

family planning (i.e. Essential Services Package (ESP) service-delivery strategy of the both government and NGOs at the grassroots has changed. Radical changes have been made in its primary healthcare service-delivery strategy. To improve programme efficiency, it has moved away from vertical health and family planning services at the doorsteps to one-stop clinics for all types of primary healthcare services. The current referral system and client follow-up mechanism for clinical contraceptive services and management of side-effects need to be reviewed in both the government and NGO sectors to adapt the new ESP strategy under the Health and Population Sector Programme (HPSP). The existing referral system also lacks linkages between referral points. There is a need to develop a feedback mechanism between referral points.

Review of GoB and NGO Activities

GoB experience

In the 1980s, the GoB established several field surveillance teams for medical quality assurance in providing clinical contraception services, known as Family Planning Clinical Supervision Team (FPCST). As a result, the national sterilization mortality rates gradually dropped to levels well below the internationally expected levels [30]. Infection control procedures have been included in subsequent training and supervision activities in the GoB programme, and continue to be a high priority.

Evidence of the GoB's commitment to QoC was demonstrated through its desire to improve volunteerism and informed choice for sterilization services. The government eliminated fixed targets for the field workers and per case payments to referral agents, and worked to make temporary methods more easily available [30].

A study on assessment of clinical contraception services in the Bangladesh Family Planning Programme identified that the government was committed to improve the quality of services in both medical and non-medical aspects of service-delivery [8]. The assessment found weaknesses in the areas of QoC which included: (i) the failure to maintain asepsis and infection prevention practices; (ii) the extremely variable practical skills and knowledge of family welfare visitors (FWVs), who do not always follow prescribed procedures; and (iii) the inadequate supportive supervision of service providers.

The national family planning programme is committed to offer potential clients a wide range of family planning services. However, before the initiation of Health and Population Sector Programme (HPSP) in July 1998, the family

planning service-delivery strategy was to provide pills and condoms at the doorstep through field workers which has given unintentional priority to temporary methods. The new one-stop-shopping strategy under the HPSP to provide essential services package (ESP), including wider range of family planning services from community clinics has the opportunity to promote clinical contraceptives. To improve the coverage and quality of clinical contraceptive services, under the HPSP, clinical contraceptive services have been intensified along with the ESP programme at all levels.

NGO experience

AVSC International

In collaboration with the Directorate of Family Planning, the AVSC International implemented the Systems Approach Project in July 1995 in five thanas of Bangladesh to improve the quality of the GoB's family planning services and method-mix in favour of clinical contraception. The Systems Approach Project was based on tested and proven interventions of the AVSC's client-centred, clinic-based family planning services programmes. The Project provided technical assistance to the Directorate of Family Planning to revitalize the clinical contraceptive service-delivery programmes using primarily available resources locally, giving priorities to local planning, supervision, training and referral. A mid-term evaluation of the Project, carried out in June 1997, revealed that the number of vasectomies done at Zakiganj Thana Health Complex of Sylhet district increased from 6 during the year preceding the intervention to 34 during the second year of the Project. The proportion of new contraceptive users who had an IUD insertion also increased from 4 percent before the introduction of the Project to about 10 percent during the evaluation [31].

Inadequate counselling and poor client-provider interactions have been highlighted as important barriers to clinical contraception. Inadequate BCC materials, lack of knowledge among the counsellors about the various family planning methods (especially long-term/permanent methods), and high workload of the service providers have been identified as the key elements which interfere with counselling and client-provider interactions [32].

A study conducted by the AVSC International on vasectomy decision-making in Bangladesh reveals that service providers play an extremely important role in providing Bangladeshi men with information about vasectomy and support for their decisions [33]. The male half of the population is often inadequately reached, since they are not available at home during the field workers' visits. Moreover, the female field workers do not feel comfortable to

discussing sexuality and contraception with males due to cultural norms. The logical alternative is to use the male family planning field supervisors (i.e. FPIs) in male motivation.

Pathfinder International

Most rural NGOs supported by the Pathfinder have provisions to provide pills and condoms. Some provide clinical contraceptive services, such as injectables and IUD, and a limited few have sterilization services. They usually refer clients to the government facilities for sterilization and other clinical contraceptive services. Before the initiation of the national Integrated Population and Health Programme (NIPHP), the service-delivery strategy of the Pathfinder-supported NGOs was to provide pills and condoms at the doorsteps through field workers, giving unintentional priority to temporary methods. However, these NGOs still reported an increase in clinical contraceptives during 1992-1997 [34]. The new one-stop-shopping strategy under the HPSP to provide ESP, including wider range of family planning services from community clinics, has the opportunity to promote clinical contraceptives further.

The Pathfinder-supported NGOs reported that involving the project staff in monitoring the QoC indicators in family planning services from service statistics has contributed to an increase in consciousness of the providers and incentive to address the pressing issues. This resulted in an increase of the QoC indicators in the NGO sites during 1994-1996. This is a good example where teamwork in facilitative supervision of quality has been demonstrated to be fruitful. Other activities on QoC of the Pathfinder International include developing modules for infection prevention and training providers [34].

In 1993, the Pathfinder took initiatives to improve the management of side-effects and complications of contraceptives by their supported NGOs. The initiatives involved development and training of the project staff on standards and protocols for management of side-effects and complications of contraceptives, including developing and establishing referral and linkages. Before the initiative, identifying and managing side-effects of contraceptives were negatively viewed by the service providers. The new initiative encouraged the service providers to identify and manage the side-effects and complications. The number of reported management of cases of side-effects of contraceptives by the project staff increased from 3,271 clients (0.76% of active clients) in 1995 to 4,019 (0.79% of active clients) in 1996 [34].

Family Planning Association of Bangladesh

The Family Planning Association of Bangladesh (FPAB), a leading voluntary organization, has been providing ESP, which includes long-acting clinical methods of contraception, through 33 clinics – covering about a million fertile couples and retaining 800,000 regular uses of various methods in slum and underserved areas of the country. A good proportion of clinical contraceptive services in Bangladesh is provided by the association [35].

Others

Regarding the provision of voluntary sterilization services in rural Bangladesh, attention has been directed to the geographical barriers, shortcomings of medical facilities and trained personnel, communication problems, economic, social and health barriers. The availability of suitable medical facilities and adequately trained personnel, along with the availability of doctors at the thana level, and regular supply of drugs, equipment and other requisites deserve important consideration, as do communication facilities, in terms of motorised vehicles, to and from the clinics, and for easy follow-up and efficient and timely management of side-effects and complications [36]. Since the literacy level, at 44 percent, is low, the programme needs to rely more heavily on interpersonal communication [37].

Method discontinuation increases with the increase in contraception. Over 40 percent of the users of all reversible methods in a five-year nation-wide survey, with the exception of IUD, discontinued within a year, and discontinuation was highest in the first year of use. Side-effects were the major cause of discontinuation [38]. These results are similar to the findings of studies conducted by Kabir, 1989 [39] and Akhter, 1996 [40] on injectables and IUDs. Most users received little follow-up counselling on their choice of contraceptive method. Interruption in re-supply was another significant reason for discontinuation. Husbands' involvement in method selection was also cited as an important element for reducing method discontinuation [29].

International Studies

QoC defined

In the broader perspective, quality issues relating to family planning service-delivery include: (i) range of services/methods available, (ii) information given to clients, (iii) technical competence of service providers, (iv) interpersonal relations,

(v) mechanisms to ensure continuity, and (vi) appropriate constellation of services [41]. Enhancing the QoC of clinical contraceptive services would require improvement of all the six elements of QoC. These elements are not mutually exclusive. Improvement of one element would as well require betterment of other elements as well.

QoC and contraceptive performance

QoC of a service-delivery system refers to the way clients are treated by the system providing the service [42]. There is a general notion that improving the quality of services is costly. The results of a study carried in Matlab, however, showed that provision of QoC is cost-effective [43]. Improving the quality of services can improve efficiency by reducing human and physical resource wastage [44]. Empirical evidence suggests that improving the quality of service can result in improvements in client knowledge and satisfaction, enhancement of client health, and increased acceptance and continuation of contraceptives [27]. Over longer periods of time, better QoC leads to higher contraceptive prevalence and reductions in fertility.

A study conducted in Peru where a Demographic and Health Survey was linked to situation analysis to measure the impact of the quality of family planning services on contraceptive use [45]. The study revealed that contraceptive prevalence would be 16 to 23 percent greater if all women lived in a cluster with the highest QoC compared with the lowest.

A study done in Egypt showed that health and family planning facilities with smaller number of health personnel trained in family planning and lack of access to facilities with female doctors were associated with high risk of discontinuation of pills for all reasons. These two covariates and another quality indicator (range of available methods) predict pill discontinuation for all reasons, except desire for another child [46].

Barriers to clinical contraception

Barriers to sterilization in Bangladesh have been discussed in detail in the "Reduction of Medical Barriers to Contraception Workshop" held in Manila, the Philippines in November 1993. It was commented in the workshop that providers are often not fully informed of the relative risks and benefits of sterilization. In some cases, social indicators, such as marital status, age, parity and age of youngest child, have been transformed into eligibility criteria. Temporary conditions are also mistakenly viewed by providers as permanent barriers to permanent methods. In other instances, clinic rules and regulations restrict access

to services. In Bangladesh, clients can be served only in their home areas, which creates a built-in geographical barrier to clinical contraception. Clinic regulations, such as providing sterilization services on particular days of the week, also create barriers from the supply side. Other barriers to sterilization services include requirement of husband's consent for female sterilization and outdated restrictions which exclude female clients who are obese or hypertensive or male clients with hernias. "Clients who want these [sterilization] services should not be refused except on actual medical contraindications. The couple, not the provider, makes the ultimate decision," was one of the comments made in the workshop [47].

Shelton, 1992 [48] and his colleagues defined medical barrier as practices, derived at least partly from a medical rationale, that result in a scientifically unjustifiable impediment to, or denial of, contraception. Contraindications, eligibility, process hurdles, persons who provide contraception, provider bias, and regulation have been pointed out to be the medical barriers.

A study done to assess the barriers to vasectomy in Honduras identified the following potential barriers: limited knowledge and misconception that vasectomy causes weight gain, reduces the ability to work, and decreases the sexual desire and activity. Few men in the study knew about vasectomy, and many wanted to know more. They felt that they should bear more responsibility for contraception [49].

Managerial barriers to sterilization include interview with a social worker and husband's signature on the consent form, while the medical barriers include medical examination and laboratory tests. In the Honduras-based study, Shelton, 1992 [42] showed that only 38% of the unsterilized women met any one requirement, and more than 50% did not fulfil any of the pre-requisites for sterilization. Among the reasons that women mentioned for not choosing sterilization were: time and family problems (52%), husband's opposition (50%), and economic limitations (45%). Many women get sterilized every year in Brazil yet tremendous unmet demand for female sterilization still exists in a country where top two contraceptive methods used are tubal ligation and pill [50]. The author argues that a large degree of frustrated demand for sterilization exists, particularly among the low-income women in a country that already has considerably high sterilization rates.

A situation analysis of the family welfare centres in Pakistan identified the following barriers to contraceptive provision: low caseload, inadequate facilities, out-of-stock items, lack of educational materials, insufficient outreach, and unnecessary social barriers, such as religious beliefs; social customs, and medical barriers, such as unnecessary selection criteria. Also, insufficient information is

provided on side-effects and contraindications to contraceptive users. In-service training and supervision are very much in need [51].

The most frequent medical barriers to clinical contraception, identified in a Peruvian study, are the delay in initiation of use by waiting for a menstrual period or a prolonged postpartum interval, and the requirement of unnecessary laboratory tests or an excessive number of visits. Extensive application procedures for sterilization, exaggerated contraindications in establishing age or parity limits for specific methods, and excessive requirements for family planning personnel, such as restricting insertion of IUDs to physicians, constitute other barriers. Many medical barriers originate in a lack of adequate information among the programme officials, and failure to recognize outdated or erroneous information [52]. Medical barriers that were identified by Bertrand, 1995 [53] include outdated contraindications and eligibility barriers that may be related to women's age, parity or consent of their spouse. Physical examinations (pelvic examination) and laboratory tests have also been stated to be unjustifiable prerequisites to initiation or continuation of contraceptive use.

In 1983, a community-based voluntary sterilization project (Nirapathpongpon, 1983) has involved voluntary groups, such as drug store employees and hair dressers, to perform motivational and recruitment activities for potential sterilization clients. This is also being tested with satisfied IUD acceptors in an operations research programme in Sri Lanka [54].

Lessons Learned

The Operations Research Project shared the findings of this report with the Ministry of Health and Family Welfare (MOHFW), USAID, Rural Service Delivery Partnership (RSDP), Urban Family Health Partnership (UFHP), and the Quality Improvement Partnership (QIP) of the National Integrated Population and Health Programme (NIPHP). The NIPHP partners concluded that there are very specific lessons learned from the review process. These lessons are:

1. With the exception of injectables, the performance of the clinical contraceptive services of the national family planning programme is declining. Method-mix is skewed toward temporary non-clinical methods. However, to meet the challenge of the national population programme to achieve the replacement-level fertility by 2005, the relative share of the longer-acting methods in the method-mix has to be increased along with increasing the overall CPR.

2. Unmet need for family planning still exists. The level of unmet need is still high among the women aged 30 years and above who are potential clients for longer-acting clinical contraceptives.
3. Social barriers to clinical contraception still exist. Religious barriers, gender preference – desire for two or more sons, perceived side-effects of male sterilization, hesitation of female client to seek sterilization services from male doctors, lack of awareness regarding availability of services in the low-performing areas of the national programme etc. are identified as social barriers to clinical contraceptive services.
4. Operational barriers, such as lack of coordination between service providers, exist. There is often inadequate coordination between the health and family planning staff at most levels of service-delivery. Misunderstanding between the medical and non-medical staff within the Directorate of Family Planning severely hinders the clinical contraception programme of the country.
5. Poor staff motivation, weak supportive supervision and lack of technical competence and supplies are specific operational barriers to clinical contraception. FPIs are reluctant to perform their mandated responsibilities.
6. Medical barriers to clinical contraceptive services exist. Some of these are provider bias based on unnecessary client selection and rigid screening criteria.
7. There are certain managerial barriers, such as excessive record-keeping.
8. Restriction of services to a defined geographical area is another barrier to clinical contraceptive services.
9. A high percentage of contraceptive users still face problems with the method they use. Also, the first-year contraceptive discontinuation rate remains high. The major causes of method discontinuation are side-effects and health concern.
10. Method-switching from shorter-acting methods to longer-acting methods is rare.
11. Proper client screening and counselling, good client-provider interaction, ensuring the counselling of husbands and adequate management of side-effects and complications are the major components of high-quality clinical contraceptive services.
12. High quality of care for family planning services increases its use.

13. Providing quality services is not a cost burden to the service-provider agencies as it is often perceived.
14. Adequate monitoring and facilitative supervision ensures the quality of care.
15. Although Norplant is acceptable to clients and the majority of them are satisfied with the service, but its availability is comparatively limited.
16. Availability of non-scalpel vasectomy has shown to improve the performance of vasectomy services, its availability is, however, limited.
17. Inadequate and inappropriately constructed BCC, especially to involve the husband, exists. Also, explicit counselling on sterilization is inadequate.
18. The duplicity of structures that impedes the use of all available manpower and resources has to be addressed as well.
19. NGOs rely on a strong referral mechanism to ensure clinical contraceptive services to their clients.
20. Linkages between referral points are inadequate.
21. There is very little study on the efficiency of the referral system of clinical contraceptive services and management of side-effects and complications.

The Future Needs

Based on the lessons learned, the NIPHP partners recommended the following future needs to improve the quality and performance of clinical contraceptive services.

1. Strategies need to be designed to minimize the existing social barriers to clinical contraception. This includes developing BCC strategies to promote clinical contraceptives, address religious beliefs and social customs and promote husband's participation in family planning. Keeping in consideration the low levels of literacy, especially among the rural population, the BCC activities should be modified accordingly.
2. Appropriate BCC activities need to be coupled with improved quality of clinical contraceptive services.
3. Strategies need to be developed to solve the problem of method discontinuation, and to improve side-effects management. This includes ensuring compliance with protocols for screening, counselling, infection prevention and side-effects management.

4. Strategies need to be developed to ensure the quality of care through monitoring and facilitative supervision.
5. Strategies need to be designed to remove the existing geographical barriers, while the medical barriers need to be revised and re-set.
6. Appropriate intervention is required to minimize the operational barriers of clinical contraceptive services. This includes minimising service provider's bias for a specific method and improving coordination between the health and family planning department, and between the medical and non-medical staff of the Directorate of Family Planning.
7. Clinical contraceptive services, such Norplant, non-scalpel vasectomy, etc., need to be made widely available.
8. Strategies need to be designed to promote switching from temporary methods to longer-acting clinical methods.
9. The current referral system and client follow-up mechanism for clinical contraceptive services and management of side-effects need to be reviewed in both the GoB and NGO sector to adapt the new ESP strategy under the HPSP and NIPHP.
10. There is a need to develop strategies to establish linkages between referral points.
11. To improve staff motivation, an incentive mechanism, based on job performance, needs to be developed.

Discussion

The USAID-funded NIPHP, launched in August 1997, has made radical change in its family planning and healthcare service-delivery strategy from its preceding programme in Bangladesh. To improve programme efficiency, it has moved away from doorstep delivery of family planning services by field workers to static and satellite clinic-based ESP which includes more comprehensive reproductive health and child survival services, and treatment of common diseases. The changes have been made based on the assumption that the clients of the doorstep services have become proactive, and like customers they will go to clinics for their health and family planning needs. The HPSP, launched in July 1998, has adopted similar philosophy. Under the HPSP, the health and family planning department at the thana level has unified to deliver ESP through the community clinics. From door-step delivery of pills and condoms to clinic-based ESP,

including wider family planning service-delivery strategy itself, should have a positive effect on the performance of national clinical contraceptive services.

Although the broad ESP delivery strategy of the HPSP has been decided, the subsystems are yet to be formulated. With the formidable task of reducing the current fertility and infant and maternal mortality levels further, the health and population sector faces many issues that need to be resolved through operations research. The clinical contraceptive service-delivery, including its referral and linkages strategy, is one subsystem of the ESP that needs operational research to test strategies to improve its quality and performance. This review report provides valuable recommendations to design strategies for the intervention.

NGOs, funded under the previous health programme of USAID, provided mostly shorter-acting contraceptive methods (pills and condoms). Some provided clinical contraceptive services, such as injectables and IUD, and a limited few had sterilization services. NGOs relied on strong referral linkages with the government facilities for sterilization and other clinical contraceptive services. The ESP delivery strategy under the NIPHP has committed to give more emphasis on clinical contraceptive services. This review report provides important lessons learned that should be adapted by the service-delivery NGOs under the NIPHP.

The Operations Research Project (ORP), along with its partners, such as MOHFW, RSDP, UFHP and QIP, discussed the findings of this report and made recommendations on the new strategy to be tested by the ORP, and also the lessons that need to be adapted by the RSDP and UFHP-supported NGOs. The intervention to improve the quality and performance of clinical contraceptive services that will follow is a very timely initiative.

The new intervention that has been jointly developed by the ORP, MOHFW, RSDP, UFHP and QIP has given priority to three aspects of the clinical contraceptive services. These are: (i) minimize medical and social barriers to clinical contraceptives; (ii) reduce contraceptive discontinuation through improving the quality of care of clinical contraceptive services; and (iii) improve the referral and linkages for clinical contraceptive services and management of side-effects and complications.

The intervention partners emphasized that minimizing barriers (medical and social) to clinical contraception should be dealt through maximizing access and quality (MAQ) approach. This means quality clinical contraceptive service must be made easily available, along with promotion of services, through minimizing social and medical barriers.

The problem of medical barriers to provide clinical contraceptives to potential clients exists. However, there are not enough data to specify them. During the field-testing on the clinical contraceptive intervention, it would be helpful to identify the policy-related barriers in the existing family planning

national guidelines. The revision of the national family planning guidelines has already been initiated by the Directorate of Family Planning of the GoB under the technical assistance of QIP. Identification of these barriers will be vital to get them excluded when the manuals get revised.

Some medical barriers and provider biases arise due to wrong interpretation of the guidelines. For the correct interpretation of the guidelines and adequate clarification of the providers, the intervention should provide refresher training to address the issue. A "whole site training" (WST) approach should be followed for the refresher courses organized by the intervention. WST is based on the concept that all providers of a site (all categories, including support staff) should receive training. For some, it would be hands on skill training, and for others, theoretical and knowledge-based orientation.

The social barriers to clinical contraception need to be addressed through appropriate BCC activities of the intervention. BCC needs to be adapted based on the local needs. The BCC messages should not only address misconceptions and rumours, but also create a positive and proactive environment for the providers to function.

Methods to ensure proper counselling of clients would be one of the main stay of quality of care component of the intervention. The intervention should involve all service providers to play a significant role in the counselling process. Role of all staff at different levels in the counselling process should be identified through this intervention.

The success of the intervention will depend on introducing supportive supervision of clinical contraceptive services. In instituting facilitative supervision, certain skills of the supervisors shall have to be sharpened/strengthened. This includes facilitation skills, problem identification through self-assessment, issue analysis, problem-solving, mentoring and coaching skills.

The intervention should give emphasis to the solution of clinical contraceptive service-delivery problems that can be locally solved. There will be one category (about 10% of all problems) which will require policy-level intervention to get resolved. These problems usually do not get resolved. The facilitative supervision of the intervention should make all attempts that these 10% problems should not overshadow the 90% of the other problems which can be resolved by the local-level service providers and/or their immediate supervisors.

Referral and linkages and client follow-up mechanism under the new service-delivery strategy of HPSP needs to be revisited through this intervention. Establishing effective linkages between the referral points would be one of the priority areas of the new intervention. While strengthening the referral system all

attempts should be made to use the "in-reach" mechanism. Particularly at the Thana Health Complex clients for clinical contraception can be referred from the different health units of the centre to the family planning unit. "In-reach" will also reduce missed opportunities.

The strategies that will be adapted to improve the quality and performance of clinical contraceptive services should give appropriate consideration to clients' choice and their rights.

While conducting operations research, from the very beginning, efforts should be made to document the different processes. As the success of the intervention will be replicated, the detailed documentation will be important for the replication process.

Conclusion

The review suggests that it is essential to improve the performance of clinical contraceptive services of the national family planning programme to achieve the demographic target of the country. To improve the performance, social, medical, operational and managerial barriers should be minimized. To reduce clinical contraception discontinuation, it is imperative to improve the quality of clinical contraceptive services and to ensure adequate referral and linkages for clinical contraceptive services and management of side-effects and complications. It is expected that the operations research intervention that will be developed and tested based on the findings of this review will give us the future direction for developing the needed clinical contraceptive service-delivery mechanism for the country.

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The Division

The Health and Population Extension Division (HPED) has the primary mandate to conduct operations research, to disseminate research findings to program managers and policy makers and to provide technical assistance to GoB and NGOs in the process of scaling-up research findings to strengthen the national health and family planning programmes.

The Division has a long history of solid accomplishments in applied research which focuses on the application of simple, effective, appropriate and accessible health and family planning technologies to improve the health and well-being of underserved and population-in-need. There are various projects in the Division which specialize in operations research in health, family planning, environmental health and epidemic control measures. These cut across several Divisions and disciplines in the Centre. The Operation Research Project (ORP) is the result of merging the former MCH-FP Extension Project (Rural) and MCH-FP Extension Project (Urban). These projects built up a considerable body of research and constituted the established operations research element for child and reproductive health in the Centre. Together with the Environmental Health and Epidemic Control Programmes, the ORP provides the Division with a strong group of diverse expertise and disciplines to significantly consolidate and expand its operations research activities. There are several distinctive characteristics of these endeavors in relation to health services and policy research. For one, the public health research activities of these Projects are focused on improving programme performance which has policy implications at the national level and lessons for the international audience also. Secondly, these Projects incorporate the full cycle of conducting applied programmatic and policy relevant research in actual GoB and NGO service delivery infrastructure, dissemination of research findings to the highest levels of policy makers as well as recipients of the services at the community level; application of research findings to improve program performance through systematic provision of technical assistance; and scaling-up of applicable findings from pilot phase to the national program at Thana, Ward, District and Zonal levels both in the urban and rural settings.



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MCH-FP Extension Work at the Centre

An important lesson learned from the Matlab MCH-FP project is that a high CPR is attainable in a poor socioeconomic setting. In 1982, the MCH-FP Extension Project (Rural) with funding from USAID began to examine in rural areas how elements of the Matlab programme could be transferred to Bangladesh's national family planning programme. In its first year, the Extension Project set out to replicate workplans, and record-keeping and supervision systems, within the resource constraints of the government programme.

During 1986-89, the Centre helped the national programme to plan and implement recruitment and training, and ensure the integrity of the hiring process for an effective expansion of the work force of governmental Family Welfare Assistants. Other successful programme strategies scaled up or in the process of being scaled up to the national programme include doorstep delivery of injectable contraceptives, management action to improve quality of care, management information systems, and strategies to deal with problems encountered in collaborative work with local area family planning officials. In 1994, this project started family planning initiatives in Chittagong, the lowest performing division in the country.

The Centre and USAID, in consultation with the government through the Project's National Steering Committees, concluded an agreement for new rural and urban Extension Projects for the period 1993-97. Salient features include: improving management, quality of care and sustainability of the MCH-FP programmes, and providing technical assistance to GoB and NGO partners. In 1994, the Centre began an MCH-FP Extension Project (Urban) in Dhaka (based on its decade long experience in urban health) to provide a coordinated, cost-effective and replicable system of delivering MCH-FP services for Dhaka urban population. This important event marked an expansion of the Centre's capacity to test interventions in both urban and rural settings. The urban and rural extension projects have both generated a wealth of research data and published papers in international scientific journals.

In August 1997 the Centre established the Operations Research Project (ORP) by merging the two former MCH-FP Extension Projects. The ORP research agenda is focussed on increasing the availability and use of the high impact services included in the national Essential Services Package (ESP). In this context, ORP has begun to work with partners in government and NGOs on interventions seeking to increase coverage in low performing areas and among underserved groups, improve quality, strengthen support systems, enhance financial sustainability and involve the commercial sector.

ORP has also established appropriate linkages with service delivery partners to ensure that research findings are promptly used to assist policy formulation and improve programme performance.