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Operations Research Project
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**Developing a Cost-effective
Tiered System for Delivering
Essential Services Package:
A Review**

**Yousuf Hasan
Shamsuddin Alamgir
Masud Reza
Ali Ashraf
Barkat-e-Khuda**





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Glossary

ADB	Asian Development Bank
AIDS	Acquired Immuno-deficiency Syndrome
ANC	Ante Natal Care
ARI	Acute Respiratory Tract Infection
BCG	Bacille Calmette Gueraïn
BP	Blood Pressure
BWHC	Bangladesh Women Health Coalition
CDD	Chronic Diarrhoeal Disease
CS	Civil Surgeon
CT	Copper T
DCC	Dhaka City Corporation
DGHS	Directorate General of Health Service
D&C	Dilatation and Curettage
DPT	Diphtheria, Pertussis, Tetanus
EDD	Expected Date of Delivery
ELCO	Eligible Couple
ENT	Ear, Nose, Throat
EOC	Emergency Obstetric Care
ÉPI	Expanded Program on Immunization
ESP	Essential Services Package
ESR	Erythrocyte Sedimentation Rate
FP	Family Planning
FWV	Family Welfare Visitor
FWVTI	Family Welfare Visitor Training Institute
GoB	Government of Bangladesh
GOD	Government Outdoor Dispensary
H&FP	Health and Family Planning
Hb	Hemoglobin
HIV	Human Immune-deficiency Virus
HQ	Head Quarter
HSC	Higher Secondary School Certificate
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
IEC	Information, Education and Communication
IPGMR	Institute of Post-Graduate Medicine and Research

Glossary (Contd.)

IUD	Intra Uterine Device
LGD	Local Government Department
LHV	Lady Health Visitor
LMP	Last Menstrual Period
LMS	Lower Member Staff
MBBS	Bachelor of Medicine and Surgery
MCH-FP	Maternal, Child Health and Family Planning
MCHTI	Maternal Child Health Training Institute
MIS	Management Information System
MLSS	Member of Lower Service Section
MO	Medical Officer
MR	Menstrual Regulation
NGO	Non Governmental Organization
NID	National Immunization Day
ORP	Operations Research Project
ORS	Oral Rehydration Saline
PHC	Primary Health Care
PNC	Post Natal Care
PUO	Pyrexia of Unknown Origin
RIHD	Rehabilitation Institute Hospital for the Disabled
RTI	Reproductive Tract Infection
SSC	Secondary School Certificate
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
UPHC	Urban Primary Health Care
WHO	World Health Organization

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Abstract

Despite significant advances in lowering fertility and child mortality, Bangladesh still faces major challenges in its health and demographic profile. With a population of 123 million, it is the most densely populated country in the world. The current population is projected to grow to 250 million, and will stabilize only in 40-50 years. Even with highly chronicled success in family planning and EPI programmes, the evidence of poor access to health care remain prominent. Less than 40 percent of the population has access to basic health care. About half of the children are not fully immunized. Much of the success of the family planning programme is dampened by a high discontinuation rate, as 47 percent of contraceptive users drop out in 12 months. Three-quarters of pregnant women do not use antenatal care, and over 90 percent, do not receive assistance from a trained person during childbirth and delivery. The present system does not enable customers to obtain services from any single service delivery point, especially at the community level. Weak referral and linkages—both vertically and horizontally—are major concerns, since poor inter-provider relationships exist at all levels, particularly between health and family planning service delivery systems.

The present study analyzes the current and past health and family planning service delivery approaches and designs aiming at understanding their operational dimensions, services focus, relevance to health and population sector strategy. The study also critically describes several alternative service delivery strategies to replace highly resource intensive door-step delivery. The paper has been produced through literature review and discussion with key informants, like Government, non-government organization (NGO), MCH-FP program manager, field visits and in-house brain-storming sessions.

This paper systematically analyzes different past and present research intervention designing along with their contributions, potentials and as well as limitations. The review began with the Centre's project research activities followed by GoB, NGO programmes.

Review of Centre and Project works in operationalizing ESP revealed that the existing field workers could deliver the ESP from the community-level fixed sites after receiving some specialized ESP training. With the wide variety of essential components and the new service strategy, requirements for support services, such as management information systems (MIS), logistics, human resource development (HRD) and information, education and communication (IEC) requirements will need to be either strengthened or redesigned. It also reveals that high priority in community awareness and participation in the Safe Motherhood Programme can increase safe delivery practices and referral for emergency obstetric care provided adequate service delivery facilities are in place.

The Health and Population Sector Strategy aims to address these issues through reform, restructuring and reorganisation of the various systems to provide a package of essential health services (ESP). Moreover, the ICPD has clearly advocated an integrated approach, including the above issues that have subsequently been taken up to develop the now-approved HPSS of the Government of Bangladesh (GoB), and thereafter to prepare the fifth Health and Population Programme (HAPP-5). The package is designed to address the health needs of families in a comprehensive manner, meeting the required standards of quality and to be available at one single service delivery site, ensuring reduced production costs and the optimal use of resources. The HPSS is the governing principle for the main national-level health initiatives, such as the World Bank/GOB funded Fifth Health and Population Project (HAPP-5). The goal of HAPP-5 is to contribute to the improvement of the health and family welfare status of the most vulnerable segment of the population, such as women, children, and the poor. The purpose of HAPP-5 as implemented within the MOHFW is to achieve client-centred provision and widespread use of the ESP, along with other selected services. Some key indicators that this goal will affect include reduction in maternal mortality, infant mortality, mortality for female and male children aged less than five years, communicable diseases, and unwanted fertility; and increase in life expectancy for females and males, age of women at birth of first child, nutritional status, and life style.

The presence of multiple providers, especially in urban areas leads to gaps and duplications in service delivery in the absence of effective coordination mechanisms. The Government in its effort to streamline urban service delivery with the technical and financial assistance of the Asian Development Bank, has finalized an Urban Primary Health Care Project (UPHCP) to be implemented, monitored and evaluated by the project office under the city corporations of the country. The primary objective is to improve the health status of the urban poor and reduce preventable mortality and morbidity, especially among women and children by increasing access to PHC services.

Under the guiding principle of HPSS, the Family Planning and Health Services Project (FPHSP) and based on its external evaluation, and an appraisal of family planning and health customers in 1995 by USAID, GoB and the USAID jointly decided to formally launch a project called National Integrated Population and Health Programme (NIPHP). The project has seven components: urban service delivery, rural service delivery, social marketing, quality improvement, urban immunization, OR, and contraceptive logistics. The primary purpose of this project is to enhance the quality of life of the poor and under-privileged members of the society by helping to reduce fertility and improve family health through the provision of a package of essential services. The special programmes are based on

the strategies of providing selected health and family planning services by combining HA and FWAs service delivery sites, external facilitation of GoB service delivery process by technical assistance, training, capacity building, and few other inputs ranging from provision of motorcycles to upgradation of structural facilities. Community mobilization activities, use of non door-step community bases strategies (Depot holder, Shastho Shebika, Jiggasha, Volunteers) to promote clinic services, and marketing pills, condoms and ORS at the community.

Review of programmes suggests that though community based strategy has apparently proved to be effective, but requires tremendous efforts to develop, maintain and retain volunteer's system. Such innovative approaches require more research. They do not seem to be effective alternative in urban area. Changes induced by active support from external agencies/facilitator don't sustain beyond project period and their replicability remain in doubt due to their financial implication, small scale and failure to consider all the elements of ESP.

Based on the extensive review of service delivery strategies and lessons learned, the Operations Research Project emphasizes the need to further research for designing cost-effective replicable service delivery strategies. Such research should focus on the few programmatic and non-programmatic needs for future improvement and sustenance of the health service delivery.

- Feasible and cost-effective alternatives to the existing door-step delivery (e.g. three-tiered vs. four-tiered, service mix across tiers, and frequency mix).
- Non-door step community based strategies (e.g. depot).
- Defining optimal catchment area.
- Development and adaptation and cost-effectiveness of unified sub-systems (e.g. record-keeping, reporting, monitoring, supervision, referral and linkage).
- Design of a feasible and practical transition of the door-step distribution strategy that minimally affects existing programme performance.

Background

Since 1960s, primary Health care (PHC) has gained tremendous importance in the context of national and development goals. The Bangladesh Health-care system adopted a series of vertical strategies to, for example, eradicate smallpox and malaria from the country through a Smallpox Eradication Scheme and Malaria Control Programme, by vaccinating its entire population and by launching an attack on the vector of the malarial parasites through six-monthly spraying of DDT [1]. An autonomous Family Planning Board was created in 1965 to promote vasectomy and "Lippies Loop" through traditional birth attendants (TBAs)¹ and Chief Male Organizers² at the community level. During 1970s-1980s, more vertical programmes, such as Expanded Programme on Immunization (EPI), Control of Diarrhoeal Disease (CDD) and Acute Respiratory Infection (ARI), were added to the primary health-care strategy. But little coordination, however, ever existed between these programmes.

Although the vertical PHC programmes achieved some progress in terms of immediate control, overlaps and redundancies resulted in the long run and none of the vertical programmes were deliverable from the basic health infrastructure, thereby failing to tap missed opportunities and address concerns relating to sustainability.

The 1994 International Conference on Population and Development (ICPD) emphasized the need of delivering a broader range of services. This need was echoed by the Health and Population Sector Strategy (HPSS) and the National Integrated Population and Health Programme (NIPHP) in Bangladesh, by the call to address the issues of missed opportunity and sustainability. A holistic approach would pull together key subsystems for optimal use of appropriate services.

Despite its considerable inefficiencies, the Bangladesh Health and Family Planning Programme has made remarkable progress over the past two decades. For example, the fertility transition is already well underway in the country, and the success of the immunization campaign is impressive. The contraceptive prevalence rate (CPR) has reached about 50 percent, and the fertility rate has declined from 6.3 in 1971-1975 to 3.3 in 1994-1996. The rate of mortality of children aged less than five years has declined from 133 (1989-1993) to 116 (1992-1996) per 1,000 live-births and over the same period, infant mortality declined from 87 to 82 per 1,000 live-births [2]. Bangladesh is, however, still one of the few countries where life-expectancy at birth is not higher for females than it is for males. Seventy

¹ Part-time volunteers.

² Also known as community mobilizers, the Chief Male Organizers supervise TBAs.

percent of pregnant women has suffer from nutritional deficiency anaemia, less than 40 percent of the population have access to basic health care, 70 percent of the pregnant women do not receive antenatal care (ANC), and less than 13 percent receive assistance from a trained attendant at the time of childbirth.

The Ministry of Health and Family Welfare (MOHFW) recognizes that the present structure of the Directorates of Population and Health (with separate cadres at all levels) does not adequately respond to the needs of child and maternal health and clinical contraception efficiently and effectively, and limits the potential for increasing the range, and quality and effectiveness of service delivery. The present structure is also not cost-effective. The cost of doorstep delivery will increase substantially, if the current service-delivery model is maintained over the next 10 years [3-6]. Currently, there is an inadequate inter-project linkage and poor institutional coordination and support within the sector resulting in duplication of efforts and/or inadequate use of resources. Functionally, the separate structures impede referral, generate internal conflict, and contribute to the low use of facilities. The current management systems provide few incentives to the service-providers to improve the quality of care, and respond to the clients' needs. The present service delivery-system does not allow clients to obtain general and reproductive health and family planning (FP) services from any single service point, although recent studies of consumer preference by several agencies have shown that the people of Bangladesh want one-stop service. Moreover, the ICPD has clearly advocated an integrated approach, including the above issues that have subsequently been taken up to develop the now-approved HPSS of the Government of Bangladesh (GoB), and thereafter to prepare the Fifth Health and Population Programme (HAPP-5).

Levels and Trends in Use of Health and Family Planning Services

Child Health

EPI in this country has made remarkable progress over the past few years, not only toward the goal of polio eradication, but also toward attaining other disease reduction goals vaccine. Table 1 illustrates a trend of fully immunized children (aged 12-23 months), both nationally and by selected division [7, 2].

Diarrhoeal diseases are still a major cause of morbidity and mortality in Bangladesh, accounting for about 19 percent of deaths of children aged less than five years [8]. Among children aged less than three years with diarrhoea, use of Oral Rehydration Solution (ORS) has changed very little (25% in 1993-1994 and 60% in 1996-1997).

There has, however, been a significant improvement in the treatment-seeking patterns for ARI cases in children aged less than three years. The figure for the national programme rose from 28 percent in 1993-1994 to 36 percent in 1996-1997. Table 1 shows these data for various age ranges.

Table 1. EPI coverage, ORS use, ARI treatment and CPR during 1993-1994 - 1996-1997

	1993-1994					1996-1997				
	National	Urban	Rural	Chittagong Division	Khulna Division	National	Urban	Rural	Chittagong Division	Khulna Division
EPI coverage (12-23 months)	58.9	70.4	57.5	53.7	80.7	54.1	58.2	53.7	51	68.3
ORS use*										
<3 years	50.3	59.4	49.3	48.0	40.9	49.0	NA	NA	NA	NA
<5 years	NA	NA	NA	NA	NA	48.1	71.2	45.7	48.2	51.4
ARI treatment										
<3 years	28.0	33.4	27.4	32.1	21.2	36.0	NA	NA	NA	NA
<5 years	NA	NA	NA	NA	NA	32.0	44.9	31.8	35.5	30.2
CPR										
Clinical contraceptive use	15.9	15.2	15.9	10.2	18.3	16.7	17.1	16.8	14.4	20.4
Non-clinical contraceptive use	20.4	29.2	19.1	11.2	24.5	24.6	35.4	23.3	16.3	30.4
ANC	26.0	33.4	22.6	23.4	25.6	26.0	44.9	23.3	31.2	27.2

Sources : BDHS 1993-1994; BDHS 1996-1997

NA = Not available

*For ORS - UNICEF - Progotir Pathya, 1997 [8].

Vitamin-A deficiency is a leading cause of preventable blindness in children. The percentage of children aged less than three years who have received a vitamin A capsule in both the cycles of distribution in a year improved substantially from 49 percent in 1993-1994 to 68 percent in 1996-1997.

Family Planning

The contraceptive-use differential shows that non-clinical contraceptives, in combination, are by far the most popular method-mix, both in urban and rural

areas. The overall use rate of the non-clinical methods is higher in the urban areas than that in the rural areas. Chittagong and Sylhet divisions still lag behind other divisions in this regard.

Reproductive Health

Obtaining Antenatal Care (ANC) from a trained provider is critical for both mother and child, since it reduces the morbidity and mortality risks. The proportion of women seeking ANC remained unchanged during 1993 - 1997 [2,7]. Fifty-eight percent of the pregnant women in the urban areas received ANC in 1996-1997 compared to only 23 percent in the rural areas.

Seventy-five percent of the pregnant women had at least one dose of Tetanus Toxoid (TT) vaccine in 1996-1997 compared to 66 percent in 1993-1994.

Review of Centre and Project Work in Operationalizing an Essential Services Package

Review of Centre Work

Community awareness and participation was given high priority in the Safe Motherhood Programme in Matlab [9]. The aim is to bring basic emergency obstetric care (EOC) closer to the community by strengthening the first link of the referral chain. In this study, a delivery unit has been set up at one of the sub-centres. The pregnant women's decision-makers are being encouraged to support delivery at the centre. Since it opened in August 1996, the sub-centre has performed 15-20 deliveries a month. The community health workers (CHWs) use a pictorial card to educate families about the signs of obstetric emergencies and the need to go to the clinic immediately when any problem arises.

Another study reviewed the possible reasons for declining maternal mortality in Matlab [10]. The study focused on the management of complications at all levels, examined hospital records of the referral hospital at Chandpur and computerization of services provided by the midwives. The authors argue that the reductions in obstetric mortality may have been due to services provided by a combination of the community midwives and the Matlab Hospital staff, including female physicians and integrated through an efficient, round-the-clock referral system. The data further indicated that the decline in mortality was also related to the use of the centres at higher levels of the health system, it especially the hospital in Chandpur where a comprehensive EOC was available.

Review of Project Work

The MCH-FP Extension Projects (Urban and Rural) found that the existing field workers could deliver the ESP from the community-level fixed sites after receiving some specialized ESP training [11]. With the wide variety of essential components and the new service strategy, requirements for support services, such as management information systems (MIS), logistics, human resource development (HRD) and information, education and communication (IEC) requirements will need to be either strengthened or redesigned.

An experiment was carried out in January 1996 by the former MCH-FP Extension Project (Urban) of the ICDDR,B to develop alternatives to the existing door-step distribution strategies for cost-effective delivery of health and FP services, in urban areas, in partnership with the concerned government agencies and an FP-MCH based NGO, the Concerned Women for Family Planning (CWFP) [12]. Two alternative service-delivery points—the static centre known as the Primary Health Care Clinic (PHCC) and cluster visitation, also known as community service points (CSP)—were tried. Both strategies were complemented by targeted home-delivery of FP services by the field workers to non-users of FP services.

The PHCC-based strategy resulted in an increased contraceptive prevalence, especially with regard to the use of clinical methods. The CSPs were not an effective strategy in Dhaka city. A set of standards and protocols has been adapted and tested in Rayerbazar, Hazaribag, Gandaria, and Motijheel to determine the value of standardized flow charts in the delivery of ESP services [13]. The findings of the study showed an improved diagnostic ability by the paramedics, resulting in the reduction of the misuse of drugs. It was also discussed that a strong planning and coordination component was essential for successful collaboration between the GoB agencies, NGOs, and the private sector required for successful ESP delivery [14].

The MCH-FP Extension Project (Rural) has been continuing to design and test ways and means to reduce the cost, and to make the national MCH-FP programme sustainable. As part of its efforts, the project introduced the *Cluster Visitation Approach* intervention in January 1996 as an alternative to the existing community-based distribution system. A secondary objective was to determine the attitudes of the women with regard to using a fixed-site rather than having their services and commodities delivered to them at their homes. A cluster of 50-60 eligible women per Family Welfare Assistant (FWA) unit was constituted, resulting in 12-16 clusters per FWA unit [15]. The findings of the study showed that the CPR did not decline even after the introduction of the intervention. Moreover, the knowledge that women will leave their homes to acquire FP services has helped policy-makers and donors to make a decision in favour of the alternative service-delivery strategies.

The intervention, *Strengthening outreach sites through the 'Satellite Clinic (SC) combined with EPI centres approach'*, began in 1995 [16]. The number of the SCs/EPI sites (combined) in the study area was increased from 8 sessions per month to 16-24 sessions per month. They were also combined with the EPI sites. The result showed a three-fold increase in access to and use of services. The strategy of increasing accessibility of a broader variety of services by combining the SC and the EPI services gave clients a chance to show their willingness to travel for the combined services [17]. It also gave the service providers an opportunity to screen the clients for any additional services required.

In early 1996, the MCH-FP Extension Project (Rural) initiated operations research (OR) activities on ESP implementation, with the health and FP government agencies of the MOHFW. These interventions are being implemented at the various service-delivery tiers in the high- and low-performing areas. The Extension Project developed a four-tier service-delivery strategy with facilities at the lowest two tiers referred to as (i) the Limited Service Centre (LSC), similar to the cluster in size, and (ii) the Extended Service Centre (ESC), similar to a combined SC and EPI. The facilities at the two highest tiers are the Health and Family Welfare Center (H&FWC) at the union level, and the Thana Health Complex (THC) at the thana level. Domiciliary services were withdrawn in the experimental areas.

At the community level, the working areas of the field workers, Health Assistant (HA) and FWA, were reorganized, and the LSCs were formed. The LSCs provide a specially-developed ESP from a house in the community to a population of 50-60 clustered households once every month. The number of SCs was increased (from the usual eight) to 20-24, and the facilities were renamed as ESCs. The ESC has an expanded team, which includes a Family Welfare Visitor (FWV) and provides additional services, such as ANC and postnatal care (PNC), first-aid EOC, child health-care, and a range of FP services, including management of side-effects. There are 20-24 ESCs in each union, each serving 100-150 households.

At the union level, the intervention plans to strengthen the existing H&FWCs by increasing the number of working days from four to six per week. In addition to its current services, the H&FWC will provide basic EOC with appropriate delivery facilities, immunization, and management of child health, including malnutrition and treatment of diarrhoea, RTIs and post-abortion complications. At the thana level, the THC will deliver a complete ESP, including comprehensive EOC services, clinical contraception, and integrated management of childhood illness (IMCI).

These and other alternative service-delivery strategies should be tested to determine which one could deliver the ESP most cost-effectively. The following strategies were considered during an exercise of the intervention team meeting [18],

The current status quo of health and FP service delivery was discussed to differentiate it from a proposed models of ESP delivery. Service delivery beginning at the doorstep was made up of four tiers (household→SC/EPI→H&FWC→THC). Each union has an average of three HAs and five FWAs. A total of 21,000 HAs and 23,500 FWAs are employed. There are also 10,000 AHIs and FPIs. The salaries of the HAs are covered by the revenue budget while that of FWAs are covered by the development budget.

Several models, consisting of varying numbers of service-delivery tiers, were considered for testing. Various staffing patterns were also examined. Each of the proposed models was critically analyzed to identify its merits, strengths and weaknesses.

It was agreed that the models, which could meet all of the following criterion, would be preferred:

- Allow for substantial reduction in field staff.
- Allow for one increased visit frequency.
- Allow for the introduction of a comprehensive health and family planning field worker.
- Allow for ease in supervision, monitoring, and reporting.

The participants discussed the modalities of conversion for FWAs to HAs. As an option, it was mentioned that:

- Recruitment of new HAs and FWAs should be discontinued.
- Existing FWAs should undergo a two-month training, so that they can perform HA jobs. This training could be followed by a one-month on-the-job basic training programme.

The need for additional technical staff, such as FWVs (3,000), can be solved by promoting the suitable FWAs to FWV positions through a 12-month basic training course.

Review of GoB and NGO Work in Developing an Essential Services Package (ESP)

Review of GoB Work

HPSS

The main objectives of the HPSS [19] are to:

- Maintain the momentum of the national efforts to lower fertility and mortality in Bangladesh;
- Reduce maternal mortality and morbidity;
- Reduce the burden of communicable diseases;
- Provide an essential package of child Health care, reproductive health, family planning, ommunicable disease control and limited curative care services for the people of Bangladesh at one-stop service points with acceptable quality and equity;
- Reform the health and population sector to provide adequate basic health and FP services to the population;
- Develop IEC messages in order to provide information, education and communication (IEC) services in support of access to and use of the ESP;
- Ensure capacity development among providers to facilitate provision of essential services, both in quantity, and quality within the context of a realistic and appropriate human resource development plan;
- Ensure regular monitoring, evaluation, and research to determine the current status of the programme (including upcoming needs in the context of an ever-changing situation);
- Ensure the quality of services; and
- Promote a client-oriented FP and Health care delivery system.

HAPP-5

The goal of HAPP-5 is to contribute to the improvement of the health and family welfare status of the most vulnerable segment of the population, such as women, children, and the poor. A number of programmes in other key sectors, such as education and rural development, etc. implemented throughout Bangladesh, will contribute to the achievement of this goal along with HAPP-5 [20].

The purpose of HAPP-5 as implemented within the MOHFW is to achieve client-centred provision and widespread use of the ESP, along with other selected services.

Some key indicators that this goal will affect include reduction in:

- maternal mortality,
- infant mortality,
- mortality for female and male children aged less than five years,
- communicable diseases, and
- unwanted fertility,

and increase in:

- life expectancy for females and males,
- age of women at birth of first child,
- nutritional status, and
- life style.

The wide range of activities included in the implementation of the ESP over the five-year period of HAPP-5 will result in the following component outputs:

- Definition, funding, promotion, and implementation of the ESP,
- Unification, reconfiguration, and decentralization of the service-delivery mechanism,
- Strengthening of integrated support systems,
- Strengthening of hospital-level services,
- Establishment and operationalization of a sector-wide programme management system,
- Strengthening of the policy and regulatory framework, and
- Strengthening of other services of public health importance.

The HAPP-5 Summary Log Frame details some key indicators that have been identified for HAPP-5 and the assumptions made about preconditions that will be required to ensure the achievement of the programme goal.

Reproductive Health care has seven sub-areas:

- Safe motherhood,
- Family planning,
- Prevention and control of Reproductive Tract Infection/Sexually Transmitted Diseases/Acquired Immune Deficiency Syndrome (RTI/STD/AIDS),

- Maternal nutrition,
- Adolescent care,
- Infertility, and
- Neonatal care.

Service delivery strategy

Three options for service delivery which require piloting are shown in Table 2.

Table 2. Service delivery options

Option 1	Option 2	Option 3
<p>Four fixed centres per team (HA and FWA work jointly). One per 1,500 population.</p> <p>The team will provide services on rotation basis once a week from each centre.</p> <p>FWV will provide higher-level services once a month from each centre.</p> <p>One day per week, the team will provide domiciliary services</p>	<p>One fixed centre per team (HA and FWA work jointly). One per 6,000 population.</p> <p>The centre will remain open to all working days</p> <p>FWV will provide higher-level services once a month from each centre.</p> <p>Domiciliary services will be rendered by HA and FWA alternatively one day each week, so that the static centre can remain open</p>	<p>Two fixed centres (alternately attended by HA and FWA). One per 3,000 population</p> <p>The centres will remain open on all working days</p> <p>FWV will provide higher-level services once a month from each centre</p> <p>No domiciliary visit</p>
Disadvantages		
<p>Centre is not open every working day</p> <p>Additional FWV may be required</p> <p>Expected number of clients may be less (cost-effective issue)</p>	<p>Not so close to the doorstep of the people</p> <p>Very large number of population to be covered</p>	<p>No domiciliary visit (follow-up and dropout tracing may be hampered)</p> <p>Additional personnel for IEC required</p> <p>Training required for provider so that she can perform additional tasks</p>

To perform the ESP functions at the thana level and below, training will be imparted to accommodate the changed roles, where necessary. The main objective

is to streamline the services, so that they are provided at different levels as per the needs of the population. In this way, the service-delivery system can be rendered in a most cost-effective way, and it is easy to manage and convenient for the clients/patients, while providing coverage to the bulk of the population.

Criteria for design

- One-stop service: As many services as possible are provided at one place on each working day on a sustainable basis. Periodic (monthly) service will be provided if that is shown to be optimal.
- Accessibility: Half an hour travel-time to the service provision point.
- Coverage: Eighty percent coverage for the population living within half an hour's walking distance to the service points.
- Quality: Services provided according to the defined standards.
- Efficiency: Providing more services at the same cost, or similar services at a lower cost in a more accessible way.
- Community participation: Involvement and participation of the community in designing, planning, monitoring, and helping to implement the programme.
- Population-based planning: Design and availability of services based on the needs of the specified population.
- Technical competence: Availability of skilled human resources with multiple skills.
- Logistics and supply: Design limited by availability of medicines, vaccines, cold chain and instruments according to the level of services.

Community/outreach/satellite-level care

Basis of service delivery design:

The unit selected for delivering services at this level will follow the administrative jurisdiction (the union is divided into three wards, and the wards are subdivided into three units each). The basic unit of service is considered to be a population of 6,000, it is estimated that there is a population of 3,000 within half an hour walking distance of the service point.

Satellite/outreach clinic staff:

Outreach clinic staff will include the FWV from the union-level centre, one FPI, and one AHI. These service-providers will supervise and provide service monitor (FWV) from variable number of satellite/outreach clinics, depending

upon the population of the union. These clinics will be mobilized and organized by an "organizer" (AHI/FPI) along with input from the community.

Services provided:

- ANC and PNC services;
- FP: Injectable and IUD (with minimal required standards, such as privacy, appropriate table height, sufficient light, and hygienic environment);
- Detection, prevention, treatment, and referral of RTIs, including STDs;
- Health education, particularly on the detection of danger signals during pregnancy and delivery and after delivery; and
- Child welfare: breast-feeding, diet, immunization, cord care, growth monitoring, treatment of common childhood diseases, intestinal parasites, and IMCI.

Community organizer:

Community involvement and participation will be critical to acceptability, satisfaction and resource supply necessary to implement the programme. It is envisioned that there will be one organizer-cum-supervisor (AHI/FPI) for each union. The responsibilities of this organizer-cum-supervisor will include the following:

- Ensure that outreach clinics are held timely;
- Organize the communities to provide space for the outreach clinic;
- Ensure that communities actively participate in and facilitate service provision;
- Raise funds for transportation and medicines for the poor;
- Coordination and sensitization parishad/political groups for the ESP, and seek their help to implement health education in schools.

Service delivery options:

Three options for service-delivery design at the community level are outlined in Table 2 above. For all three options, a team, made up of one FWA and one HA, will be the core personnel. The FWV will provide additional clinical services. Each team should have at least one female (FWA/HA). The services will be provided mainly from a static centre. It is envisioned, however, that the domiciliary services will shift their emphasis to groups that are at high risk (drop-outs for FP and/or people suffering from infectious diseases). These services will be provided one day per week.

Specific functions of the static centres

The specific functions of the SCs include:

- Registration of pregnant women;
- Encouraging pregnant women to attend the clinic for FWV services and ensuring that they come for antenatal services;
- Maintaining information pertaining to the expected date of delivery, so that assistance can be given to women with endangered delivery;
- Referral to higher centres;
- Providing FP methods: pills and condoms;
- IEC: hygiene, diet, immunization, intestinal parasites, breast-feeding etc.;
- EPI: informing families in advance about the outreach clinic and ensuring that the children are immunized timely;
- Minor treatment: ORS, vitamin-A, antihelminthics, ARI, DOTS for TB, antimalarial drugs, etc.

Urban Primary Health Care Project

The urban poor of Bangladesh suffer from the worst health status in the country. The situation will worsen without action because most urban population growth is concentrated among the poor who reside in burgeoning slums and squatter settlements. It is expected that with the current population expansion rate, the urban slum population will reach 50 percent of the total urban population of the country by the year 2005. Aggravated by the unhygienic environmental conditions prevailing in the slums, the unsatisfactory health status of the urban poor reflects an inadequate PHC system.

The GoB, with the technical and financial assistance of the Asian Development Bank, has finalized an Urban Primary Health care Project (UPHCP) [21] to be implemented, monitored and evaluated by the project office under the city corporations of the country.

Objective

- To improve the health status of the urban poor and reduce preventable mortality and morbidity, especially among women and children by increasing access to PHC services;
- To build the capacity of local government bodies to manage, finance, plan, evaluate, and coordinate health services;

- To form partnerships with the private sector to deliver Health care services; and
- To test the partnership approach, evaluate and scale up the approach.

Partners will have the opportunity to charge fees up to a limit agreed upon by the partnership committee.

Scope

The project will be implemented in four city corporations of the country, serving an approximate population of 9.5 million.

Strategy

The strategies of the Project are to:

- A package of services will be delivered from the fixed-service delivery sites referred to as Urban Primary Health Care Centres.
- The delivery of these services will be contracted out to the NGOs, the private sector, or provider associations. Such contracts will be known as partnership agreements based on competitive bidding.
- After a formal agreement, the winning bidder will commence service delivery, and will receive periodic progress payments on the basis of progress evaluation and bonus on the basis of performance.
- For each partnership agreement, there will be 10 centres for each 500,000 population. Therefore, each centre catchment population will be 50,000 compared to the current average of 132,000 per health centre.
- Some centres will also cater as MCWCs.

Distribution of Primary Health Care Centres

To improve the coverage and access and minimize the travel time required to obtain PHC services, the project will support the construction of 190 new PHC centres, located in the vicinity of slums and other densely populated areas. The following health facilities are expected to be built during the project period (Table 3).

Table 3. City Corporations' required number of PHC centres

City	Estimated population (n=9.50 million)	New facilities required (n=190)
Dhaka	6.00	120
Chittagong	2.00	40
Khulna	1.00	20
Rajshahi	.50	10

To increase the availability of affordable obstetrical services, a maternity ward will be built in one of the 70 health centres.

Service package

The PHC service package includes:

- Immunization;
- Micronutrient support, particularly vitamin-A;
- Family planning;
- Prenatal, obstetrical and postpartum care;
- Systematic case management of pneumonia and diarrhoea in children;
- Case management of TB and RTI in adults;
- Health education on selected topics related to the above topics; and
- Commitment toward the support of women who are victims of violence.

Indicators

There are several indicators to measure the accomplishments of the project. They are as follows.

- *Process:* At the community level, this represents accurate knowledge about (i) ORS preparation; (ii) sign/symptoms indicating need for ARI referral; (iii) contraceptive methods.

- *Output:* Child immunization, TT coverage among pregnant women, vitamin A coverage, ANC use, CPR, TB management, and use of iodized salt in slums.
- *Impact:* IMR and CMR.
- *Provider:* Correct management of ARI; increased score on standardized supervisory checklist.

Evaluation and monitoring

An integrated supervisory instrument (ISI) will be used for routine performance monitoring jointly by the independent firms and the city corporations. This instrument will comprise observable indicators, such as quality of care, skills and knowledge of providers, record-keeping, drug supply, staff availability, outreach activities, and cleanliness.

Routine monitoring will be compounded by the periodic household and facility surveys, the findings of which will be compared with the baseline data on various process, output and impact-related indicators.

Review of NGO Work

To improve the existing service-delivery strategy, several approaches have been proposed and tested. Therefore, there is a historical perspective to the ESP intervention. Some of these approaches are describe below.

National Integrated Population and Health Programme (NIPHP)

As a follow-up to the Family Planning and Health Services Project (FPHSP) and based on its external evaluation and a 1995 USAID appraisal of family planning and health customers, USAID and the GoB jointly decided to formally launch a project called National Integrated Population and Health Programme (NIPHP) [22]. The project has seven components: urban service delivery, rural service delivery, social marketing, quality improvement, urban immunization, OR, and contraceptive logistics.

The primary purpose of this project is to enhance the quality of life of the poor and under-privileged members of the society by helping to reduce fertility and improve family health through the provision of a package of essential services.

The mission is to reduce fertility and improve family health through active participation of men, women, children, and youth. The project intends to serve the low-performing areas which include the following:

Geographic: Chittagong, Sylhet, slums, pockets within high-performing areas

Programmatic: Discontinuation of FP methods, non-users of ESP, newlyweds and postpartum women

Demographic: Adolescents, men, working women, commercial sex workers, floating populations.

Strategy

Based on the successes already achieved in promoting FP and child survival through the support of NGOs, MOHFW, and SMC nationally and in the targeted areas, the NIPHP is now focusing on the low-performing and under-served groups, and will offer support and facilitate the management and service quality of NGOs, government organizations and social marketing on a national basis. Simultaneously, the NIPHP will work to increase the programmatic, organizational and financial sustainability of these service-delivery organizations. The NIPHP intends to achieve its objectives through a set of intermediate results.

Indicator

Output-related indicators are as follows:

- Raise contraceptive prevalence (all methods) from 45 percent (1993/1994) to YY percent.
- Increase the rate of immunization against EPI diseases from 64 percent to XX percent for children and from 84 percent to YY percent for women.
- Increase the proportion of pregnancies attended by a trained provider from 20 percent (1993/94) to YY percent.
- Raise the delivery of vitamin A capsule from 0.7 percent of under five children to YY percent.
- Increase knowledge among youths, men and women about the risks and prevention of STDs/HIV/AIDS.

Following are the impact-related indicators:

- Reduce the total fertility rate from 3.4 (1993-1994) to XX.
- Reduce the infant mortality rate from 87/1,000 (1993-1994) to YY/1,000.
- Reduce the maternal mortality rate from 50/1,000 (1993-1994) to YY/1,000.

All of the targeted indicators will be achieved through:

- Delivering an essential package of high-quality, high-impact FP, and health services.
- Promoting awareness and use of appropriate services through a variety of IEC methods.
- Enhancing the ability of individuals, families, and communities to protect and provide for their own health.
- Promoting the sustainability of service delivery.
- Encouraging a facilitative GoB policy framework.

Rural Service Delivery Partnership

One of the subresults of the RSDP is to provide cost-effective services in 258 thanas beginning with a total of 2.2 million ELCOs and reaching 3.7 million ELCOs by the end of the seven-year period. During this period, the number of total active users is expected to double from about nine percent at the baseline. However, clinical methods, such as sterilization and NORPLANT will not be offered. As such, no change is expected in these performances by NGOs.

Service-delivery strategy

The service-delivery strategy is to provide services at least initially through three levels. At the lowest level, depot holders will provide commodities from their homes. At the next level, a SC, staffed by an FWV, will provide services. In between, there is a community mobilizer (CM) who provides support services to the depot holder, organizes SCs, and informs members of the community about the availability of services. A depot holder will have 250-300 ELCOs. Ten to 15 depot holders will serve under one CM. The higher level will be a functioning static clinic providing a range of ESP services.

Catchment Area

Considering the fact that goods and services rendered by the health facilities are classified as convenience goods, the threshold for these goods and services in terms of the population required to market them and the territory over which they are sold needs to be defined to allow for optimal planning and to minimize duplication of efforts. When working with such concepts, it is given that there exists a threshold distance beyond which individuals are unwilling or unable to travel [23]. Fieldler found distance from the patient's home to the health centre to be an important explanatory variable for differences in use [24]. In a rural setting,

that persons at greater distances from the facilities limit their visits to curative (rather than preventive) purposes. Thus, physical inaccessibility (due to long distances) is one very important determinant of whether and/or when a person receives medical care [25].

Cost recovery

There is a plan to recover cost for most of the services offered by the RSDP.

Feasibility

To determine the feasibility of the strategy, the approach proposed by the RSDP could be tested against the strategy without depot holders and then compared with the status quo.

Urban Family Health Partnership

Under the NIPHP, the urban Dhaka and adjoining Tongi municipalities have been divided into several contiguous geographic clusters. Table 4 shows the distribution of the clusters and the organizations assigned to these clusters.

Table 4. Distribution of the clusters and the assignment of organizations

Cluster No	Administrative Boundaries	Assigned Organization
Dhaka 1	Zone 2 and 3 , and Wards 76, 77, 80, 81, 82, 83, 87, 88, 89 and 90 of Zone 1	Concerned Women For Family Planning (CWFP)
Dhaka 2	Zone 4 and 5, and Wards 30, 75, 84, 85 and 86 of Zone 6	Population Services and Training Centre (PSTC)
Dhaka 3	Zone 6 and 7	Unity Through Population Services (UTPS)
Dhaka 4	Zone 8, 9 and 10, and Tongi municipality	Progoti Samaj Kayallan Protisthan (PSKP)

Service-delivery strategy

The basic strategy is to provide client-oriented, quality, essential services from the fixed-service sites and total withdrawal of household service delivery. The fixed sites are organized at two levels.

The first-level clinic is called a static service delivery clinic. These clinics, staffed by a doctor, a paramedic and a counsellor along with various other supporting staff, operate six days a week from 9 a.m. to 2 p.m. and from 4 p.m. to 7 p.m.

The second level of fixed sites is the SC which is organized in each ward based on the providers' need as well as the community needs. The number may vary from ward to ward.

Catchment area

Theoretically, the SCs serve a population within a radius of half an hour's walking distance from the clinics. They actually serve the population within 15 minutes walking distance. There is no fixed catchment size stipulated for the clinics at any level.

Cost recovery

Costs involved in service provision are being partially recovered by imposing service charges, for laboratory tests, and drug costs (except immunization). However, the poor may avail of services free of charge and buy medicines at the subsidized rates.

Service package

The service package that will be offered include high-priority ESP services, except Norplant, sterilization, and safe delivery.

The UNICEF-supported Combined Service Delivery (CSD) Project

This approach, initiated by UNICEF, was tested in Manikganj by combining SCs with the EPI spots. Training materials for outreach workers and a single reporting system have been developed. The HAs and the FWAs, have however, failed to adopt the intervention's mode of service delivery. Moreover, there have been problems in defining the roles and responsibilities of the thana and district officials.

BRAC's Facilitation of MOHFW Combined Service Delivery Centres

During the mid-1980s, BRAC initiated an effort to link the EPI services provided by the HAs at the EPI outreach centres with FP services provided by the FWVs in the same community. In addition to the EPI and FP services provided at these sites by the government workers, the BRAC workers provided growth monitoring and growth promotion for the children and their mothers who attended the clinic. In areas where no government clinic services were available, BRAC established

clinics where EPI, FP, and antenatal services could be provided during the same visit. Generally, clinics are held once a month. Thus, BRAC has served as a catalyst to promote joint EPI outreach/SCs where the government services are available.

Shastho Shebika Project of BRAC

This intervention seeks to test a strategy to ensure community participation effectively in the health service delivery. As part of this intervention, female community members are identified and trained at the community level to act as the depot holders. A depot holder is primarily responsible for mobilizing a community with a population of 1,500 to use the fixed-service delivery sites organized by BRAC, as well as the GoB fixed sites (EPI/satellite). The community members are also responsible for selling non-clinical contraceptives and ORS. Diagnosis and treatment of ARI cases, referral of severe cases, and follow-up treatment for TB are all part of the BRAC programme. The BRAC model has partially been adopted by the RSDP.

Family Development Services and Research

The Family Development Services and Research (FDSR), an NGO working in rural Chittagong and funded by the UFHP, operates a monthly SC for a population of about 1,500. The SC is organized by a team of a paramedics and a social organizer; is supported by five depot holders, who are paid an honorarium of Taka 200.00 per month and meeting allowances. The FDSR also has an H&FWC-type static clinic which serves a population of 30-40 thousand.

Thana Functional Improvement Pilot Project

The Thana Functional Improvement Pilot Project (TFIPP) aiming at improving the quality of existing health and family welfare services at the thana level and below. The Project has added many inputs, i.e., bicycles for field workers and field supervisors, motor bikes for thana supervisors, ambulance, equipment for the THC, funds for repair work, construction of a training centre at the THC and special fund at the thana and union level to improve the programme performance. The Project was assisted in planning and implementing 8 combined SC+EPI sites of a union [26].

Besides the one for growth monitoring, no referral mechanism has yet been developed. Emphasis on clinical methods has resulted in significant improvements in performance. One of the strategies was to keep the THC open for sterilization during all working days and publicize this information to formal and informal leaders. Introduction of separate committees for involvement in health, FP and

community and feedback mechanisms, developed by the TFIPP, may contribute to the overall improvements in programme performance. The TFIPP has facilitated the development and implementation of the Functional Improvement Action Plan (FIAP), and supports skill-development training for different types of providers, and also the training of ward-boys, cleaners, sweepers and ayahs of the THC. There is a plan to recover cost for the sustainability of the programme. Fee structures are in place for services in health and FP facilities of the project areas. The THCs in the TFIPP areas charge fees for outpatient services, ambulance use, X-rays, and pathology tests. The TFIPP is likely to expand such cost-recovery measures to include other services, as well. In the near future the TFIPP will introduce ESP through community clinics, where a team of FWAs and HAs will provide services in six selected unions. There may be three, four, or five teams per ward to organize the community clinics one to five days per week. A group of trained TBAs in some experimental unions and a group of community health volunteers (CHVs)—one per 150 population—will help contact clients at home.

Child Health Initiative for Lasting Development (CHILD)

In October 1991, the CARE-Bangladesh initiated the Child Health Initiative for Lasting Development (CHILD) Project which provided services to five of the 11 thanas of Sylhet District through a partnership approach with the MOHFW. The goal of the project is to strengthen the capacity of the government system in implementing health and FP services from outreach posts. The Project activities were directed at increasing the availability, accessibility, use, coverage, and quality of services with emphasis on immunization, vitamin-A distribution, FP, and home treatment of diarrhoea. The first project, called CHILD I, was managed by 2-4 field trainers (FTs) posted at each thana. Based on an assessment of sustainability, dialogue with the government, and concurrence of USAID, a second phase of the project, called CHILD II, began in October 1995 with one FT, but with activities similar to those of CHILD I. Activities of the CHILD I Project include: (i) development of annual implementation plans, (ii) maintenance of a control room where health and FP progress toward targets is portrayed, (iii) organization of joint monthly meetings at the thana level, (iv) increasing numbers of merged health and family planning clinics, and (v) increasing coordination of meetings at the union level.

Integrated Community Family Health Development Programme, Bogra

The Bangladesh-German Technical Cooperation (GTZ) initiated the Integrated Community Family Health Development Programme (ICFHDP) which claims to have successfully unified the programmatic activities of the two directorates of the

MOHFW from the district level, down to union, by forming committees at district, thana, and union levels. In these committees, other sectors, such as social services, education, etc. are also included to ensure that inter-sectoral collaboration takes place in the project areas. Also, the ICFHDP is developing and testing three models in which health and family welfare staff work together. These models have already resulted in improvements in health-related indicators in the model areas. The three models of community-oriented family health services, developed in the ICFHDP, are based on the integration of health and family planning personnel and on the participation of the community through village volunteers and village committees. The three ICFHDP models are: (i) Community-based Comprehensive Family Health Services in Amtoli Village, Sariakandi thana [27]; (ii) Integrated Family Health Service Delivery and Sanitation Programme at Chopinagar Union, Bogra Sadar thana [28]; and (iii) Multisectoral Development Programme in Abilamba, Kahaloo thana [29].

Although the baseline and mid-term health information and indicators have been collected in the project areas, there appears to be no control areas selected to serve as a comparison, and the number of households included in the surveys in each project area is relatively small (about 200 households).

The short-term objectives, such as increasing ANC and PNC coverage to 80 percent and CAR/CPR to 70 percent by 1997, appear to be too ambitious, and could certainly not be replicated in such a short time, if scaled-up in the national programme. Some of their measured achievements also seem a little hard to believe in the absence of coercion or exaggeration in the reporting. These include increase in contraceptive acceptance rate (CAR) from 40.6 percent to 49.3 percent in 1995 and in CAR from 49.3 percent to 62.3 percent in 1996, and in ANC coverage from an already high 71 percent in June 1994 to 86 percent in December 1994 (reaching 100 percent in 1995 and continuing at 100 percent for the next two years). Some of these achievements, however, might be possible in settings where the villages are very small. Their models include a conceptual framework and a referral system, for the integrated health services.

The ICFHDP has found that the identification of high-risk pregnancies for referral may not be a feasible strategy, since too many pregnancies tend to fall into the high-risk category, and many pregnant women often experience pregnancy complications in their 20s and 30s who are not in the high-risk category. Activities relating to prevention and treatment of RTI/STIs and scabies appear to get little or no attention in the ICFHDP models, although these are important health needs for the population, as expressed in the customer surveys.

Lessons Learned

The tedious review of several programmes, concepts, and activities have led to several lessons that could strengthen our future endeavour for delivering high-impact high-quality service in the both urban and rural communities. The following lessons are worthy to note:

- There is wide support from the government and donors to provide the ESP through a one-stop-shopping approach.
- Introduction of alternative service-delivery strategies, such as combined SC+EPI or cluster spots, from fixed sites do not adversely affect the CPR.
- Missed opportunities for service provision can be reduced by providing a wide range of functionally integrated services.
- Improved MIS for a wide variety of essential components and new service strategies can be used for documenting and monitoring progress and evaluate services.
- Introduction and practice of standards and protocols can help improve the diagnostic and management capabilities of the providers.
- Appropriate IEC, e.g. ESP flip chart, counselling, and community-level meetings is needed for the delivery of the ESP.
- It is possible to extend basic EOC and safe delivery to the community level.
- Service restructuring may prove to be more efficient and effective in providing services.

Needs for the Future

Based on the service and lessons learned, the Operations Research Project emphasizes the need to focus on the few programmatic and non-programmatic needs for future improvement and sustenance of the health service delivery.

- Testing a four-tier vs. a three-tier service delivery strategy.
- Testing monthly vs. weekly vs. daily service.
- Operationalizing the appropriate tier with appropriate frequency of services.
- Testing depot holder vs. no depot holder service.
- Determining catchment area.
- Total unification of record keeping and reporting.

- Developing a unified system for supervision.
- Developing a comprehensive referral and linkage system for the ESP.
- Testing the feasibility of cross-training the HAs and the FWAs to provide a wider range of ESP services.
- Analysis of the cost-effectiveness of the ESP strategies.
- GoB waiver for integrated services (record keeping, supervision, logistics, ESP flip chart).

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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.

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.



Operations Research Project

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