HEALTH AND POPULATION PROGRAMME

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JULY 1993 – DECEMBER 1994
REPORT

BRAC

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HEALTH AND POPULATION PROGRAMME

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ACRONYMS and ABBREVIATIONS

AC	Area Coordinator
ACCTT	Accountant
AD-CC	Assistant Director - Clinical Contraception
AHI	Assistant Health Inspector
AM	Area Manager
ANCC	Antenatal Care Clinic
CAR	Contraceptive Acceptance Rate
CES	Coverage Evaluation Survey
CHDP	Comprehensive Health Development Project
CIDA	Canadian International Development Authority
CS	Civil Surgeon
DD-FP	Deputy Director, Family Planning
DPT	Diptheria, Pertusis and Tetanus
EDD	Expected Date of Delivery
EPI	Expanded Programme on Immunization
EPI-F	Expanded Programme on Immunization - Facilitation
FP	Family Planning
FPI	Family Planning Inspector
FWA	Family Welfare Assistant
FWC	Family Welfare Centre
FW	Field Worker
FWV	Family Welfare Visitor
GC	Gram Committee (Village Committee)
GOB	Government of Bangladesh
HA	Health Assistants
H/H	Household
HPP	Health and Population Programme
HI	Health Inspector
IEM	Information, Education and Motivation
IGVGD	BRAC's Income Generation for Vulnerable Group Development
JC	Junior Consultant
LBW	Low Birth Weight
MA	Medical Assistant
MCH	Maternal and Child Health
MIS	Management Information System
MLM	Mid Level Manager
MO	Medical Officer
MOFIC	Mother of Fully Immunized Children

MOHFW	Ministry of Health and Family Welfare
MS	Mohila Shova (Women's Association)
NFPE-AG	Non-Formal Primary Education for Adolescent Girls
NFPE	Non-Formal Primary Education
NGO	Non-Governmental Organization
NOS	Numbers
NTG	Non-target Group
OA	Office Assistant
ODA	Overseas Development Authority
ORSCT	Out Reach Site Care Takers
ORT	Oral Rehydration Therapy
OTEP	Oral Rehydration Extension Project
PHC	Primary Health Care
PO(F)	Programme Organizer (Female)
PO(M)	Programme Organizer (Male)
RED	BRAC's Research and Evaluation Division
RM	Regional Manager
RPO	Regional Programme Organizer
RTI	Reproductive Tract Infections
SC	Satellite Clinic
SS	Shastho Shebikas (Female Health Assistants)
SK	Shastho Kormi (Health Workers)
SDC	Swiss Development Corporation
STDs	Sexually Transmitted Diseases
SS	Shastho Shebikas (Female Health Assistants)
SK	Shastho Kormi (Health Workers)
TBA	Traditional Birth Attendant
TC	Thana Coordinator
TH&FPO	Thana Health and Family Planning Officer
TPFO	Thana Family Planning Officer
TG	Target Group
TT	Tetanus Toxoid
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Aid
VGD	Vulnerable Group Development
UP	Union Parishad
WHDP	Women's Health and Development Programme

Table III.6 Facilitation of Government Service Centres

Name of District	EPI Centre Planned	EPI Centres Held
Sunamgonj	35917	26041
Moulvibazar	29050	27404
Hobigonj	32569	28357
Feni	19958	19196
Noakhali	35889	34730
Cox's Bazar	25955	22896
Total	179338	158624

The coordination for planning, supervision and monitoring of the government EPI programme is done by organizing monthly coordination meeting of health and FP department; discussion and updating of the latest field situation and taking appropriate actions to overcome problems; strengthening joint field supervision.

Table III.7 Coordination and Planning Meetings by HPP's EPI Team

Name of District	Divisional Level		District Level		Thana Level		Union Level	
	Planned	Held	Planned	Held	Planned	Held	Planned	Held
Noakhali	-	-	54	48	310	291	456	424
Feni	-	-	59	59	248	238	259	273
Cox's Bazar	-	-	32	28	382	331	476	306
Moulvibazar	-	-	42	42	477	461	342	335
Sunamgonj	-	-	31	32	260	248	382	295
Hobigonj	-	-	31	30	495	399	302	277
TOTAL (REGIONAL)	2	2	249	239	2172	1968	2217	1910

Participants:

Divisional Level:	Divisional level Govt. and Non-Govt. Officers
District Level:	CS, DD(FP), ADCC, TH&FPO, MO(EPI), MO(CS), Sr. HEO, HS, DC, SP, TNO,
Thana Level:	TH&FPO, TFPO, FPI, Sr. FWV, HI, AHI, HA, FWA, TNO, TEO, SSO, Ansar VDP Adjutant.
Union Level:	FWA, FWV, FPI, HA, AHI.

iii. FACILITATION OF GOVERNMENT COMBINED SERVICE DELIVERY CENTRES:

The above activity facilitates delivery of other services along with the EPI, i.e., through the Satellite Clinics (SC). Thus the team coordinates with the health and family planning. departments for merging EPI outreach centers and satellite clinics and supervising the combined service centers to improve service quality. During the period July 1993 - December 1994, the percentage of merged centres was raised from the initial 18% to 63%.

Table III.8 Functioning of Combined Service Delivery Centres

Name of District	No. of EPI centre	No. of Satellite Clinic	No. of combined service delivery centre		
			Planned	Held	
				#	%
Sunamgonj	35917	10920	8806	2001	23
Moulvibazar	29050	9082	5139	3695	72
Hobigonj	32569	10525	4331	3400	79
Feni	19958	6112	3040	2811	92
Noakhali	35889	8044	4312	4282	99
Cox's Bazaar	25955	3464	1538	1037	67
TOTAL	179338	48147	27166	17226	63

iv. TRAINING:

Basic and refreshers training are organised for all staff associated with EPI. The following table shows the training during the reporting period:

Table III.9 Training of Field Staff

Name of District	Thana level		Union Level		Village Level	
	Planned	Held	Planned	Held	Planned	Held
Noakhali	13	13	-	-	-	-
Feni	53	62	8	8	52	52
Cox's Bazar	19	13	3	10	-	-
Moulvibazar	7	7	6	6	6	6
Sunamgonj	21	21	22	19	20	17
Hobigonj	6	9	2	2	3	3
TOTAL	119	124	41	45	81	78

Participants/Trainee:

Thana: THFPO, MO(EPI), FPO, MO(MCH), EPI Supervisor, EPI Technician, Health Inspector

Union: AHI, FPI, FWV, MA; Village: HA, FWA

v. DISEASE SURVEILLANCE:

This programme was strengthened through training of government staff to identify sign/symptoms of polio, neonatal tetanus, measles, setting up of an information network among the community to collect the information; and, by monitoring to check the data. The following table shows the status of disease surveillance in the six districts during July 1993 - December 1994.

Table III.10 Disease Surveillance Activities Done by the HPP's EPI Team

Name of district	Name of the disease															
	Neonatal tetanus				Maternal Tetanus				Polio				Measles			
	ID	DEAD	REF	NO ACTION	ID	DEAD	REF	NO ACTION	ID	DEAD	REF	NO ACTION	ID	DEAD	REF	NO ACTION
Sunamgonj	5	4	4	-	-	-	-	-	-	-	-	-	32		22	10
Maulvi-Bazar	2	2	-	-	-	-	-	-	-	-	-	-	2	-	2	-
Hobiganj	1	-	1	-	1	-	1	-	20	-	16	-	26	-	23	2
Feni	3	3	-	-	-	-	-	-	8	-	8	-	64	-	64	-
Noakhali	3	3	-	-	-	-	-	-	-	-	-	-	25	-	25	1
Cox's Bazar	3	2	1	-	-	-	-	-	7	-	7	-	19	-	19	-
Total	-	-	-	-	-	-	-	-	3	-	3	-	47	-	45	3

vi. IMMUNIZATION COVERAGE:

The immunization coverage in the Chittagong region during the period of June 1993 - December 1994 as compiled from that reported by each district is given below:

The target for EPI coverage is set by the EPI Head Quarters at Dhaka and often the actual coverage exceeds the targeted coverage. In such cases the reported coverage is more than 100 (in percentage).

Table III.11 Immunization Coverage: Total Area (July '93 - June '94)

Name of District	Centre planned	Centre held	Under 1 year				Pregnant women	
			Target*	Achievement			Target*	Achieve-ment (%)
				BCG (%)	DPT3 (%)	Measles (%)		
Cox's Bazar	17119	15190	46547	52091 (112)	50705 (109)	51250 (110)	57467	39478 (69)
Noakhali	23789	22580	73114	77666 (106)	78319 (107)	80516 (110)	90264	75856 (84)
Feni	13420	12745	36898	37956 (103)	39328 (106)	41155 (111)	45554	35406 (78)
Hobigonj	21682	18535	50290	56242 (112)	54522 (108)	58357 (116)	62086	59384 (96)
Moulvi-bazar	24078	22456	45917	51482 (112)	51694 (113)	52365 (114)	57084	40165 (70)
Sunam-gonj	23666	17239	57602	64307 (112)	59407 (103)	60873 (106)	69111	49652 (72)
TOTAL	123754	108745	310368	339744 (109)	333975 (108)	344516 (111)	381566	299941 (79)

* **TARGET FOR 12 MONTHS OF 1993**

Table III.12 Immunization Coverage: Normal Area (July'93- June'94)

Name of District	Centre planned	Centre held	Under 1 year				Pregnant women	
			Target	Achievement			Target	Achievement (%)
				BCG (%)	DPT3 (%)	Measles (%)		
Cox's bazar	17119	15190	46547	52091 (112)	50705 (109)	51250 (110)	52467	29478 (69)
Noakhali	23709	22580	73114	77666 (106)	78319 (107)	80516 (110)	90264	75856 (84)
Feni	13420	12745	36898	37956 (103)	39328 (106)	41155 (111)	45554	35408 (78)
Rohingya	14018	12089	32082	36416 (114)	35276 (110)	37676 (118)	39506	38369 (120)
Moulvi-bazar	19773	18506	55214	60952 (110)	60851 (110)	61273 (111)	63914	32959 (55)
Sonargoan	13077	8795	30913	30588 (99)	27657 (89)	28180 (91)	37981	23261 (61)
Total	100196	89915	254846	279669 (109)	272136 (107)	280052 (110)	314668	245329 (78)

Table III.13 Immunization Coverage: Haor Area (July'93- June '94)

Name of District	Centre planned	Centre held*	Under 1 year				Pregnant women	
			Target	Achievement			Target	Achievement (%)
				BCG (%)	DPT3 (%)	Measles (%)		
Cox's Bazar /Feni/ Noakhali	NA							
Moulvibazar	993	876	2294	2634 (115)	2572 (112)	2700 (117)	2834	1611 (57)
Habigonj	5807	5134	14369	14853 (102)	14192 (99)	15315 (106)	17739	15582 (88)
Sunamgonj	11589	8444	26690	33719 (126)	31750 (119)	32693 (122)	31130	26291 (95)
TOTAL	18389	14454	43353	51026 (118)	48514 (112)	50708 (117)	51703	43584 (84)

* DURING CRASH PROGRAMME SEVERAL CENTRES HELD TOGETHER

Table III.15 Immunization Coverage: Tea Garden (July'93- June'94)

Name of District	Centre planned	Centre held	Under 1 year				Pregnant women	
			Target	Achievement			Target	Achievement (%)
				BCG (%)	DPT3 (%)	Measles (%)		
Moulvibazar	3312	2984	8406	7876 (94)	8271 (98)	8390 (99)	10336	5595 (54)
Hobigonj	1857	1392	3919	5173 (132)	5054 (129)	5366 (137)	4839	5433 (112)
TOTAL	5169	4376	12325	13049 (106)	13325 (108)	13756 (112)	15175	11028 (72)

*** NUMBER OF CENTRES DEPENDS ON GARDEN MANAGEMENT**

Table III.15 Immunization Coverage: Total Area (July - December 1994)

Name of District	Target # of U-1 Children*	# BCG	# DPT1	# DPT3	# Measles	Target # of Pregnant Women*	TT2 Booster
Cox's Bazar	41168	26185	26017	26238	26844	49837	25384
Noakhali	62793	38702	38363	37076	40351	75850	41063
Feni	31955	16560	16167	17039	19761	38598	19863
Hobigonj	44567	24235	23798	25572	28321	53801	32679
Moulvibazar	39645	22259	19098	19156	26081	47889	27179
Sunamgonj	50281	30468	29899	31647	34324	60735	37788
TOTAL	270409	158409	153342	156728	175682	326710	142893

*** Target of 12 months of 1994**

It can be deduced from the above figures that the immunization coverage by the BRAC EPI-F has been quite satisfactory.

6. EPI COVERAGE EVALUATION SURVEY

An internal EPI Coverage Evaluation Survey (CES) conducted in August 1994 identified several constraints. Meetings were subsequently held with the government staff to work out probable solutions. This is documented in the following table and are expected to be strengthened in the coming months.

Table III.16 EPI Coverage Evaluation Survey Findings

CONSTRAINTS	PROBABLE SOLUTION	RESPONSIBLE PERSON
MANAGEMENT ISSUES a. Inadequate supervision and monitoring b. Poor registration c. Lack of follow up d. High session drop out e. Government staff shortage f. Non-local staff recruitment leading to high drop out.	a. Preparation of supervisory action plan and checklist b. Follow the supervisory action plan through joint field visits with government health and family planning c. Cross check and verification of data of EPI registers, tally sheets at office & field level d. Provide feedback on field findings to respective staff for improving the programme status e. Develop and maintain a session monitoring chart & provide feedback if necessary f. Advocate for recruiting local staff	TH&FPO, TFP OMO-FPI,MO-MCH,TC,PO, EPI Tech, Field Supervisors MOHFW,CS, EPI HQ, UNICEF, RM, RPO

CONSTRAINTS	PROBABLE SOLUTION	RESPONSIBLE PERSON
COORDINATION a. Insufficient involvement of family planning staff b. Meetings irregular c. Infrequent and inadequate joint field supervision d. Low percentage of merging EPI outreach sites with SCs	a. Preparation of plan of action jointly at thana and union levels involving the health and FP wings through a consensus building workshop b. Maintain resolution of meetings and ensure distribution to all participants c. Preparation of joint supervision plan specially for low performing sites / ward / union and share field findings with respective staff for performance improvement. d. Identification of EPI outreach site which may be merged with SC. e. Prepare action plan for merging the centres.	CS, DD-FP, RM, MLMs, TC, PO, HA, FWA,FPI, AHI, HI,FWV
LACK OF MOBILIZATION a. Fear of side effects b. Unaware of 2nd,3rd DPT & measles dose c. Not visited by field worker d. High drop out rate from BCG-Measles	a. Ensure follow up the clients before and after immunization b. Strengthen community involvement specially Imams, teacher, youth groups, MOFIC, ORSCT, Union Parishad, VGD card holders, NGO workers and beneficiaries and other social allies	MLMs, RM, AM, TC, PO, HA, FWA, Union Parishad
OPERATIONAL a. Vaccination centre too far b. Inconvenient timing c. Vaccinator absent d. Communication problems in hard to reach areas.	a. Prepare a plan of action for reaching the yet unreached clients through a special program b. Increase individual contacts with target households. c. Increase interaction with EPI headquarters at Dhaka.	MLMs, AM, TC, PO, HI, AHI, FPI, HA FWA

Executive Summary

7. RED Studies on EPI-F

The Research and Evaluation Division of BRAC has conducted the following studies on the BRAC's EPI-F programme:

i. Vaccination Coverage Survey in WHDP-EPI Facilitation Area

The survey was aimed to assess the vaccination coverage status, reasons for failure to immunize and knowledge of mothers about vaccination schedules and its side-effects. It was carried out between 20 April - 5 May 1994 using the "30 cluster survey method."

The survey found that 65% of the children (12-23 months) were fully immunized and 14% not immunized at all. About 65% of the mothers having infants (0-11 months of age) received two doses of tetanus toxoid. Dropout rate from BCG to measles vaccination was 22% while that from DPT-1 to DPT-3 was 20%. Child immunization cards and TT cards retention rate were 54% and 28% respectively. Fifty two percent of the infants were protected against neo-natal tetanus.

As regards children, the main reasons for partial or no immunization were inadequate information on vaccination, schedule, fear of reaction and lack of understanding on its importance. It was observed that 50% of the Family Welfare Assistants (FWAs) were present in the EPI sessions, and equipments were sterilized in only 41% of the vaccination site.

BRAC workers need to be more active in social mobilization and more involvement of government supervisory staff need to be encouraged.

ii. A Review of Operational Strategies in BRAC's EPI Facilitation Programme for Hard to Reach Areas

The study was conducted in BRAC's EPI facilitation areas to investigate the process of alternative strategies, status of combined service delivery, social mobilization and coordination between health and family planning staff. The study was carried out on randomly selected 5 intervention (2 tea garden, 2 haor and 1 normal areas) and 3 control (1 tea garden, 1 haor and 1 normal area where HPP is not involved) areas in October 1994. Data was collected through interview and observation.

Due to some geographical and social constraints, most of the EPI sessions in haor villages and tea garden areas are conducted during rainy season through crash programme and on weekly holidays.

The number of combined EPI-Satellite centres held were 66% in intervention areas compared to 32% in control areas. 27% of the combined service recipients in intervention and none from control areas were motivated for immunization by the health and family planning staff. Half of the mothers mentioned that availability of different services at one place was the advantage of combined service delivery centres. Moreover, all mothers in intervention and 90% of those in control areas were satisfied with the quality of combined services. Coordination meetings were held

regularly between health and family planning (FP) departments in both the intervention and control areas.

Seventy percent of BRAC programme participants, and 55% non-target group children were fully immunized. Health Assistants (HAs) and BRAC staff in haor areas, and HAs and family welfare assistants (FWAs) in tea garden areas played a major role in social mobilization. In the last three months, the households of fully immunized children were visited 2.7 times by the health workers twice for those partially immunized and 1.8 times for those not immunized. **Social mobilization, strengthening of coordination between health and FP departments, emphasis on registration of target children, health education, effective action plan, supervision of field staff were recommended as areas requiring further improvement.**

IV.B FAMILY PLANNING FACILITATION PROGRAMME:

1. Background:

The Government of Bangladesh, through the Ministry of Health and Family Welfare observed the Family Planning Fortnight in December, 1993. The purpose of this fortnight was to identify problems and suggest solutions and strategies to meet the future challenges in the FP-MCH programme more effectively.

Subsequent to the Family Planning Fortnight, a National Steering Committee was formed to integrate the recommendations and generate a National Plan for Action and identified priority areas to be addressed.

BRAC along with other NGOs was requested by the government to assist in implementing the recommendations for bringing about a change in the family planning / MCH status of the country. BRAC was specially requested to focus in some of the low performing areas so as to enhance contraceptive coverage and develop a strategy leading to sustained impact in family planning. BRAC, therefore, decided to embark on a programme aimed at facilitating the family planning activities in four low performing districts of the country for the next thirty three months (December 1994 - August 1997).

2.a. Goal

The overall goal of this programme is to augment the quality of life and improve maternal and child morbidity and reduce mortality.

2.b. Objectives

This programme aims to facilitate the national family planning programme and make it sustainable through:

a. Development of government capacity through management support and training;
b. Implementing innovative means of social mobilization;
c. Ensuring enhanced quality of care and services, and,
d. Supplementing service delivery in areas with limitations;
e. Assistance to reformulate the programme for attain sustainability of impact.

3. Programme Strategy

The programme will adopt the following strategies :

- The activities will complement the existing government activities and supplement the gaps which remain in the same.
- Avoid duplication of activities by other organizations.
- The activities will be focussed towards the needs of the clients.
- Mobilization activities will encompass the religious leaders and sayings to justify family planning.
- An integrated approach will be adopted to ensure that the programme participants receive the benefits of all of BRAC's development activities i.e., RDP, NFPE.

4. Implementing Mechanism:

Though the project is developed and implemented by BRAC, it includes partners from the community and the government family planning department. Utilization of these partners and effective cooperation with the GOB is critical to the success of the programme.

The project is being funded by the United States Agency for International Development (USAID), through its cooperating agency the Pathfinder International, Bangladesh Country Office.

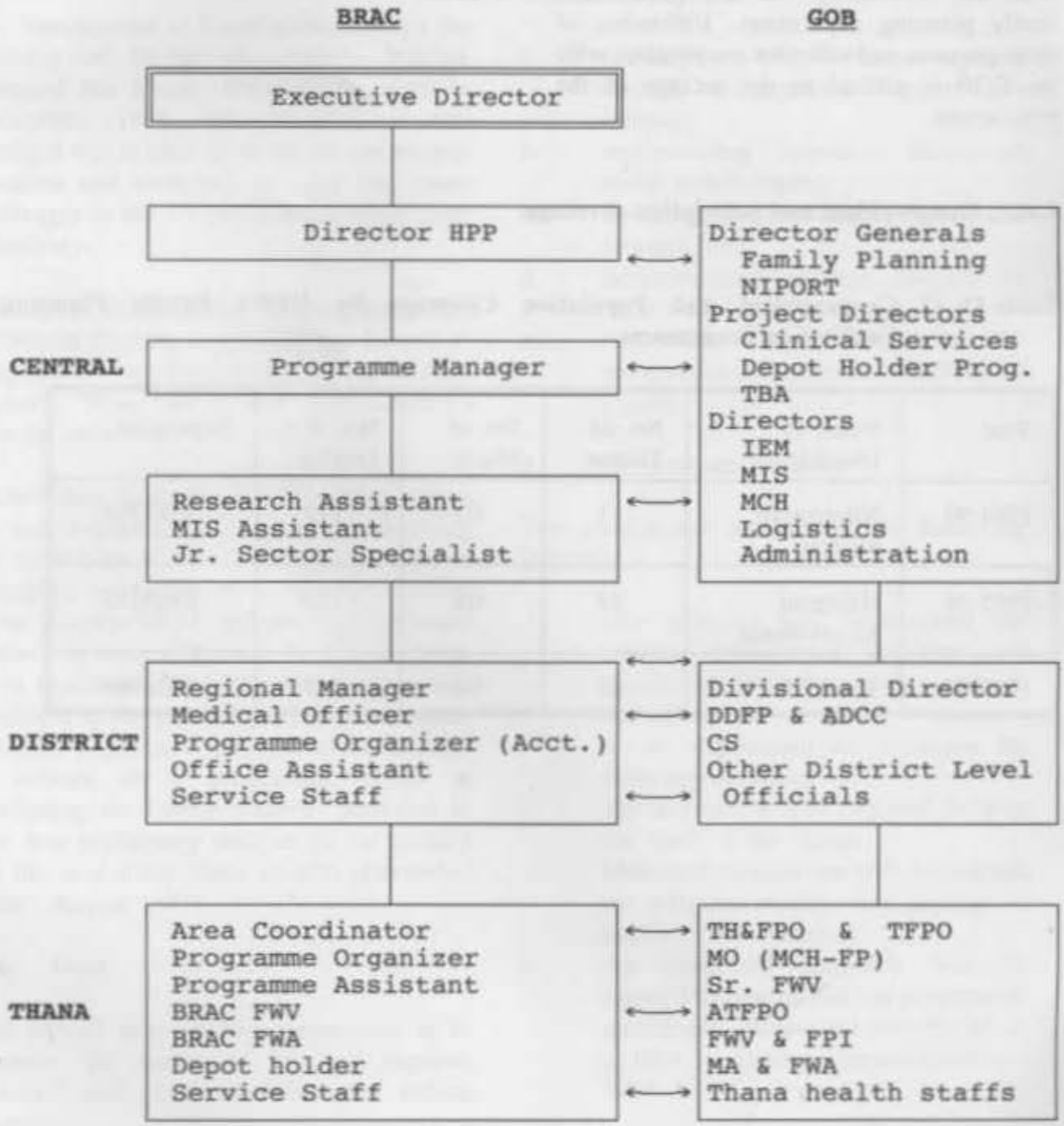
4.a. Geographical and population coverage

Table IV.17 Geographical and Population Coverage by HPP's Family Planning Facilitation Programme

Year	Name of Districts	No. of Thanas	No. of Munic.	No. of Unions	Population
1994-95	Nilphamari Sherpur	11	02	117	2517391
1995-96	Habigonj Moulvibazar	14	02	152	2903175
1996-97	Total	25	04	269	5420566

4.b. STAFFING STRUCTURE AND LEVEL OF COOPERATION WITH GOB

Exhibit C: Staffing Structure and Level of Cooperation With GOB in the Family Planning Facilitation Programme



IV.C FACILITATION OF THE NATIONAL TB AND LEPROSY CONTROL PROGRAMME:

An understanding has been reached whereby BRAC is to provide technical assistance to the government in the newly developed project called Further Development of TB Leprosy Control Services. An agreement on this was signed between the National TB and Leprosy Control Services Project and BRAC on 12 April, 1994. According to the agreement and operational guidelines, the responsibilities of BRAC and the TB and Leprosy Control Services Project will be the following:

BRAC

BRAC will :

i. Provide manpower for social mobilization, case detection, treatment, follow-up, supervision, monitoring, evaluation and coordination at different level;

ii. Provide training to BRAC and GOB staff at thana level.

iii. Conduct communication campaign through audio visual media including print materials, short films and dramas for TV and Radio.

GOB (TB control project)

GOB will :

i. Provide anti TB drugs, laboratory reagents, equipments, recording and reporting forms, publicity materials, treatment guidelines;

ii. Provide Training of Trainers (TOT) to BRAC staff, training materials for BRAC and GOB staff. Perdiem and travel cost for resource persons and GOB participants will also be provided by GOB.

iii. Designate the GOB health institutes i.e. Thana Health Complex, TB clinic, Sadar Hospital and other specialised hospital as the referral unit.

iv. Be responsible for overseeing the laboratory at BRAC facilities, visit the field activities and conduct coordination meetings at different level.

BRAC's TB programme is expected to cover 130 thanas through 1997. The treatment schedule to be followed under this agreement is the 8-month schedule (Rifampicin + Isoniazid + Ethambutol + Pyrazinamide for 2 months followed by Isoniazid + Thiacetazone for 6 months). Orientation of WHDP staff (i.e., Managers, MOs and POs) in the ten WHDP thanas on this schedule of treatment has been completed.

I. Training & Orientation:

Under this agreement the National TB and Leprosy Services Project has trained six trainers from WHDP in July 1994. These trainers will be responsible for conducting the training of government, BRAC and other NGO staff at thana and districts. To date the following trainings have been completed:

Table IV.18 Training and Orientation of BRAC, GOB and Other NGOs in TB and Leprosy Control

Name	Participants	Nos.
1. Management course on TB and Leprosy for thana level managers	BRAC: Area Coordinator(AC), Medical Officer(MO) GOB: Thana Health & Family Planning Officer(TH&FPO), Medical Officer(MO) Lamb Hospital: TB Control Officer(TCO)	BRAC-17 GOB-20 Lamb Hosp.-2
2. Training on TB and Leprosy for Mid level supervisors	BRAC: Area manager(AM), Programme Organizer(PO) GOB: Sanitary Inspector(SI), Health Inspector(HI), Medical Assistant(MA), Store Keeper and Statistical Assistant Lamb Hospital:Field Supervisor	BRAC-111 GOB-138 Lamb Hosp.-2
3. Training on TB and Leprosy for field level staff	GOB: Assistant Health Inspector(AHI), Health Assistant	GOB-344
4. Training on TB and Leprosy for Lab. technician	BRAC: Laboratory Technician GOB: Medical Technologist	BRAC-6 GOB-4

2. Collaboration Between BRAC, GOB and RIT, Japan:

A collaborative research on integration of TB control activities into the Primary Health Care systems is being conducted jointly by National TB and Leprosy Control Services and Research Institute of Tuberculosis (RIT), Japan. BRAC is also collaborating in this through HPP. This is going on in four thanas and the research team have visited the Thana Health Complexes (Sonargoan, Araihazar, Dakope and Terokhada THCs) where the pilot project is being implemented through the existing government health infrastructure. The team is particularly focussed on identifying the problems / constraints and strengths faced by the project and ways to solve it.

Findings of the research will be disseminated at divisional study meetings at six monthly intervals at Dhaka and Khulna in 1995.

IV.D BANGLADESH INTEGRATED NUTRITION PROJECT:

The Bangladesh Integrated Nutrition Project (BINP) is another national programme, where BRAC has been involved. The project is being initiated based on the experiences of TINP (Tamil Nadu Integrated Nutrition Project) and BRAC's operations research activity on Community Based Nutrition Initiative at Muktagacha, Mymensingh.

The BINP was conceptualized with the ultimate goal of reducing malnutrition, specially of children and women, thereby reducing morbidity and mortality and significantly improving the nutritional status of the people by the year 2000.

The Project is being funded by the World Bank. BRAC has been involved through HPP from the stage of conceptualization of the project and through provision of technical inputs and field experience for preparation of the project proposal.

Initially the project will start in six thanas of the country, and by the year 2000 will be extended to 40 thanas. Children through age 2, will have their nutritional status monitored, and when found deficient will be supplemented with food as an educational activity. A pilot thana will cover primipara

NGOs including BRAC are expected to facilitate the government through assistance in implementation of the community based nutrition activities, training, logistics and quality assurance. An agreement is expected to be signed soon between the government and BRAC in this context.

EXECUTIVE SUMMARY

WHDP came into being in 1991 as a result of the integration of BRAC's diverse experience in health to establish. The new programme combined a new initiative with two ongoing health projects to form a single health strategy. The EPI-F programme and Primary Health Care programme were integrated with the new initiative on women's health, offering integrated maternal and child health care in sixty two thanas.

By the end of 1994 BRAC's health programmes were consolidated as independent entities and with specific thrusts - the **WHDP** focussing on specific aspects of women and child health, including pilots or innovations in several areas; the projects which **facilitate or strengthen** the government programme such as the **EPI-F and FP-F;** and the package of **essential health care (EHC)** services to meet the needs of the participants of BRAC's programmes. The WHDP and the Facilitation programmes are managed by the **HEALTH AND POPULATION PROGRAMME (HPP)** while the Essential Health Care programmes is managed by the **RURAL DEVELOPMENT PROGRAMME (RDP).**

This report will detail the achievements, and constraints along with lessons learnt in the **HEALTH & POPULATION PROGRAMME** in the period July 1993 - December 1994. It may be noted that unlike the previous years the reporting period is for 18 months. This is to ensure that the current and subsequent reporting periods follow the calendar year and also be synchronous with the reporting period of other BRAC programmes.

WOMEN'S HEALTH AND DEVELOPMENT PROGRAMME:

WHDP's current phase which started in July 1991 was to end on June 1994. However, the project life had to be extended through 31 December 1995 due to the fact that extension of the project start-up time caused the field activities to start later than planned. The savings of project funds has allowed the project to continue activities for approximately one and a half year i.e. through 31 December 1995, giving time to complete the planned activities.

I. REPRODUCTIVE HEALTH:

I.A. Safe Motherhood

A significant emphasis of the Reproductive Health component is on Safe Motherhood, whereby pregnant women are given ante and post partum care; and the knowledge of trained Traditional Birth Attendants (TBAs) is reinforced to facilitate safe delivery at home, and, high risk and/or emergency cases are referred to the hospitals for specialised care.

Out of a total of 42,107 women registered as pregnant in the reporting period, 83% availed the antenatal care and 52% of them were screened out as high risk cases. Of the 31,373 deliveries, there were 28,913 live births, 929 still births, and 1,531 abortions.

I.B. Birth Spacing and Contraception

In order to reduce the potential for maternal mortality WHDP has also adopted a component of birth spacing and contraception for non-pregnant women.

The village base health functionaries or Shastho Shebikas function as depot holders within the village. They motivate couples for contraception, supply oral contraceptives and condoms to all acceptors, and also refer clients seeking IUDs, injectables and sterilization.

Of the 354,113 ELCOs, 177057 are modern method users, bringing the CAR to 50%. 233,289 cycles of oral pills and 20,033 packets of condoms were distributed by the Shastho Shebika or Depot Holders.

I.C. Health and Nutrition Education

Health and nutrition education is another important aspect of the programme. This is provided on a regular basis at various levels, i.e., during household visits, and Mohila Shova and Gram Committee meetings. The topics include nutrition of the adolescent girls, pregnant and lactating women, colostrum, exclusive breast feeding and weaning, disease prevention and control of tuberculosis, ARI and diarrhoeal diseases.

II. DISEASE CONTROL

II.A. Community Based Tuberculosis Control

Although WHDP emphasizes the health and nutritional status of women and children, some of its interventions are also designed to serve the entire population. The community based tuberculosis control programme is one such programme. With the objectives of reducing the risk of infection due to tuberculosis, and morbidity and mortality from the disease, this component is operational in ten thanas where WHDP is present.

As in other activities, the Shastho Shebikas serve as the village level focal points of the TB control programme. They are responsible for disseminating information about TB, identifying suspected cases, collecting sputum, and motivate the patient to initiate treatment, provides the medicine and ensuring treatment compliance. Side effects are monitored closely by the SS and PO and if required the BRAC Medical Officer and MO (Disease Control) from the Thana Health Complex.

In the eighteen months under reporting, 31,739 persons were suspected to be tuberculous out of which 6% (2,001) were found to be sputum positive. There is a overall increase in the cure rate from 76% to 85% and decrease in the fatality rate from 15% to 8% within the reporting period.

II.B. EPI Diseases:

With the aim to reduce child and infant mortality and morbidity from the six preventable diseases i.e. measles, tetanus, diphtheria, pertussis, tuberculosis, and poliomyelitis; support is provided to the Expanded Programme for Immunization. The EPI coverage in the WHDP catchment is 70% for BCG, 80% for DPT / OPV third dose and 80% for measles.

III NUTRITION:

III.A. Children

III.A.1 Growth Promotion

Growth monitoring of children upto two years of age takes place during the monthly ANCC/SC. During the reporting period, each child had an average of seven contacts with the growth monitoring sessions.

Of the 46,057 children under two years in the programme's catchment area, 35,003 (76%) attended the growth monitoring sessions during and 75% showed weight gain.

III.A.2 Vitamin A Capsule (VAC) Distribution

Vitamin A capsules are also distributed to children under six years of age biannually by government Health Assistants (HAs) under supervision of Health Inspector (HI). 80% children under six years received the 37th cycle of VAC, while 77% received the 38th cycle of VAC.

IV. WATER & SANITATION:

The community is motivated to install and maintain tubewells and use its water not only for drinking purposes, but also for cooking and washing utensils as far as is practicable. The number of newly installed tubewells 14,815, bringing the number of tubewells in the WHDP catchment area to a total of 94,908.

V. CAPACITY DEVELOPMENT:

In an effort to strengthen the capacity of the government personnel and the community, HPP has been involved in capacity development through various workshops and training. These have involved the various government union and thana level personnel as well as the Gram Committee members, Mohila Shova members, and the adolescent girls.

GENERAL INFORMATION:

I. MANAGEMENT INFORMATION SYSTEM (MIS)

With the purpose of rapid data collection, analysis and feedback, WHDP set up its own Management Information System (MIS) from January 1993. A set of MIS modules has been developed for reporting the information and computerization of data. A methodology to consolidate the monthly performance data and convert this into periodical reports has also been developed.

To improve the existing reporting system, the reporting design and format was revised for more precise and accurate information. This revision was mainly in the annual reporting format which is updated at the end of each year and the Monthly Performance Report (MPR) was also modified and consolidated to provide information on all activities in WHDP.

The new programme covered by the MIS is the EPI Facilitation programme. The coverage data is going to be validated through an annual rapid survey. An MIS is going to be designed for collection, consolidate and analysis of data from on-going activities for the Family Planning Facilitation Programme.

II MONITORING AND EVALUATION

II.A Research and Evaluation Division (RED)

A special cell was established within the Research and Evaluation Division, BRAC for monitoring and evaluating HPP activities. A team of RED researchers has produced several monitoring and evaluation reports, and the recommendations of the reports are being reviewed by HPP.

II.B In House Mechanism

The in-house mechanism of monitoring and supervision of the Health and Population Programme activities starts from the area offices to the level of senior managers at the Head Office.

Findings from this process are combined with the MIS reports and the findings of the RED monitoring cell, and decisions taken on the necessary follow up action.

II.C External Evaluation

A five-member team evaluated BRAC's Women's Health and Development Programme (WHDP) from January 25 - February 6, 1994. The purpose was to review WHDP's goals and strategies, to determine its achievements and shortcomings, and on the basis of their findings to recommend future actions. The team was led by Dr. Lincoln Chen, and comprised Dr. Mabelle Arole, Dr. Martha Chen, Prof. Ananda Mohan Das, and Dr. Shishir Senapati.

The team concluded that WHDP overall is an outstanding program making important contributions to women's health and development in Bangladesh, with demonstrated success with management, social mobilization, and government facilitation. Improvements are needed in strategic clarity and coordination between health and rural development work at the village, area, and thana levels.

For WHDP's next phase, the following tracks were recommended as most appropriate. The first would be to retain and strengthen a distinctive health programme aimed at national impact targeted at a specific, high priority problem. A second track would be to integrate health and rural development through strengthening the health component of BRAC's RDP. In either case, the WHDP should continue to develop a "core package" of women's health and development services in pilot areas. A dynamic, flexible, and technically strong WHDP is considered essential for experimentation, training, and technical support of either track.

II.D Cost Effectiveness Analysis

The cost effectiveness (CE) of WHDP's comprehensive and integrated health service program was conducted in January 1993, in 2 parts :

1. Financial evaluation of the expenditure in terms of expenditure per unit of health outcome.
2. Indepth evaluation of the economic costs and CE of the project's interventions.

Cost-effectiveness was calculated by dividing total costs per component by effectiveness measures selected for the study. Most of the WHDP components and pilot projects appeared to be cost-effective, but there is room for improvement by either identifying ways to reduce total costs or by increasing the total level of activity per component.

PILOT PROJECTS

I. MATERNAL MORTALITY REDUCTION PILOT PROJECT:

A pilot intervention to reduce maternal mortality has been implemented in two sadar thanas of Dinajpur and Bogra, covering a population of approximately 0.34 million. The goal of the project is to reduce maternal mortality and morbidity.

During the reporting period a total of 13,940 pregnant women were identified, among whom 47% were screened as high risk of whom the major portion were multigravidas and women <18 years age.

A total of 1,618 pregnant women were referred to the district hospital, of which 584 were emergencies while 1034 had been previously identified as high risk cases. 1,717 pregnant women were admitted in the Sadar hospitals among whom 1,316 delivered in the hospital during the reporting period.

851 (65%) were normal deliveries while 465 (35%) required life saving interventions. During the same period 12,214 deliveries occurred, of which 11% were institutional deliveries. 63% were delivered by trained personnel such as doctors, nurse, FWV and trained TBA. 33 mothers died (22 in hospitals and 11 at home) during these deliveries and 987 infants including 644 neonates died out the same number of deliveries. The maternal deaths were mostly conditions which could be prevented. This again strengthens the conviction that without adequate and accessible emergency obstetric care, maternal mortality can not be substantially reduced.

II. COMMUNITY BASED PNEUMONIA CONTROL PILOT PROJECT

WHDP has implemented a community based pneumonia control pilot project in the two sadar thanas of Dinajpur and Bogra with the goal to control pneumonia through creating awareness in the community, specially mothers, to recognise and manage ARI at home in accordance with the WHO and GOB guidelines.

16,910 ARI cases were identified in the project area during the reporting period. Among them 22% had common cold, 78% were identified as suffering from pneumonia and 0.5% were diagnosed with severe pneumonia. Among the 13,194 pneumonia cases, 13,004 (99%) were treated by the Shastho Shebika and 140 cases required hospital admission. Among these 74 cases were referred by SSs on, while 66 were referred during treatment. The case fatality among those identified by the SS and mother and reported as such stands at 0.2%. The data indicates that the peak time of ARI attack for the last two consecutive periods of twelve months is from October to February.

III. BIRTH WEIGHT RECORDING PROJECT

Aiming to gather precise information on trends in birth weight, and effects of the program interventions on it, WHDP undertook to record the weight of the new born. A review of the weights recorded shows that, weight below 2.5 kg. is gradually decreasing. However, it should also be borne in mind that the interventions of WHDP, RDP and NFPE could be having a combined effect on birth weight.

A review of all births recorded in these 30 pilot areas during the period shows that weight of 79% of the 3,273 births were recorded, and 22% of this was below 2.5 kg. (2500 gms.).

IV. COMMUNITY BASED PILOT NUTRITION INITIATIVE

The Community Based Pilot Nutrition Initiative was operationalized in 1993 in Muktagacha thana of Mymensingh district, covering a population of 168,000. The population covered by this pilot are children under two, adolescent girls, and pregnant and lactating women. The control population for this pilot is situated in Mymensingh Sadar.

Of the total 16161 children under two, 13650 or 84% were weighed and their mothers were given nutrition education sessions. 75% of these children were found to be gaining weight. The remaining 3411 children whose growth were faltering were enrolled into the nutritional supplementation programme. A review of the average weight of the children at entry and exit from supplementation (for those who graduated from the supplementation in June 1993, December 1993, June 1994 and December 1994), shows that the average weight gain of the cohort was 11- 15% of their starting weight.

1306 (23%)with BMI less than 18.5 were enrolled into the supplementation programme and 443 of them delivered. The birth weight of 341 infants were recorded, 78 of which were below 2.5 kg. The field data indicates that women with higher initial BMI, seems to be having babies with higher birth weights.

Some improvement was noted in the weight of the adolescent girls in relation to that of the control girls. The heights however do not show much difference from that of the control area.

V. PROJECT ON COST-EFFECTIVENESS OF VARIOUS CHEMOTHERAPEUTIC REGIMENS IN TB CONTROL

A pilot TB project in Phulpur thana of Mymensingh District is looking at the cost effectiveness of three alternative treatment schedules: the 12-month standard course, the 8-month, and, 6-month short course of treatment.

An initial analysis of the data shows that the cost per case cured is Tk. 8,050 in the 12 month regimen, Tk. 10,359 in 8 months regimen 10,396 in 6 month regimen. The 8 months therapy having lower drug costs than the 6 months therapy, less opportunity costs, less side effects, more efficacy and less mortality than the standard 12 months regimen, is believed to be most cost-effective regimen of therapy.

FACILITATION PROGRAMMES:

I. EXPANDED PROGRAMME ON IMMUNIZATION (EPI):

BRAC's facilitation assistance to the EPI is focussed currently on 42 low performing thanas under Chittagong region covering a population of 9.5 million.

With the objectives of creating a demand for government services, and preparing and activating the government machinery to respond to this demand,BRAC's involvement in this activity is in terms of community mobilization, training of government workers, coordination between the government and BRAC staff at all levels from thana to district leading to improved and strengthened performance in EPI.

A Coverage Evaluation Survey found that 65% of the children (12-23 months) were fully immunized and 14% not immunized at all. About 65% of the mothers having infants (0-11 months of age) received two doses of tetanus toxoid. Dropout rate from BCG to measles vaccination was 22% while that from DPT-1 to DPT-3 was 20%. Fifty two percent of the infants were protected against neo-natal tetanus.

II. FAMILY PLANNING FACILITATION PROGRAMME:

BRAC's family planning programme is aimed at facilitating the family planning activities in four low performing districts of the country for the next thirty three months (December 1994 - August 1997). The overall goal of this programme is to augment the quality of life and improve maternal and child morbidity and reduce mortality. This programme aims to facilitate the national family planning programme and make it sustainable through:

a. Development of government capacity through management support and training;
b. Implementing innovative means of social mobilization;
c. Ensuring enhanced quality of care and services, and,
d. Supplementing service delivery in areas with limitations;
e. Assistance to reformulate the programme for attain sustainability of impact.

Part I :

Health and Population Programme

I. BACKGROUND : HEALTH AND POPULATION PROGRAMME (HPP)

Inspite of the impressive strides made in Bangladesh in some health and family planning interventions (i.e., EPI and Contraception), the health of the people, however, continues to remain grievously poor. To date, the Child Mortality Rate 133 per 1000 live birth, Maternal Mortality Rate is 4-6 / 1000 live birth (UNICEF estimated in 1993 that three Bangladeshi women die every hour due to maternity-related causes) and the Total Fertility Rate is 4.2. Almost 50% babies are born with weight less than 2,500 gms, while the average calorie intake of most Bangladeshi women is 80% of the required amount. To date, approximately 12 - 13% of population has access to Primary Health Care.

The need to change health statistics inspired BRAC to design a community based health programme. Philosophy of BRAC is rooted in the belief that only the people themselves can bring about change, through individual and concerted action with support of opportunities provided by BRAC. The paramount intention of BRAC's to alleviate poverty and empower people. To achieve this BRAC pursues rural development through three major vertically integrated sectoral programmes - health, education, and rural development. The strategy of all BRAC programmes build upon a common base: local people empowered through group formation organized into village-level institutions.

The health programme has evolved over the years through distinctive phases : experimental family planning (1973-75); integrated health care (1975-79); oral therapy extension programme (OTEP, 1980-1990); child survival primary health care (1986-1990) and facilitation of the expanded programme of immunization (EPI, 1986-1994).

In July 1991, BRAC integrated its diverse experience in health to establish WHDP, combining a new initiative with two ongoing health projects to form a single health strategy. The EPI-F programme and Primary Health Care programme of RDP were integrated with the new initiative, offering integrated maternal and child health care in sixty two thanas.

By the end of 1994, BRAC's health programme has been renamed as the Health and Population Programme (HPP) so as to accurately reflect its broadened focus on population / family planning activities along with the existing health programmes.

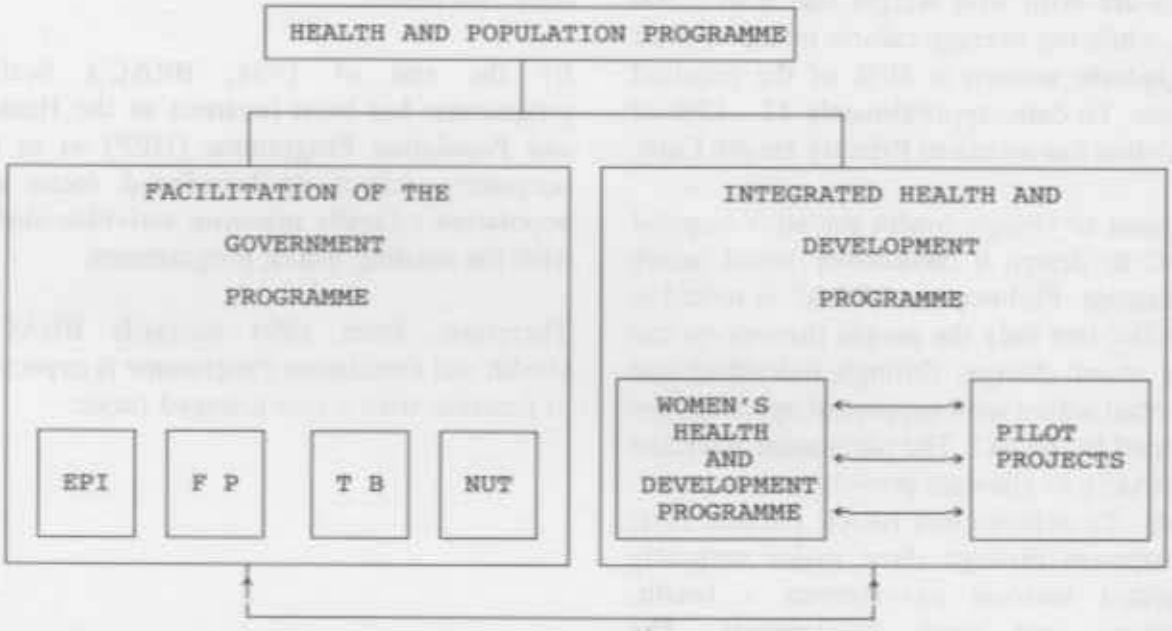
Therefore, from 1994 onwards BRAC's Health and Population Programme is expected to function with a two pronged focus:

1. Women's Health and Development Programme (WHDP) focusses on improving the health and nutrition status of women and children and through pilot activities responds to the more technical needs to the community;

2. Facilitation of the Government Programme - strengthens the government's performance and develops the community's capacity for sustained health impact.

- Expanded Programme on Immunization (EPI)
- Family Planning Programme (FP)
- Control of TB and Leprosy
- Community Based Nutrition Programme

Exhibit : A : Components of Health and Population Programme.



Part II :

Women's Health and Development Programme

II.A. WOMEN'S HEALTH AND DEVELOPMENT PROGRAMME (WHDP):

II.A.1. GOALS AND OBJECTIVES OF WHDP:

The objectives of WHDP is two-fold:

- to improve the health and nutritional status of women and children; and
- to mobilize communities and strengthen community-level capacities to sustain health and development activities.

II.A.2. DESCRIPTION OF THE PROGRAMME:

a. Reproductive Health:

i. Safe Motherhood

A significant part of the programme's emphasis is on Safe Motherhood, whereby pregnant women are given ante and post partum care, and the knowledge of trained Traditional Birth Attendants (TBAs) is reinforced to facilitate safe delivery at home.

The Shastha Shebikas and TBAs from the community assist in identifying pregnant women, while the Family Welfare Visitors (FWVs) and /or WHDP Programme Organizers (POs), provide basic ante and post natal care through the Satellite Clinics (SCs) and Antenatal Care Centers (ANCC) and at home (if the situation should warrant it). Referral care is provided by the senior FWV, nurses and physicians from the Thana Health Complex (THC), WHDP's Medical Officers and the Sadar District Hospital.

Out of a total of 42,107 women registered as pregnant in the reporting period and expected to avail antenatal care services, only 34,949 (83%) attended the Satellite clinics or Antenatal Care Centres. During the course of providing antenatal care, 52% were screened out as being high risk in accordance to the programme's criteria.

31,373 deliveries occurred within the WHDP catchment population in the reporting period. Following is the outcome of these deliveries.

Table II.1 Pregnancy Outcomes (N = 31,373)

Live Births	28,913
Still Births	929
Abortions	1,531

ii. Birth Spacing and Contraception

In order to reduce the potential for maternal mortality WHDP has also adopted a component of birth spacing and contraception for non-pregnant women.

A baseline has been done to identify and register all the eligible couples within the programme area. This information is available in the registers and updated monthly.

The Shastho Shebikas function as depot holders within the village. They motivate the couples and assist through supply of oral contraceptives and condoms. The Shebikas assist to facilitate and improve the FWAs coverage from whom she also receives her

supply. She also refers clients seeking IUDs, injectables and sterilization to the FWV at the Satellite Clinic, the Family Welfare Centre (FWC), the Sterilization (VSC) / IUD Camps or the Thana Health Complex.

The SS/Depot Holder has received ten days training on methods of contraception and side effects. This training is in addition to their basic and refresher training.
Following is the outcome:

Table II.2 Eligible Couples (ELCOs) and Contraceptive Usage

Total ELCOs	Modern method users	CAR
354,113	177,057	50%

Table II.3 Contraceptives Distributed by the Depotholders

Cycles of oral pills	233,289
Packets of condoms	20,033

The SS provides follow-up care to all ELCOs receiving contraceptives. The Programme Organizer visits those reporting with side effects and complications. Such cases are also referred to the BRAC MO and MO-MCH.

iii. Health and Nutrition Education

Health and nutrition education is another important aspect of the programme. This is provided on a regular basis at various levels, i.e., during household visits, and Mohila Shova and Gram Committee meetings. Education on the food intake of the adolescent girls, pregnant women, lactating women as well as education on colostrum, exclusive breastfeeding and weaning food are particularly emphasized. This education also covers prevention of ARI, immunizable diseases, night-blindness, control of tuberculosis and diarrhoeal diseases.

II.A.2.b. Disease Control

i. Community Based Tuberculosis Control

Although WHDP emphasizes the health and nutritional status of women and children, some of its interventions are also designed to serve the entire population. The community based tuberculosis control programme is one such programme. The objectives of this activity are to reduce the risk of infection due to tuberculosis; reduce morbidity and mortality from the disease through diagnosis and treatment of at least 75% of sputum positive cases.

The Shastho Shebikas (SSs) are the village level focal points of the TB control programme. They are responsible for disseminating information about TB,

identifying suspected cases through signs and symptoms of TB and collecting sputum from these cases. Slides are prepared from the sputum at the smearing centers and sent for examination to the laboratories at the Thana Office, where the laboratory technicians stain and microscopically examine the slides. All positive slides and 5% of new negative slides are cross checked and confirmed by the Medical Officers. Once a patient is identified through two sputum positive slides, the PO informs the SS and both of them motivate the patient to initiate treatment with BRAC. They also are responsible for ensuring the patient's compliance.

The 12-month standard treatment schedule is followed in 9 thanas of WHDP. Injection Streptomycin is administered at the patient's home by the trained Shastho Shebikas on alternate days for the first two months and one tablet of Thiazide (Isoniazid 300 mg + Thiacetazone 150 mg) is given for twelve months.

The SS collects the medicine from the Area Office and distributes one week's supply of the medicine to each patient. The treatment card remains with the patient with a copy kept in the area office. Side effects are monitored closely by the SS and PO and if required the BRAC Medical Officer and MO (Disease Control) from the Thana Health Complex.

If a patient shows any adverse reaction, the offending drug is identified and replaced. Cases which are resistant to the 12 month regimen or have relapsed are put on the 8 month short course therapy. The SS ensures daily supervised therapy under the stringent guidance of PO and MO.

The following problems were encountered in this activity during the reporting period and were subsequently solved:

Table II.4 Problems and Solutions in TB Control Programme

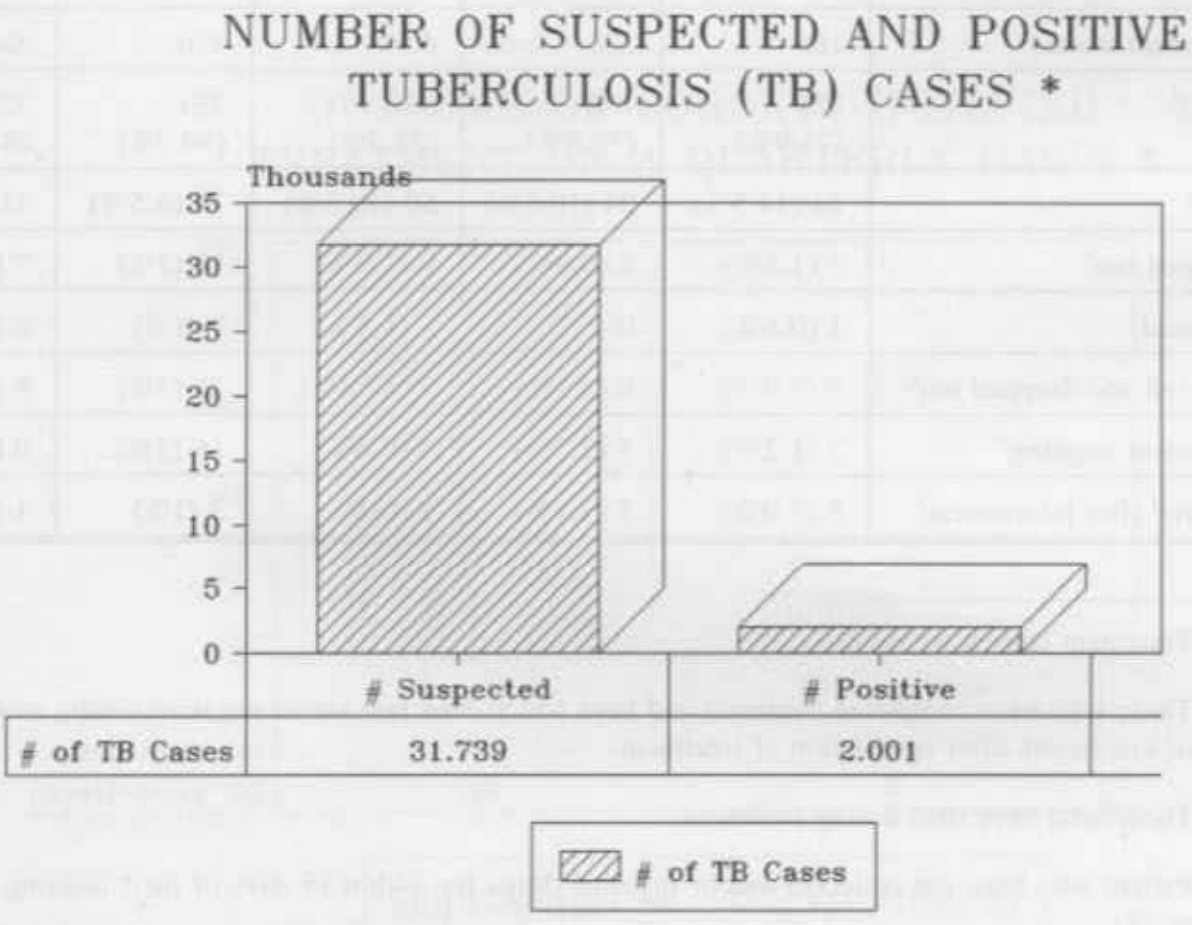
Problems	Solution
Some TB patients were found sputum positive even after the prescribed retreatment regimen on (2SHRZ+4RH)* and / or (2SHRZ+6HT)*	1.Retreatment regimen was changed to (2SEHRZ / 1EHRZ / $5H_3R_3E_3$)* 2. Daily supervision therapy is advised to ensure compliance with drug taking.
Side effect of TB drugs is comparatively higher with fixed dosage therapy which does not consider age and weight of the patient.	Age and weight specific doses for all medicines are now being given
Case identification was decreasing in several thanas	SS are to visit all households once every 3 months and POs are to visit 20% of the household to cross check SS's skill in identification and her regularity.

* S= Streptomycin; H= Isoniazid; R= Rifampicin: Z= Pyrazinamide; E= Ethambutol; T= Thiacetazone.

* 2= 2 months; 4= 4 months; 6= 6 months; 5= 5 months;

In the eighteen months under reporting, 31,739 persons were suspected to be tuberculous out of which 6% (2,001) were found to be sputum positive.

Figure II.1.



* JUNE 1993 – DECEMBER 1994

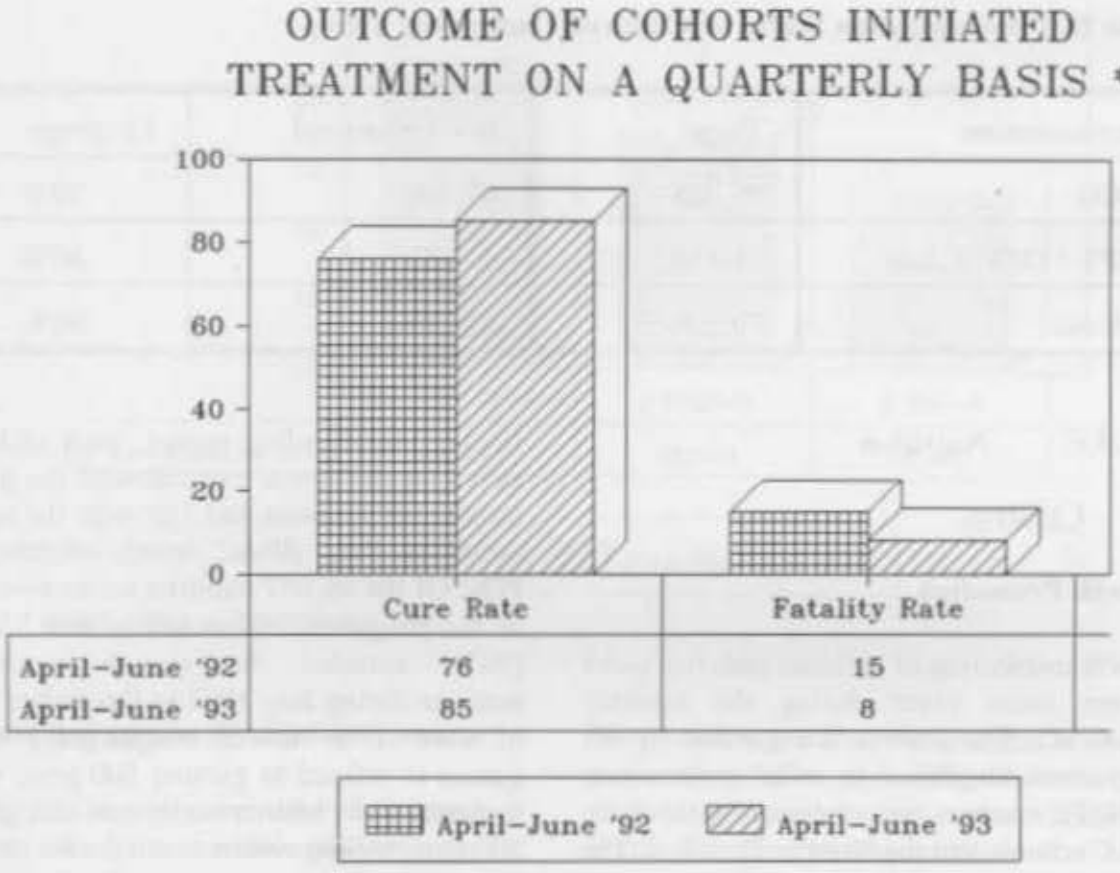
Table II.5 Outcome of cohorts initiated on treatment on a quarterly basis (April 1992 - June 1993)

	April June 1992	July Sept. 1992	Oct. Dec. 1992	Jan. March 1993	April June 1993
Treatment started[1]	166	228	478	476	384
Cured[2]	126 (75.9%)	182 (79.8%)	374 (78.2%)	384 (80.7%)	326 (84.9%)
Died[3]	24 (14.5%)	24 (10.5%)	50 (10.5%)	31 (6.5%)	31 (8.1%)
Dropped out[4]	3 (1.8%)	2 (0.9%)	9 (1.9%)	11 (2%)	7 (8.1%)
Migrated[5]	1 (0.6%)	0	5 (1.1%)	5 (1%)	2 (0.5%)
Referred and dropped out[6]	5 (3.0%)	8 (3.5%)	35 (7.3%)	26 (5%)	8 (2.1%)
Treatment ongoing[7]	2 (1.2%)	5 (2.2%)	3 (0.6%)	16 (3%)	9 (2.3%)
Positive after retreatment[8]	5 (3.0%)	7 (3.1%)	2 (0.4%)	3 (1%)	1 (0.3%)

1. Treatment started by BRAC.
2. Those who have completed treatment and have had at least two smear negative results with an interval of one month after completion of treatment.
3. Those who have died during treatment.
4. Patient who have not collected and/or ingested drugs for within 15 days of their meeting with the SS or PO.
5. Patients who have moved or migrated to another area and have not been given or collected any drugs from BRAC.
6. Patients who have been referred to the jurisdiction of another tuberculosis centre and on who we do not have any information regarding regularity of treatment and sputum examination results.
7. Patients who are currently under treatment.
8. Patients who are sputum positive after the 2nd line retreatment regimen (2EHRZ/6HR, 2ESHRZ/1EHRZ/$5E_3H_3R_3$).

The above data shows that there is a overall increase in the cure rate from 76% to 85% and decrease in the fatality rate from 15% to 8% within the reporting period.

Figure II.2.



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It may be noted here that in April 1994, BRAC entered into an agreement with the government for enhancing the functioning of the National TB and Leprosy Control Services Project. This is described separately in Part IV of this report.

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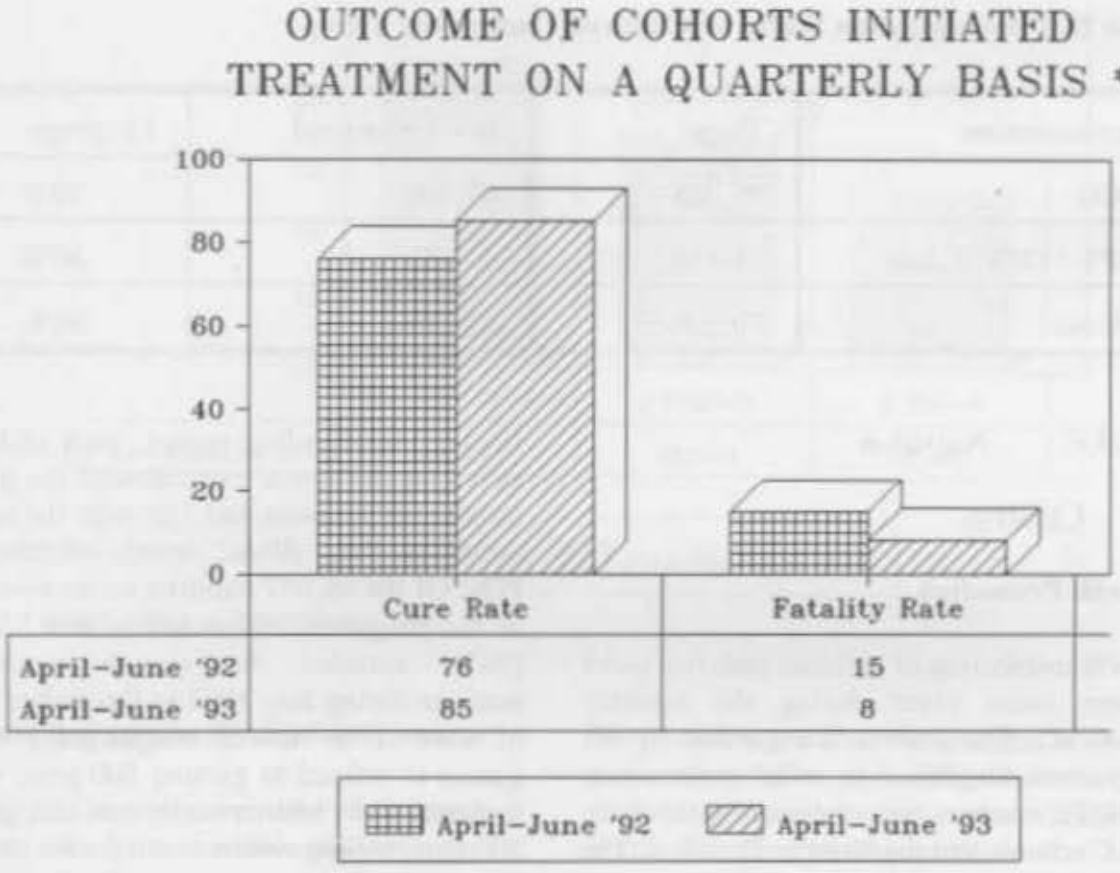

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ii. **EPI Diseases:**

With the aim to reduce child and infant mortality and morbidity from six preventable diseases: measles, tetanus, diphtheria, pertussis, tuberculosis, and poliomyelitis; support is provided to the EPI through motivation of the mothers to complete immunization of their children prior to their first birthday. The EPI coverage in the WHDP catchment is:

Table II.6 Immunization Status of Children Under One Year

Immunization	Target	No. immunized	Coverage
BCG	96,885	67,700	70%
DPT / OPV 3 dose	81,813	45,642	80%
Measles	79,598	63,275	80%

II.A.3.c. Nutrition

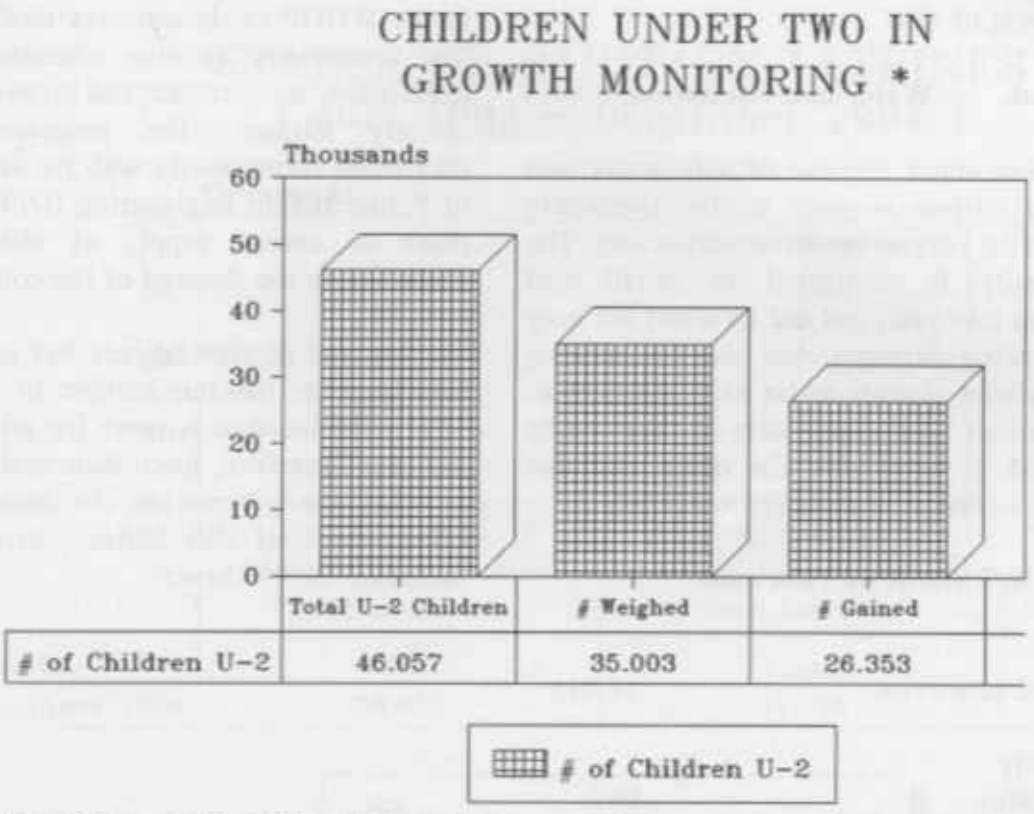
i. **Children**

Growth Promotion

Growth monitoring of children upto two years of age takes place during the monthly ANCC/SC. The session is organized by the Programme Organizer in collaboration with the NFPE teachers and adolescent girls of the BRAC schools and the Shastho Shebikas. The weight is taken and recorded in the child's growth cards by the NFPE teacher. The teacher interprets the growth curve to the mother and explains the caring measures that are to be taken. Nutrition education specially on the importance of colostrum and breastfeeding, as well as information on child health care are provided in these sessions. BRAC's village level cadres (the SS, TBAs, MS and GC members) assist in this process.

During the reporting period, each child had an average of seven contacts with the growth monitoring sessions and / or with the service providers, i.e., BRAC health volunteers or POs. Of the 46,057 children under two years in the programme's catchment area, 35,003 (76%) attended the growth monitoring sessions during July 1993 to December 1994, of whom 75% showed weight gain. Weight gained is defined as gaining 500 gms. within 3 months for children under one and gaining 300 gms. weight within 4 months for children 1-2 years. It is to be noted here that emphasis is given on the direction of the growth curve and faltering and not on the exact weight gain in kilograms. The teachers and POs are also encouraged to probe the cause of any weight loss or faltering. This information along with that on EPI is documented on the growth chart.

Figure II.3



* JUNE 1993 - DECEMBER 1994

Vitamin A Capsule (VAC) Distribution

Vitamin A capsules are also distributed to children under six years of age biannually by government Health Assistants (HAs) under supervision of Health Inspector (HI). Prior to the reporting period, it was done through household visits. But discussions with the government staff on ways to maximize output through the existing contact points has led to a change in strategy. Earlier the VAC distribution was done at home and it took almost two months to complete it, but the strategy is revised. The Vitamin A capsule distribution to those under one year is done in conjunction with the EPI sessions. For children, over one year, the capsule is distributed through the satellite clinics and ante natal care centres. In this manner the distribution is completed in almost one month. WHDP activities include motivation and education of mothers regarding the need for Vitamin A, and mobilizing the community. The Programme Organizers and Shastho Shebikas assist the Health Assistant to ensure proper distribution of VAC.

80% children under six years received the 37th cycle of VAC, while 77% received the 38th cycle of VAC.

II.A.3.d. Water and Sanitation:

Education about the use of safe water and sanitary latrines is given to the community through the various health education fora. The community is motivated to install and maintain tubewells and use its water not only for drinking purposes, but also for cooking and washing utensils as far as is practicable. Furthermore the community is also being educated to keep safe the other available sources of water in ponds or water pits.

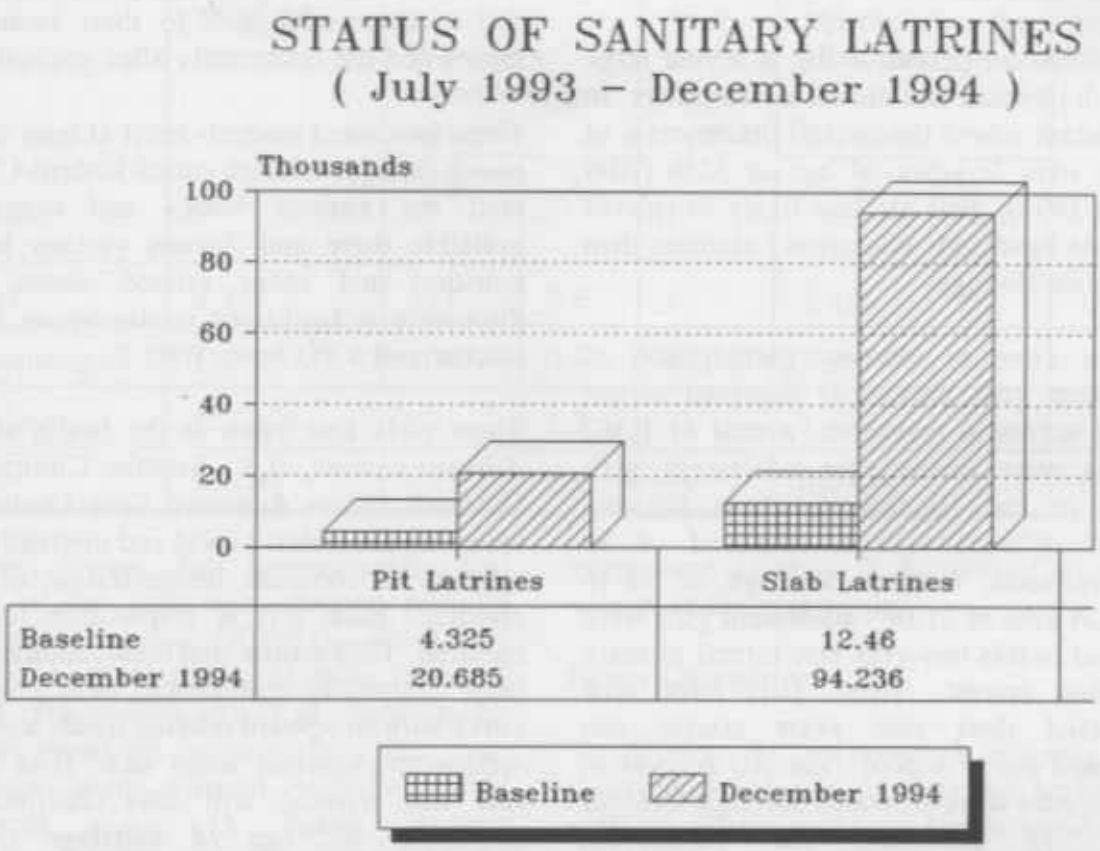
Table II.7 Status of Tubewells

Newly installed tubewells	:	14,815
Currently functioning	:	96%
Tubewell with platform	:	42%

With 14,815 tubewells installed during the reporting period the total number of tubewells in the WHDP catchment area totals 94,908. The community is also educated on the installation, maintenance and proper usage of sanitary latrines. The programme staff coordinate continuously with the Department of Public Health Engineering (DPHE) at the thana to ensure supply of slab latrines according to the demand of the community.

The number of slab latrines has increased 8 fold from the baseline number of December 1991. The increase is more for pit than slab latrines. Therefore, motivation and education is being strengthened on the durability and effectiveness of slab latrines, to encourage increased use of these.

Figure II.4



II.A.3.e. Capacity Development:

i. Government:

In an effort to strengthen the capacity of the government personnel, HPP has been involved in capacity development of the Government through various workshops. This has become an effective way of enhancing collaboration and cooperation with the GOB.

As part of this exercise an orientation workshop is organized at periodic intervals at the thana where issues on enhanced collaboration between GOB - BRAC are discussed. Eight Orientation workshops were held with 400 GOB health and family planning staffs (HI, AHI, HA, SI, EFI, FWV, FWA, Sr. FWV) in the reporting period.

ii. Community Cadre:

Adolescent Girls:

The adolescent period of life is a vital stage for both physical and mental development. In Bangladesh where the overall literacy rate of people over 7 years of age is 32% (BBS census 1991), girls are less likely to receive adequate food and education / training than their male siblings.

With a view to increase participation of adolescent girls previously deprived or not having access to education, a total of 1,362 schools were opened for adolescent girls (AGs) in the 10 thanas. These schools, located in each village, consisted of 30 learners each, between the age of 11-16 years. A total of 31,089 adolescent girls were enrolled in this two year non-formal primary education course. These girls have now completed their two years course and graduated out of school. The AG schools in Muktagacha were extended through October 1994, to facilitate the adolescent supplementation activities.

In addition to being trained in functional literacy, numeracy and social studies, they have also received education on health (including reproductive health) and nutrition related issues.

It is expected that in addition to an increase in the literacy rate these girls will continue to function as agents of change providing health and nutrition education to their immediate family and the community after graduation.

These graduated students meet at least once a month through a forum called Kishori Club to read the various books and magazines available there and discuss various health, nutrition and other related issues. The discussion is facilitated jointly by an NFPE teacher and a PO from WHDP.

These girls also assist at the health service delivery centres, (i.e., Satellite Clinics, EPI Outreach and/or Antenatal Care Centres) in weighing the under-2 child and motivating the mothers to complete immunization of their children. Each girl is responsible for two children. They ensure that these children have been completely immunized, have a growth curve with an upward moving trend, and avail appropriate services when sick. It is hoped that this training will also contribute to increasing the age of marriage of the adolescent girls, and delaying their first pregnancy.

Table II.8 Matrimonial Status of Adolescent Girls Within WHDP Catchment Area

	Total AG learners	Married Previous to enrollment to school		Average Age at marriage	Married after the graduation		Age
		#	%		#	%	
Bogra	9,374	247	2.6	15	2,616	28	16
Mymensingh	13,137	106	0.8	15	2,399	18	15
Dinajpur	857,585	99	1.2	13	1,855	22	16
Total	31,089	452	1.5	15	6,870	22	16

Our data shows that, approximately two percent of the girls were married prior to enrollment in schools. Of the remaining only 22% got married after graduating from the schools. The average age of marriage among this later group has increased by a year from those who were married prior to school enrollment (i.e., 15 years). During discussions with some women in the community it was found that those adolescent girls who have graduated from these schools are sought after for marriage by wealthy and educated families.

Of all the married girls, only 1% of the girls enrolled were pregnant before joining the school while 12% became pregnant during schooling. On the basis of their experiences the field staff strongly feel that family life education and training should also be targeted towards the male in the community and those who influence decisions (i.e., mothers-in-law, mothers, grandparents, uncles/aunts). The total community would then be mobilized to bring about a change in the lives of girls and women in the community.

Gram Committee

To develop the community's capacity and ability to identify and solve its own health and nutrition related problems, gram committees (village committees) were formed in each village with nine to eleven women with leadership qualities. These GCs elect a president and a secretary as the office bearers conduct the business and help the committee maintain a strong role in the health activities of the community. They meet monthly and the office bearers with the help of POs ensure that decisions are followed up and reported on during the next meeting.

Shastho Shebika

The shastho shebikas are young to middle aged married women with virtually no formal education. They volunteer to serve as health

cadres for their own village/community. They have received a basic training of three months and refresher every month.

150 households are served by one shastho shebika. Their responsibility is to visit all households once a month, provide health and nutrition education and document the vital events;
(birth, deaths, marriage and migration). They also serve as depot-holders for temporary methods of contraceptives, identify and treat TB and pneumonia patients and refer the women identified as pregnant for antenatal care.

Traditional Birth Attendants:

To ensure safe birth practices, one traditional birth attendant per village has been trained by BRAC. The training is based on the GOB approved curriculum and also includes child nutrition and care, and contraception. The trained TBAs meet quarterly for refresher training, and also to discuss their problems with the trainer and PO.

Social Mobilization:

Social mobilization is recognised as key to the success of all BRAC activities. Although there is no set definition of social mobilization, for convenience it can be defined as "the process of bringing together all feasible and practical intersectoral allies to raise awareness of and demand for a particular development programme; to assist in the delivery of resources and services; and to strengthen community participation for sustainability and self reliance".

Social mobilization starts with awareness creation to expand the body of knowledge within the rural society. In order to achieve this, interpersonal communication, group contact and mass media are used. In addition to this meetings of the community cadres, mosque forums, imam mahfils, village doctors and male seminars are organised and conducted at different educational, religious and other institutions.

There are 13,703 mosques, 809 madrasas, 4,769 primary schools, 879 high schools and 75 colleges in the WHDP working area through which these fora and seminars are organized.

Table II.9 Meetings for Social Mobilization

	No. of meetings held	Average attendance	Expected attendance
GC meeting[9]	29,100	9	11
MS meeting[10]	51,295	19	25
Mosque forum[11]	1,451	41	40
Imam Mahfil[12]	56	22	25
Village doctors[13] meeting	88	15	20

9 To evolve the community's ability to identify and solve its own health and nutrition related problems, these Gram Committees (GC) were formed in each village comprising of women with leadership qualities. The committee meets monthly to discuss and decide on health related issues.

10 To serve as an education forum for topics related to health and nutrition, 20-25 women are grouped into a women's forum (Mohila shova). One woman from each household was selected to form the women's forum in each village. This forum meets quarterly and is used to impart education on topics vital to health and well being of the community.

11 Regular weekly meetings are being held in the mosques in the project area after Friday prayers. This forum ensures that a larger and wider audience listens to discussions on basic health care and immunization.

12 To involve the religious leaders in mobilization, Imams in the project area meet in a forum. Those are held on a regular basis. The Imams help to motivate the villagers avail the basic health services.

13 The village doctors are expected to play a vital role in social mobilization and motivation. Therefore attempts are made to utilize their contacts with the patients, for education of the mothers. The meetings help to reiterate their knowledge.

	No. of meetings held	Average attendance	Expected attendance
Male Seminars[14]	9242	15	20

II.A.3. ACTIVITIES PLANNED FOR THE NEXT YEAR:

Major activities for 1995 are:

- Development of the continuation phase proposal for WHDP (1996-2000)
- Pilot the establishment of static service centres / clinics for provision of basic curative, women's health and clinical contraceptive services.
- Pilot the effectiveness of a community based programme for syndromic diagnosis of STDs/RTIs
- Consolidate the experiences of the operations research projects and document these.
- Conduct a cost effective analysis of the WHDP.
- Oral Therapy Extension Project (OTEP II) to reinforce the knowledge of GOB workers, NGO workers and school teachers and students on ORT.

[14] The male members of the community meet regularly with the programme staff to discuss issues related to health, nutrition and family planning. Through these fora the male members of the community are motivated to help and encourage the female members of their families to avail the health services.

II.B. GENERAL:

II.B.1. MANAGEMENT INFORMATION SYSTEM (MIS)

With the purpose of rapid data collection, analysis and feedback, WHDP has set up its own Management Information System (MIS) from January 1993. A set of MIS modules has been developed for reporting the information and computerization of data. A methodology to consolidate the monthly performance data and convert this into periodical reports has also been developed. Dr. Nirmala Murthy from the Foundation for Research in Health Systems (FRHS), India and her associates have assisted in developing the system. A detailed report on the above was provided in the WHDP Annual Report (July 1992 - June 1993).

a. Change in Reporting Design and Format

To improve the existing reporting system, the reporting design and format was revised according to the need to obtain more accurate information.

i. Annual Reporting Format:

The annual reporting format has been revised to include the basic demographic information and data on water and sanitation, family planning activities, staff and community cadres development. This is updated at the end of each year.

ii. Monthly Performance Report (MPR):

The MPR has been modified to include information on postnatal care, tuberculosis control, and family planning activities.

A monthly feedback format for the field is developed with key process and effectiveness indicators for each component. Every month two reports are produced within fourteen days of receiving the field data. One report compares the performance of each region and thana and the second report shows the status of the programme versus achievements.

b. New Programmes Covered by MIS

i. EPI Facilitation:

Data from the EPI Facilitation programme is also being centrally consolidated and computerized from January 1994. The data is being collected in a newly designed format. The coverage data is going to be validated through a rapid survey using the 30 cluster sampling technique to be done on an annual basis.

ii. Family Planning Facilitation:

The Family Planning Facilitation Programme has been implemented from December 1994 to facilitate the GOB activities. An MIS is to be designed for collection, consolidate and analysis of data from on-going activities. This will also include designing of simple registers for various levels and a monthly performance report format and occasional surveys to get rapid information on specific questions. HPP will use in-house expertise and assistance of external consultants for this assignment.

iii. Supervisory Checklist:

A mechanism to look at the authenticity of the records at the union / area offices is being developed. This will be through the use of the Lot Quality Assurance (LQA) tool to develop a Supervisory Checklist.

c. Quality Assurance Exercise

The Indepth Analysis is one of the important components of the WHDP MIS and is conducted at the beginning of every year to assess of the quality of the activities. The following components of the programme are covered in this process:-

- Ante-natal Care
- Family Planning
- Growth monitoring
- Immunization
- Vitamin A
- Water and Sanitation

The findings of this analysis are detailed in a separate report.

d. Consultancies:

i. Review of MIS

Dr Nirmala Murthy of the Foundation for Research in Health Systems in Ahmedabad, India had assisted to set up the WHDP MIS in 1993. In June 1994, she returned to BRAC to finalize the selection of indicators and outcome measures for all WHDP interventions; streamline the collected data to enable the system to provide feedback for key indicators of WHDP.

II.B.1. MONITORING AND EVALUATION

a. Research and Evaluation Division (RED)

A special cell was established within the Research and Evaluation Division, BRAC for monitoring and evaluating HPP activities. A team of RED researchers has produced several monitoring and evaluation reports. Abstracts of these reports are available in the Annual Report of the Research and Evaluation Division for 1993 and 1994. The reports are listed below:

1. Assessment on the Regularity of Iron-folic Acid Tablet Intake
4. Does Early Enrolment of Pregnant Women with Antenatal Care Centres Increase Their Visits to Different Antenatal Service sources?
3. Monitoring of Birth and Death Recording Activities in Women's Health and development Programme
4. Evaluation of TB Laboratory Operations in Women's Health and development Programme of BRAC
5. Assessment of Community Based TB Control programme
6. Monitoring on Birth and death Updating in Women's Health and Development Programme
7. Women, Workload and Women's Health and development Programme: Are women Overburdened ?
8. Training the Bottom fifty Percent: Is its a Better Approach to Promote Health Service Utilization Among the Poor ?

9. The Impact of Women's Health Development Programme on the Relation among GOB, Community and BRAC.
10. Effect of education on Health Nutrition and Overall development: A Case of BRAC's NFPE in WHDP
11. Mothers' Perceptions about Maternal Health Care and their Utilization of Health Services in WHDP
12. Background Characteristics of Mothers with Stillbirth in Women's Health and Development Programme
13. Vaccination Coverage Survey in WHDP-EPI Facilitation Area
14. An Exploratory Study on Sexually Transmitted Diseases in Two Regions of Bangladesh
15. Health Behaviour of Rural Women: Evidence from WHDP Baseline Survey
16. Fertility and Mortality Situation in Northern Rural Bangladesh
17. An Evaluation of Knowledge and Practices of Trained Traditional Birth Attendants
18. A Review of Operational Strategies in BRAC's EPI Facilitation Programme for Hard to Reach Areas
19. Study on the Causes and Factors Related to Maternal Deaths in WHDP Area of BRAC
20. Hygiene Practices in Three Regions of Women's Health and Development Programme
21. A Comparative Study on Shastho Shebika in Manikganj and other RDP-PHC
22. TB Case Management at Community Level: Situation of the Treatment Completed Patients in Women's Health and Development Programme
23. Women Programme Organizers' problems in BRAC : A Critical Assessment

Thirteen other studies on HPP are currently ongoing:

1. Assessment of Post-training Knowledge and Practice of Shastho Kormis
2. Assessment of Post-training Knowledge and Practice of Shastho Shebikas
3. Role of Gram Committees in Basic Health Care Service Delivery
4. Study on the Status of Ante-natal Care of the Mothers Facing Still Birth Hazards
5. Knowledge, Role and Practice of POs and Other Health Related Cadres in Pregnancy Identification in WHDP
6. Causes of Maternal Mortality and Factors of Maternal Morbidity in WHDP
7. Process Documentation of Different Package Service Delivery in WHDP
8. Cohort Analysis of Growth Monitoring
9. Consequence of Low Birth Weight
10. A follow-up of Community Based TB control programme of BRAC
11. Causes of discontinuation of TB treatment.
12. Comparative study of hygiene behaviour in rural Bangladesh
13. Perception of mothers about ANCC, SC and folfe tablet intake.

II.B.2.b. In House Mechanism

There is an in-house mechanism of monitoring and supervision of the Health and Population Programme activities starting from the area to the level of senior managers at the Head Office.

The overall responsibility of coordinating the management and supervision of the Health and Population Programme lies upon the Director HPP, who is reportable to the Executive Director, BRAC. The Director is assisted by the various managers. Each programme component is coordinated and supervised by an experienced senior staff.

The Regional Managers (RM) stationed at the divisional level are responsible for coordinating the field operation. The work of the RMs are coordinated and assessed by the Programme Manager, while the Area Coordinators coordinate the activities of the thana and report back to the Regional Managers. The Area Managers are in charge of the activities at the area and the team of POs and community cadres like TBAs, Shastho Shebikas and GC members.

II.B.2.c. External Evaluation - WHDP Evaluation

A five-member team evaluated BRAC's Women's Health and Development Programme (WHDP) from January 25 - February 6, 1994. The purpose was to review WHDP's goals and strategies, to determine its achievements and shortcomings, and on the basis of their findings to recommend future actions.

The team was led by Dr. Lincoln Chen, Chairman, Department of Population and International Health, Harvard School of Public Health, Harvard University, The team comprised:

- Dr. Mabelle Arole, a community based public health physician and Advisor for Health and Nutrition, UNICEF Regional Office for South East Asia;
- Dr. Martha Chen, a specialist in gender and development, and Director, Programme on Non-governmental Organizations, Harvard Institute of International Health, USA;
- Prof. Ananda Mohan Das, a biostatistician and Professor, Bangladesh Centre for Medical Education Dhaka, Bangladesh;
- Dr. Shishir Senapati, a public health pediatrician and Head, Monitoring and Research Division Child in Need, India.

Following is a summary of their assessment and recommendations.

Impact- Health impact measured through the health status of the targeted population was considered premature for WHDP, however impressive achievements were noted in service coverage, utilization and social mobilization. WHDP's work in group formation, health promotion, community participation, and facilitation of government services was specially mentioned in this regard. **Future impact assessment through a tightened and streamlined internal monitoring system and an independent survey of health status in 1995-1996 was recommended.**

Management - Management assessment focused on field execution, technical strategies, and organizational health. BRAC's management is exceptional as reflected by field staff with clear roles, basic competencies, high morale, and strong motivation. The WHDP has clearly defined objectives backed by strong supervision, training, and monitoring. Certain strategic technical issues including anemia, risk screening, the training of traditional birth attendants need to be critically reviewed, and potentially newer dimensions such as quality of family planning and community financing should be considered. **Across BRAC's sectoral programmes, horizontal linkages should be strengthened at the village-level, in group formation and field staff deployment. Enhancing coordination between the health and rural development activities at the village, area, and thana levels will be the challenge for WHDP.**

Empowerment - Empowerment of communities and strengthening of government are important objectives of WHDP. This is done by strengthening village cadres and government functionaries by linking them together through community participation and government facilitation. The programme is strong in health education and social mobilization. **More time will be required to move communities from knowledge and awareness, to utilization and demand, and ultimately to empowerment and self-sufficiency. Mechanisms should also be found to retain and sustain the unpaid village health workers through community financing.** The capacity of government has been strengthened through the EPI-F. **As BRAC withdrawal from EPI would likely result in declining government performance, BRAC's efforts should continue. Capacity strengthening of government is also a process that will require time.**

Gender - WHDP fosters gender equity, as women and their children are the primary beneficiaries of the programme's efforts; women are also empowered as agents of social change through group formation, volunteer cadres, and an innovative program of non-formal primary education for adolescent girls (NFPE/AG). **Some gender-linked health problems, such as reproductive tract infection and quality in contraceptive services need to be strengthened. The education of adolescent boys and involvement of men could be included in the programme.**

Research - WHDP undertakes internal MIS and action research, and the Research and Evaluation Division (RED) performs independent monitoring and research. **Research design and data analysis of WHDP's action research projects on ARI, safe motherhood, tuberculosis, community-based nutrition, and low birth weight should be completed. External monitoring by RED should be resumed to ensure reliability and validity of the internal WHDP and MIS. For both WHDP and RED, there should be research projects of higher quality focused more on qualitative aspects of "why" programs are succeeding or failing. WHDP's diverse components should be communicated and disseminated with sharper clarity to a broader community.**

Sustainability - Of the WHDP components, EPI-F providing a single service costs the least, and CHDP providing comprehensive services costs the most. Cost-effectiveness analyses showed wide cost variability between CHDP sites, suggesting possible efficiency gains in some sites. The analysis also documented that the community makes significant contributions through donated labor. **Sustainability will require more time, as it ultimately depends upon strong human, organizational, and financial resources within the community.**

The Recommendations

The team concluded that WHDP overall is an outstanding program making important contributions to women's health and development in Bangladesh. WHDP's has demonstrated success with management, social mobilization, and government facilitation. **Improvements are needed in strategic clarity and coordination between health and rural development work at the village, area, and thana levels.**

For WHDP's next phase, the following tracks are considered most attractive. **The first would be to retain and strengthen a distinctive health programme aimed at national impact targeted at a specific, high priority problem.** Like BRAC's OTEP and EPI-F, family planning or nutrition could be addressed through facilitation of government action, especially in backward regions. **A second track would be to integrate health and rural development through strengthening the health component of BRAC's RDP.** Like credit and enterprise development, health sector work could be strengthened within RDP and eventually made economically sustainable.

In either case, the WHDP should continue to develop a "core package" of women's health and development services in pilot areas. A dynamic, flexible, and technically strong WHDP is considered essential for experimentation, training, and technical support of either track.

II.B.3. PROJECT TIME

II.B.3.a. Extension of Time for the Project

The WHDP's current phase which started in July 1991 was to end on June 1994. However, the project life had to be extended through 31 December 1995. This has been necessary for the following reasons :

- The project start-up activities including site selection, rapport building with local health and family officials and other NGOs, baseline survey, recruitment and training of staff and community based health volunteers, initially scheduled for the first six months of the project period (July-December 1991) were completed by May 1992.
- Field activity implementation started in a concerted manner from June 1992. The initial expiry date of WHDP of June, 1994 would thus only provide two years of activities to achieve the project objectives.
- WHDP will have continue to assess its community based activities and government facilitation programmes to determine which efforts need to be

continued; which can be financially self sustaining and which will require donor support.

The delayed start caused savings of project funds. This has allowed the project to continue activities for approximately one and a half year i.e. through 31 December 1995, giving time to complete the planned activities.

II.B.4. COST EFFECTIVENESS ANALYSIS

WHDP conducted one of the first attempts in Bangladesh to assess the cost effectiveness (CE) of a comprehensive and integrated health service program. In January 1993, Ms. Logan Elaine Brenzel of Johns Hopkins University conducted the CE study in 2 parts :

1. Financial evaluation of the expenditure in terms of expenditure per unit of health outcome.
2. Indepth evaluation of the economic costs and CE of the project's interventions.

The exercise has been conducted only one and half year after the programme was initiated and therefore, is not truly reflective of the total cost situation expected by the end of Phase I.

Cost-effectiveness was calculated by dividing total costs per component by effectiveness measures selected for the study. Most of the CHDP components and pilot projects appear to be cost-effective, although the range of cost-effectiveness results by thana suggest there is room for improvement by either identifying ways to reduce total costs or by increasing the total level of activity per component.

The overhead costs differ among thanas. Therefore, an in-depth evaluation of overhead costs needs to be made by category of cost for each thana at the end of Phase I to get an accurate picture. An indicator i.e., overhead costs per employee may be developed to determine the norm and identify high and low cases against the norm.

It was recommended that WHDP evaluate whether the current approaches for EPI and vitamin A distribution represent the best use of resources. The incremental cost of EPI and water / sanitation components seems greater than the level of incremental benefits to the national programmes. Therefore, efforts should be made to develop indicators of effectiveness for these.

II.B.5. SUSTAINABILITY OF THE PROGRAMME

In view of making the programme financially sustainable as well as to increase the value and demand of the services, WHDP has introduced charges for services provided by the Shastho Shebikas since July 1994.

The schedule for the service charges is given below.

Exhibit B: SERVICE CHARGE SCHEDULE

PROGRAMME	SERVICE CHARGE		SHARE OF SS / TBA	
	TG	NTG	TG	NTG
FAMILY PLANNING				
REGISTRATION	3.00	5.00		
ORAL PILL MAYA OVACON	 2.00 6.00		1.00	
CONDOM RAJA	 0.25		0.05	
INJECTION / DOSE	2.00		2.00	
IUD INSERTION FOLLOW UP	 5.00 2.00	 5.00 2.00	3.00	
MR	150.00		10.00	
STERILIZATION	25.00		TUBECTOMY: 5.00 VASECTOMY: 10.00	
ANTE NATAL CARE				
REGISTRATION	3.00	5.00	2.00	
SERVICE	1.00	3.00	1.00	
DELIVERY AT HOME			5.00 BY MOTHER	
BIRTH KIT	10.00		TBA: 1.00 G.C.: 9.00	

PROGRAMME	SERVICE CHARGE		SHARE OF SS / TBA	
	TG	NTG	TG	NTG
MATERNITY WAITING HOME				
NORMAL DELIVERY THANA UNION	100.00 80.00	200.00 200.00		
ARI CONTROL				
DRUGS (SYP.COTRIMEXAZOLE)	10.00	20.00	5.00	
TB CONTROL				
IDENTIFICATION			25.00	
SECURITY MONEY: INJECTION / FOLLOW UP	200.00		SS: 100 PATIENT: 75	
RELAPSE	60.00		60.00	
DEWORMING				
UNDER 2 YRS OTHERS	2.00 3.00	3.00 4.00	1.00 IN CASE OF HOME ADMINISTRATION	
GROWTH MONITORING				
REGISTRATION CARD	1.00	3.00		

II.B.6. STAFF DEVELOPMENT ACTIVITIES

a. Training and human resource development

To cope with the training needs of HPP a separate group of managers and medical officers experienced in health and population has been created.

This group is responsible for coordinating the training activities of HPP in collaboration with BRAC's Training Division and the government training institutes.

Broad areas of HPP training courses:

Considering the various types of training needs, the following categories of courses have been designed :

A. Managerial Skills
B. Technical Skills
C. Organizing Communities and Capacity Building
D. Orientation Courses

Responsibilities of the training group :

Training expertise have been developed among the group through Training of Trainers (TOT) and Training on Development Communication (TDC).

The responsibilities of the training group include:-

- Training needs assessment
- Development of course outlines
- Selection and development of materials and methods
- Implementation of training courses
- Monitoring and follow up courses
- Collection of feedback on the training courses
- Review and update materials, methods and course outlines

The training in HPP is operationalised at several different levels i.e., TARC or Regional Training Centres and other institutions such as the CDM facilities; field based training at the district, thana or area.

The training activity of WHDP is divided into preparatory and action phases as shown below:

Preparatory Phase		Action Phase		
Step 1	Step 2	Step 3	Step 4	Step 5
Training of Trainer	Course Development Workshop	Training	Course Review	Refreshers

The core trainers of the HPP training group receive the General TOT and the Technical TOT. The general TOT deals with training needs assessment, development of training plan, and course outline, selection of methods and materials, and development of materials where required. This is imparted by the trainers from BRAC's Training Division.

The technical TOT deals with the technical aspects of the programme. This is imparted jointly by the senior technical experts of HPP and Training Division.

HPP also avails training courses from government institutions as well as other non government organizations (i.e., clinical contraceptive service delivery skills), and participates with the government in training activities such as those for TB and Leprosy.

Table II.10 Training for HPP Cadres and staff during July 1993 to December 1994 :

Name of Training	# of Participants
Gram Committee (GC) Training	1,608
Shastho Shebika (SS) Training:	
Basic	1,123
Refresher	15,506
Traditional Birth Attendant (TBA) Training: Refresher	7,305
WHDP In Service Staff Training:	
Area Managers (AMs)	11
Programme Organizers (POs)	111
Medical Officers (MOs)	01
Gender Awareness & Analysis Course for WHDP Staffs:	
Area Managers (AMs)	22
Programme Organizers (POs)	04
Thana Coordinator (TC)	04
Organizational Development Training for WHDP Staff:	
Programme Organizers (POs)	30
Thana Coordinator (TC)	01

Name of Training	# of Participants
Orientation of EPI-F Staff: Programme Organizers (POs)	45
Development Management Course in Public Health (POs) for WHDP Staff: Area Managers (AMs)	04
Pre-Service Training for WHDP Staffs Programme Organizers (POs)	04
Basic Statistics in Health Research Training Area Coordinators (ACs) Medical Officers (MOs) Area Managers (AMs)	 01 02 01
Training Workshop on Operations Research Methodology Medical Officers (MOs) Area Managers (AMs)	 01 01
Management Training Course for Thana level Managers on TB and Leprosy Control (Area Coordinators & Medical Officers)	17
Training on TB and Leprosy for Mid level Supervisors (Area Managers & Programme Organizers)	116
Training on TB and Leprosy for Laboratory Technicians	06

INTERNATIONAL TRAINING COURSES

- **Exposure on Community Based Nutrition Programme implementation. Visit to Tamil Nadu Integrated Nutrition Project, Madras, India by a 6-member team of Managers, Medical Officers and Nutritionists**

Table II.11. International Training Courses :

Sl. No.	Name of the Course	Name of Participant	Period	Venue
01	Programme Management for FP Managers	Mr. Tapan Brahma	May 2-22	AIT, Bangkok, Thailand
02	Primary Health Care Management Advancement Programme (PHC-MAP)	Dr. Younus Ali	July 1-21 1994	AIHD, Mahidol University, Bangkok, Thailand
02	International Course on Food & Nutrition Management	Dr. Zeba Mahmud	Oct.23 to Dec.3	Wageningen, Netherlands
03	Course on Gender and Health - International Perspective	Dr. Malabika Sarker	Oct.3-28	Karolinska, Sweden
04	19th Programme for Development Managers (PDM) Course	Md. Abdus Salam	Nov.7 to Dec.2	AIM, Philippines
05	International Laboratory Training Course on Tuberculosis	Mr. Bivakor Roy	Nov. 6 1994 to Feb. 3 1995	RIT, Tokyo, Japan

Master of Public Health : University of North Carolina At Chapel Hill, USA

Sl. No.	Name of Participants	Designation
01	Mr. Alamgir Hossain Chowdhury	Senior Area Manager
02	Dr. Aslam Zulfiquer Baig	Medical Officer

Ongoing International Training

Sl. No.	Name of Participants/Designation	Course
01	Dr. Ali Mehryar Karim Medical Officer	MS in Epidemiology, Harvard School of Public Health, USA
02	Mr. Taufiqur Rahman Senior Area Manager	Masters in Primary Health Care Management, Mahidol University, Thailand

Table II.12. Participation of HPP Staff in International Seminar/Workshop/Conference/Meeting:

HPP Staff	Name of the Seminar / Workshop / Meeting	Place / Date
Dr. Sadia Afroze Chowdhury	Meeting on Initiative to Address Training and Research Needs in Nutrition - UN Sub-Committee on Nutrition / World Bank	Bellagio, Italy November 1994
	Women's Study Project - Technical Assistance Group Meeting	FHI, Durham, USA November 1994
Mr. Jalaluddin Ahmed and Mr. Akramul Islam	Global Congress on Lung Diseases	Minz, Germany June 1994

Table II.13 Paper Presentation by HPP Staff in National / International Seminars / Workshops:

Speaker	Title of the Seminar/Workshop	Title of the Paper	Venue / Date
Dr. Ziya Uddin	Meeting of Non-Government Organization on Acute Respiratory Infection and Diarrhoeal Diseases	Community Based ARI Control Programme, BRAC	WHO, Dhaka May 1994
Dr. Sadia Afroze Chowdhury	First Canadian Conference on International Health	Meeting the Challenges to Equity-Centered Health and Development: The BRAC Experience	Ottawa, Canada November 1994
	ICPD Outcome and Reproductive Health Care	Reproductive Health Care in BRAC	Harvard School of Public Health, USA November 1994
Mr. Jalaluddin Ahmed and Dr. Ziya Uddin	National Conference on Safe Motherhood	Strategies for social mobilization for promotion of safe motherhood - BRAC's Approach	Hotel Purbani, December 1994

Part III :

Pilot

Projects

III.A MATERNAL MORTALITY REDUCTION PILOT PROJECT:

A pilot intervention to reduce maternal mortality has been implemented in two sadar thanas of Dinajpur and Bogra, covering a population of approximately 0.34 million.

The goal of the project is to reduce maternal mortality and morbidity through :

- Early identification of pregnant women;
- Provision of antenatal care services and referral for high risk pregnancies;
- Use of trained TBAs/dais for safe deliveries;
- Promoting post-natal and new born care practices.

1. OPERATIONAL STRATEGIES:

In the villages pregnant women identified by TBAs, SSs and GC members are registered by the POs and given monthly antenatal services at Antenatal Care Centre (ANCC) and Satellite Clinic (SC). Through this check-up high risk pregnancies are also screened.

The women identified as having high risk pregnancies remain under close observation of the POs and the TBAs. The MOs visit the high risk cases as a priority and also visit the ANCC/SC for supervision. Special emphasis is given to women with expected date delivery (EDD) in the current month. They are also motivated to go to the Maternity Waiting Home (MWH) a maximum of three days prior to their EDD. Women identified as having normal pregnancies are encouraged to utilise the services of trained TBAs, or midwives for home based deliveries.

The Maternity Waiting Home, conceived as a midway health facility, was set up to facilitate referral for high risk pregnancies. This facility is expected to increase availability and accessibility of maternal care in the two thanas through facilitation of the tertiary health system. Consisting of four beds and the facilities for basic emergency obstetric care (EOC) these are situated about 5 km away from the Sadar / District Hospital. The BRAC MO and a trained TBA is available 24 hours to look after the admitted cases. When the MO is away on a field visit a trained paramedic is available.

The MWH was established to internalize within the community, the practice of institution based delivery and referral to secondary and tertiary service facilities.

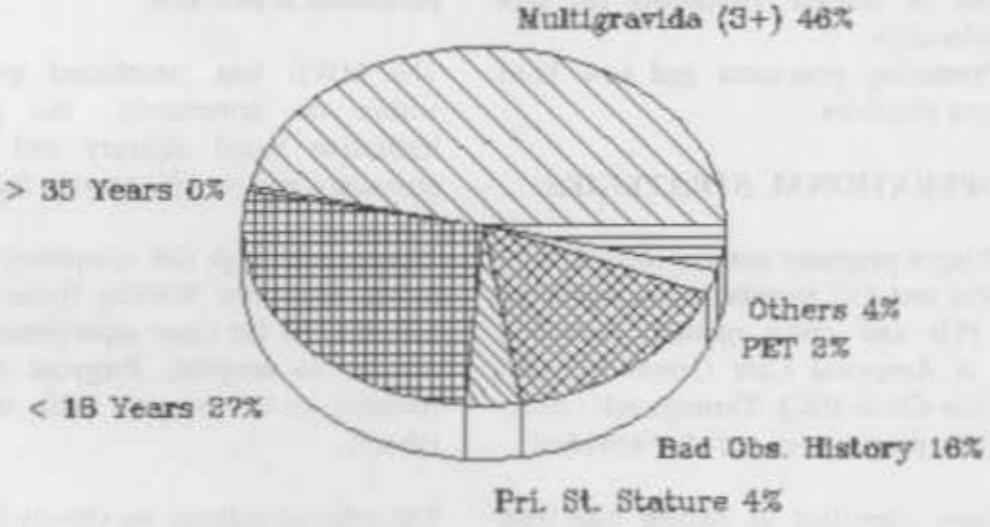
Women with high risk symptoms are referred to the Maternity Waiting Home two weeks before EDD for close supervision and timely transfer to hospital. Pregnant mothers are referred to the hospital with the onset of labour.

The referred patients are closely followedup. Post natal follow up through 42 days post partum is also being provided regularly by trained TBAs and POs. This is supervised by the Medical Officers, Area Managers, as well as by the MO (MCH & FP) from the Thana Health Complex.

During the July 1993 - December 1994 period a total of 13,940 pregnant women were identified, among whom 47% were screened as high risk. Multigravida (3+pregnancies) [46%] and women <18 years age [27%] comprised the major portion of the high risks.

Figure III.1.

IDENTIFIED HIGH RISK MOTHER BY CRITERIA
JULY 1993 – DECEMBER 1994



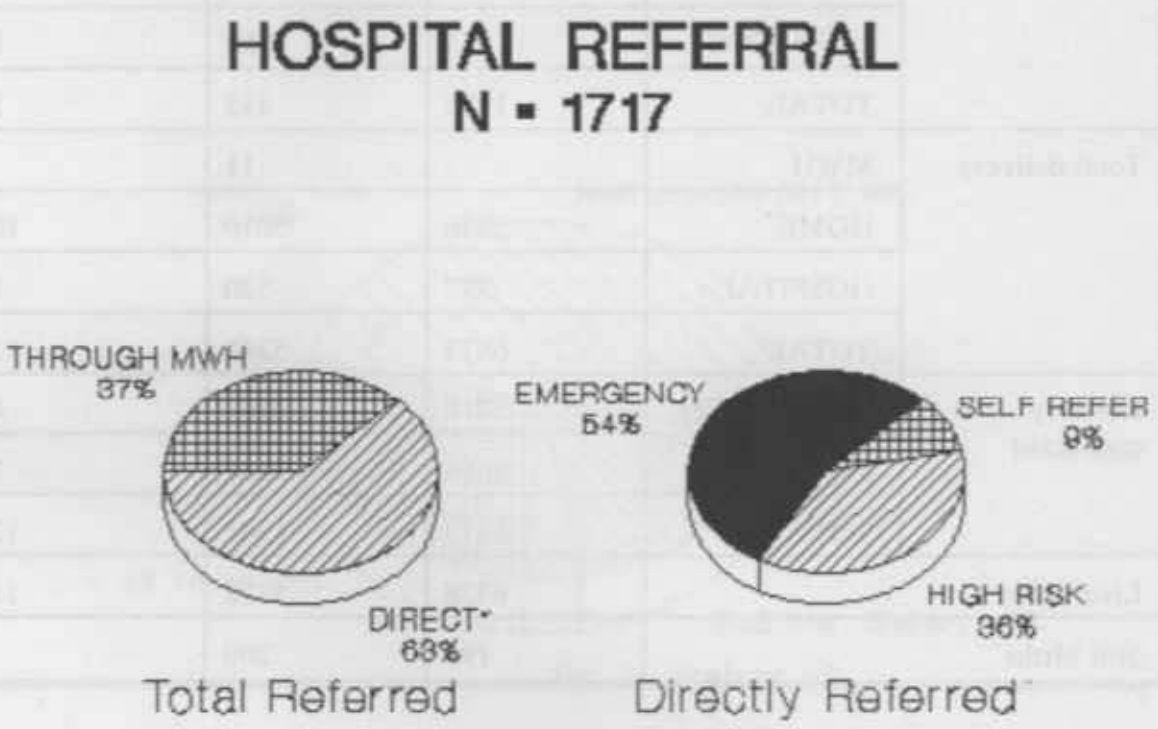
DINAJPUR AND BOGRA SADAR

Table III.1 MMR Pilot Project Report

INFORMATION		DINAJPUR	BOGRA	TOTAL
Pregnant mother identified		7999	5941	13940
High risk identified		3845	2673	6518
Hospital refer	EMERGENCY	410	174	584
	HIGH RISK	775	259	1034
	TOTAL	1185	433	1618
Total delivery	MWH	-	11	11
	HOME	5876	5010	10886
	HOSPITAL	997	320	1317
	TOTAL	6873	5341	12214
Delivery conducted	UNTRAINED	2219	2283	4502
	TRAINED	4654	3058	7712
	TOTAL	6873	5341	12214
Live births		6728	5172	11900
Still births		199	208	407

In the MMR project special emphasis is given on three aspects namely referral, institutional delivery and safe delivery in case of home deliveries. A total of 1,618 pregnant women were referred by WHDP to the district hospital, while 99 went there as self-referrals with antenatal, natal and postnatal complications. Of the cases referred by WHDP, 584 (36%) women were emergencies while 1034 (64%) had been previously identified as high risk cases.

Figure III.2.



* BRAC AND SELF (N=1074)

1,717 pregnant women were admitted in the Sadar hospitals of Dinajpur and Bogra. Among them 1,316 delivered in the hospital during the reporting period. 851 (65%) were normal deliveries while 465 (35%) required life saving interventions, i.e., 147 through caesarean sections, 15 by forceps, 4 needed destructive operations, while 299 required medical interventions like ARM or Syntocinon drip.

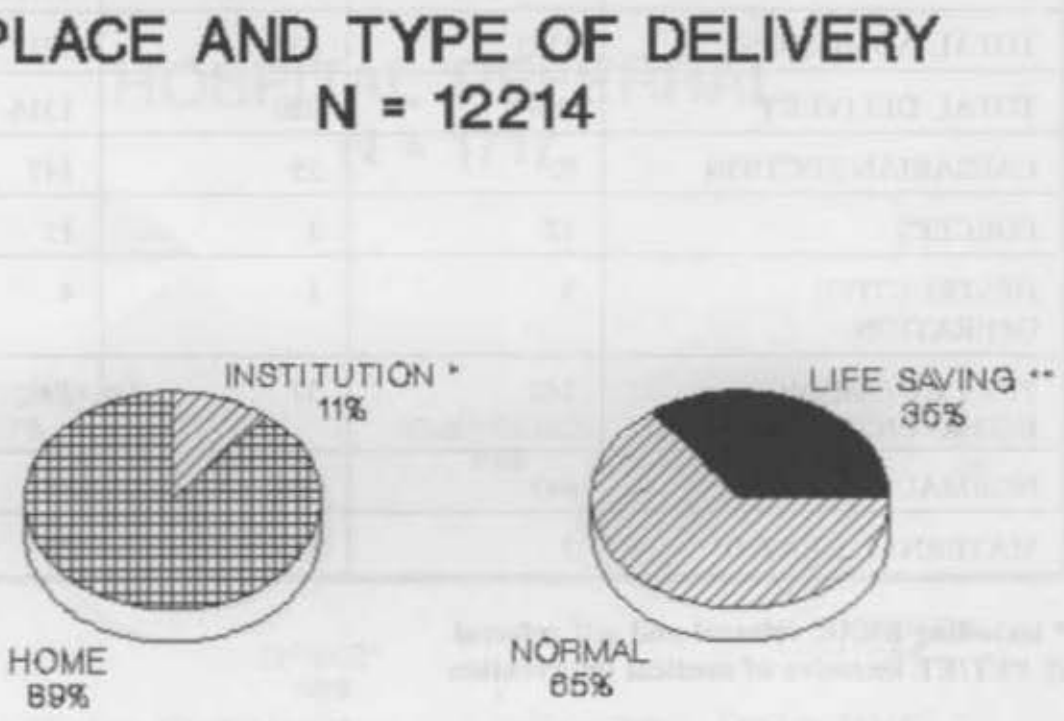
Table III.2 Out Come From Hospital Referral

INFORMATION	DINAJPUR	BOGRA	TOTAL
TOTAL ADMISSION	1185	532*	1717*
TOTAL DELIVERY	996	320	1316
CAESARIAN SECTION	92	55	147
FORCEPS	12	3	15
DESTRUCTIVE OPERATION	3	1	4
PET / ET / MEDICAL INTERVENTION	242	57	299
NORMAL DELIVERY	647	204	851
MATERNAL DEATH	7	15	22

*** including BRAC referral and self referral**
@ PET/ET inclusive of medical intervention

During the same period 12,214 deliveries occurred within the project area, of this 11% were institutional deliveries. This is higher than the national average of institutional deliveries i.e. 1.9%. Among the total deliveries 63% were delivered by trained personnel such as doctors, nurse, FWV and trained TBA, which is again higher than the national average of 8% (Progotir Pathey, 1993).

Figure III.3.

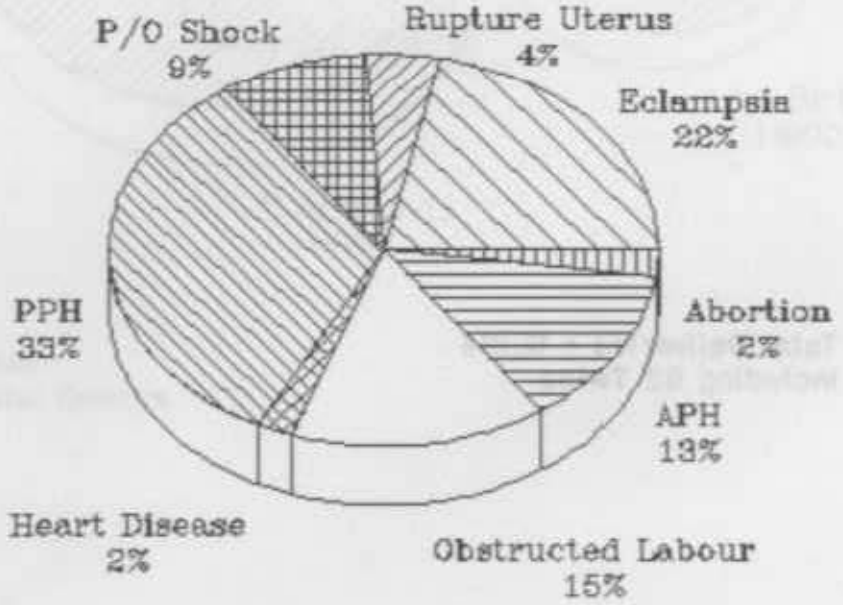


* HOSPITAL & MWH
** CS, FORCEP, CRANIOTOMY, ARM, PET/ET

In the project areas, i.e., Bogra and Dinajpur Sadar Thanas, there were 11,900 live births (including 93 twins) and 407 still births from July 1993 to December 1994. These births took place out of the 12,214 deliveries. At the same time 33 mothers died (22 in hospitals and 11 at home) during these deliveries and 987 infants including 644 neonates died out the same number of deliveries. The maternal deaths were mostly conditions which could be prevented. This again strengthens the conviction that without adequate and accessible emergency obstetric care, maternal mortality can not be substantially reduced.

Figure III.4.

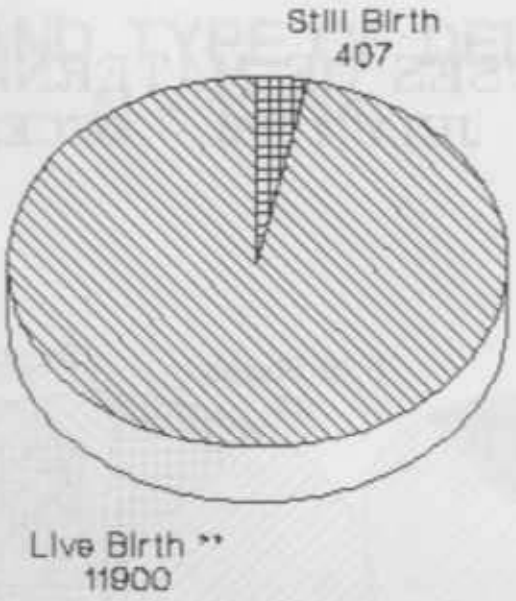
CAUSES OF MATERNAL MORTALITY
JULY 1993 – DECEMBER 1994



DINAJPUR AND BOGRA SADAR

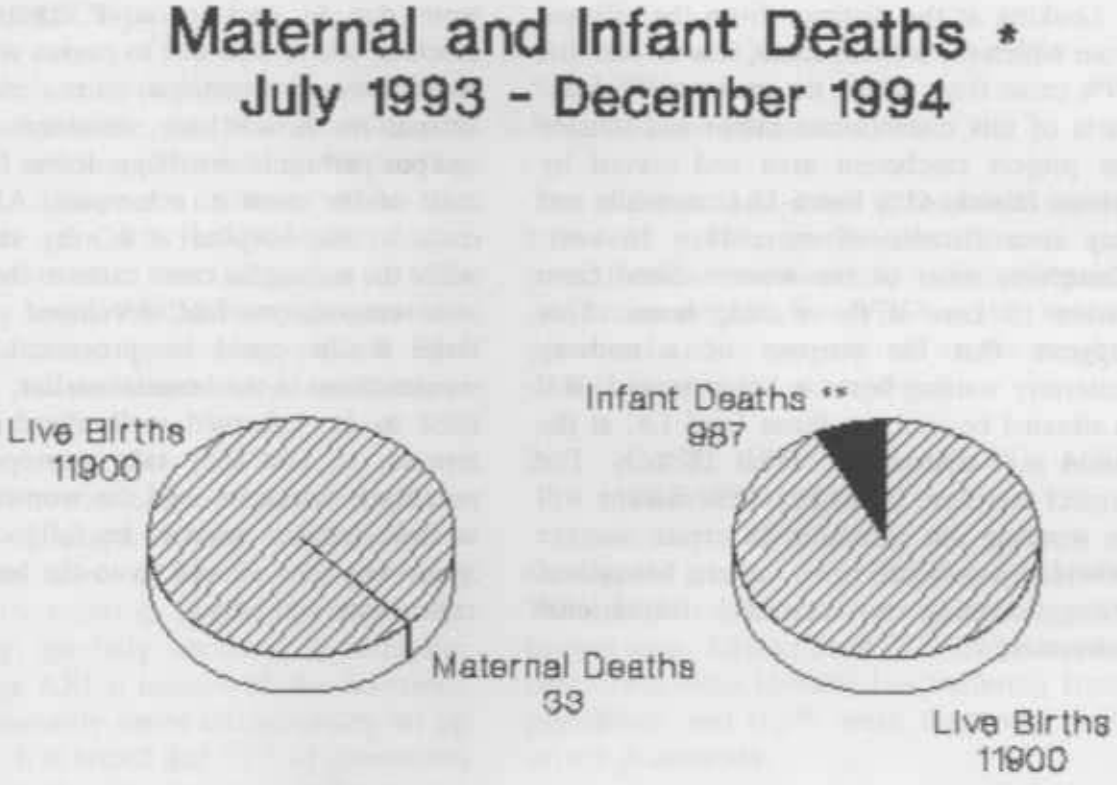
Figure III.5.

Maternal Mortality Reduction Project
July 1993 - December 1994 *



* Total Deliveries - 12,214
** Including 93 Twins

Figure III.6.



* **MMR Pilot Project**
** **Including Neonatal Deaths**

LESSONS LEARNT:

i. Looking at the distance from the villages from which the women came, it was seen that 19% came from within the range of 0-5 kms. Parts of this distance are urban and outside the project catchment area and served by private clinics. 61% live 6-16 kms, while rest stay at a distance of more than 16 kms. Therefore, most of the women came from within 10 kms of the waiting home. This suggests that the purpose of a midway maternity waiting home is better served, if it is situated beyond the thana level i.e. at the union at a distance of about 10 kms. The project therefore in the next few months will be working out strategies to create another MWH if possible to bring about a behavioral change leading to increased institutional deliveries.

ii. Among the maternal deaths, it was found that 22 mothers died in the hospitals. Three were due to post-operative complications, nineteen others died due to causes which may have been preventable, i.e., eclampsia, antepartum hemorrhage, retained placenta, and postpartum hemorrhage. It was found that most of the cases of eclampsia, APH, PPH came to the hospital at a very late stage, while the eclampsia cases came to the hospital after convulsions had developed. Most of these deaths could be prevented if these women came to the hospital earlier, i.e., they need to be informed well ahead on these aspects, so that they take appropriate and necessary measures, and the women as well as their families need to be fully convinced about why they should go to the hospital for expert care and why.

III.B COMMUNITY BASED PNEUMONIA CONTROL PILOT PROJECT

In Bangladesh acute respiratory tract infection (ARI) is responsible for 18% of all deaths among the children. This is now the leading cause of death of children since the introduction of ORT for diarrhoea. In an attempt to tackle this affliction at the community level, WHDP has implemented a community based pneumonia control Pilot Project in the two sadar thanas of Dinajpur and Bogra.

The goal is to control pneumonia through the reduction of deaths among children under three years affected by it. This is being achieved by creating awareness among the community, specially mothers, to recognize and manage ARI at home with the assistance of the community-based infrastructure set up by BRAC. It is hoped that 75% of pneumonia cases within the community will be treated through this intervention.

1. OPERATIONAL STRATEGY:

Shastho Shebikas (Community Health Functionaries) have been trained to identify and treat pneumonia cases using the WHO case management protocol. Along with this, education is also being imparted to Gram Committee (GC) members, adolescent girls (AGs) and the mothers, to identify signs and symptoms of ARI cases.

In adherence with the WHO guidelines the pneumonia cases are classified as:

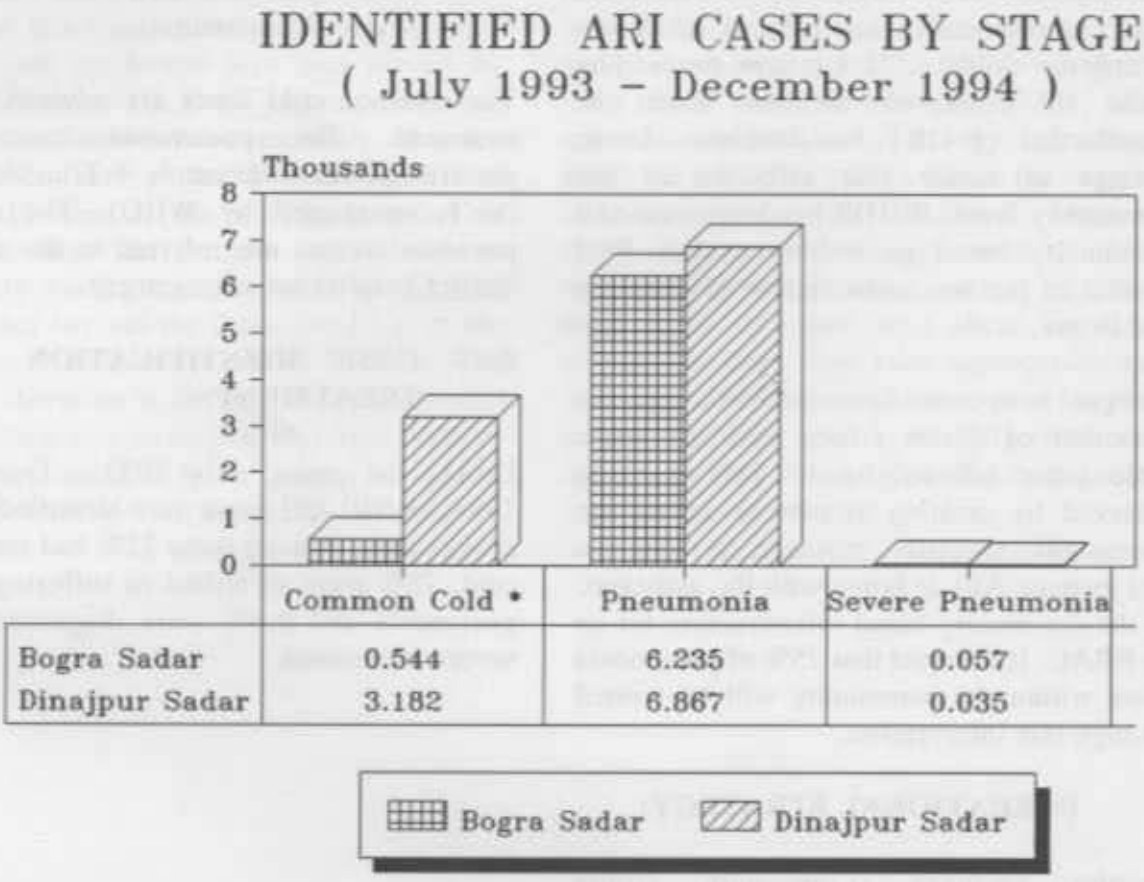
- Common Cold or No Pneumonia
- Pneumonia
- Severe Pneumonia

The common cold cases are advised home treatment. The pneumonia cases are prescribed Sulfamethaxazole + Trimethoprim (as recommended by WHO). The severe pneumonia cases are referred to the nearby district hospital for management.

2. CASE IDENTIFICATION AND TREATMENT:

During the period July 1993 - December 1994, 16,910 ARI cases were identified in the project area. Among them 22% had common cold, 78% were identified as suffering from pneumonia and 0.5% were diagnosed with severe pneumonia.

Figure III.7.

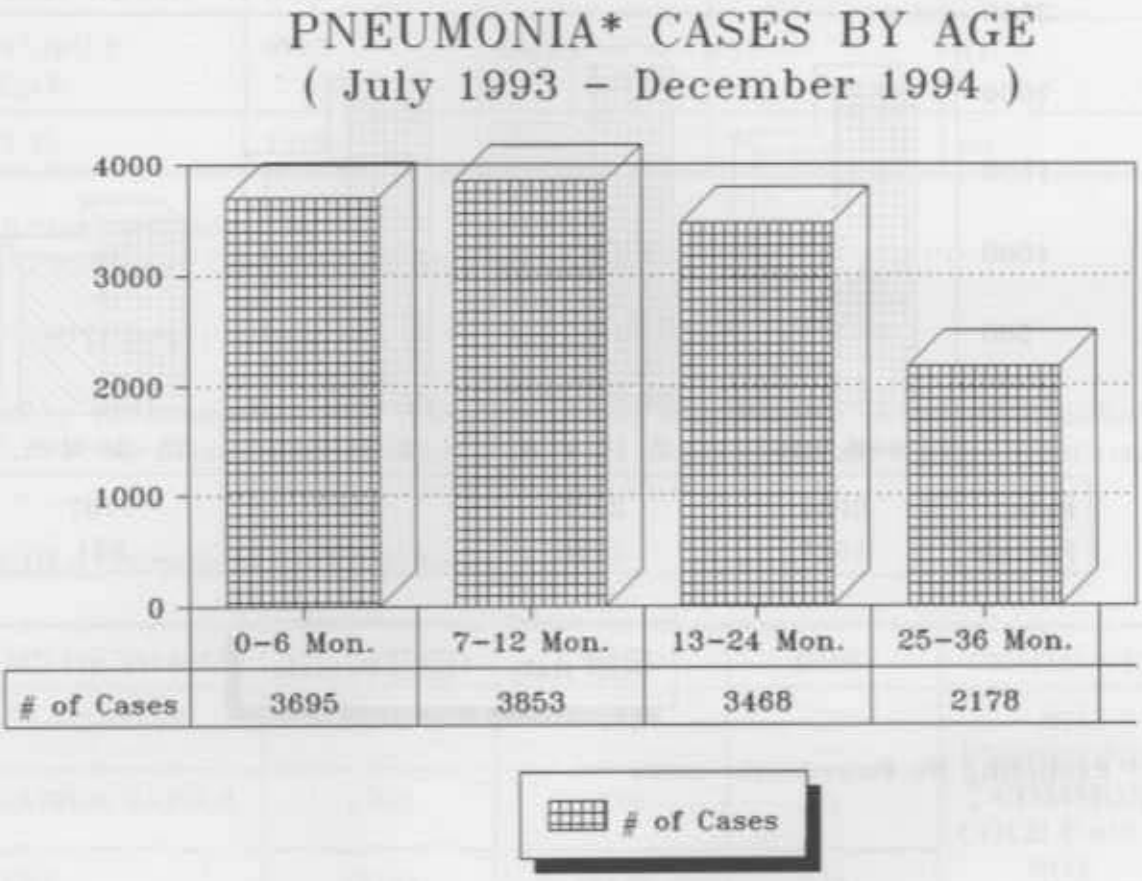


	Common Cold *	Pneumonia	Severe Pneumonia
Bogra Sadar	0.544	6.235	0.057
Dinajpur Sadar	3.182	6.867	0.035

* No Pneumonia

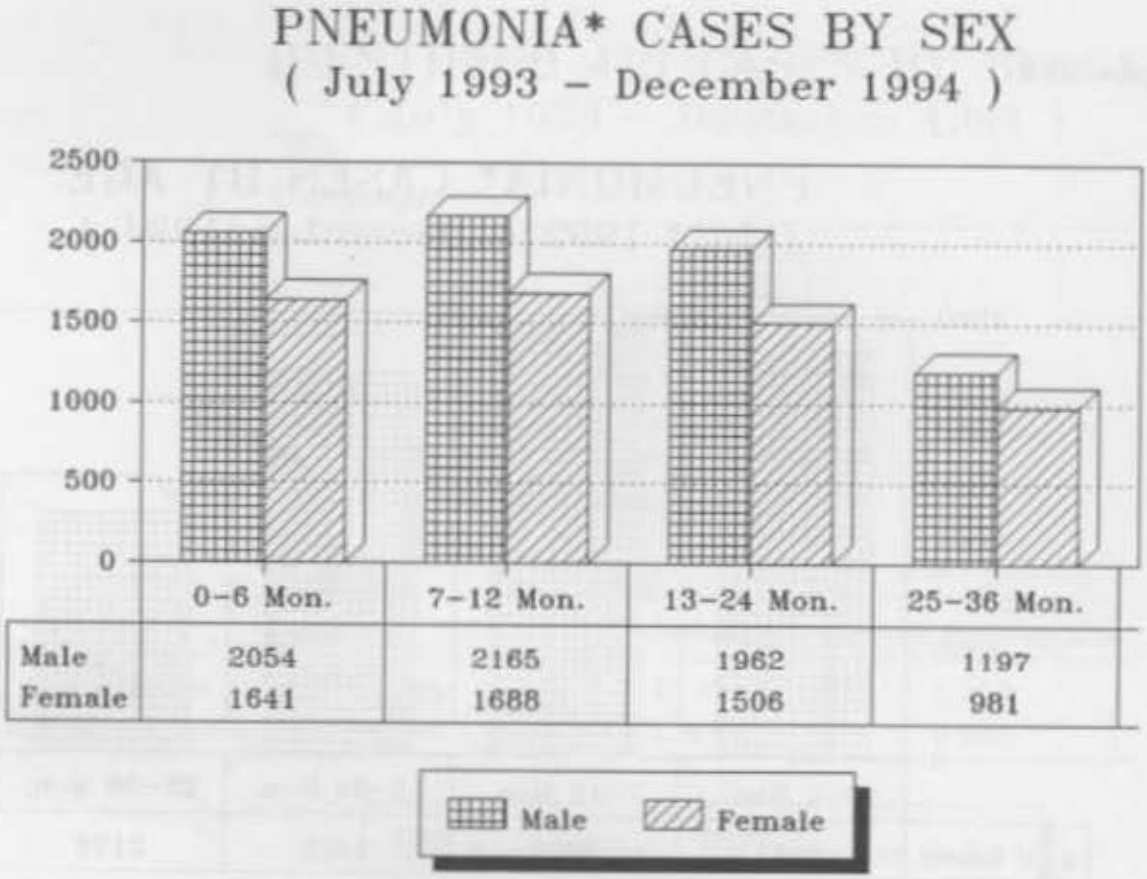
Stratification of ARI cases by age showed that 27% were in the 0-6 months age group, 28% in 7-12 month, 27% in 13-24 month and 18% in the 25-36 month age group. The most vulnerable age group apparently is the 0 - 12 month age group.

Figure III.8.



* Excluding No Pneumonia cases

Figure III.9.



* Excluding No Pnuemonia cases

Among the 13,194 identified pneumonia and severe pneumonia cases, 13,004 (99%) were treated by the Shastho Shebika with antibiotics at home and 140 cases required hospital admission.

Among these 74 cases were referred immediately by SSs on identification, while 66 cases were referred during treatment.
It may be mentioned here that 116 cases were treated by POs.

Table III.3 MANAGEMENT OF ARI CASES BY SHASTHO SHEBIKA (SS)

NAME OF THANA	IDENTIFIED	TREATED BY SS	REFERRED BY SS	
			Before Rx	During Rx
BOGRA SADAR	6292 *	6137	39	55
DINAJPUR SADAR	6902	6867	35	11
TOTAL	13194 **	13004	74	66

* 116 cases were treated by POs
** No Pneumonia / Common Cold cases not included.

3. OUTCOME:

Regarding the outcome of cases: 13,170 of the 13,194 cases were cured while 24 children died.

The case fatality among those identified by the SS and mother and reported as such stands at 0.2%.

Table III.4 Outcome of Identified Cases

NAME OF THANA	IDENTIFIED	CURED	DIED	COMMENTS
BOGRA SADAR	6292	6271	21	**NO PNEUMONIA / COMMON COLD CASES NOT INCLUDED**
DINAJPUR SADAR	6902	6899	3	
TOTAL	13194	13170	24	

The seasonal variation of ARI cases for the last two consecutive periods of twelve months confirm that the peak time of ARI attack is from October to February. Therefore education regarding ARI needs to be further strengthened through all educational forums used by WHDP, during this season, to ensure adequate identification, treatment and referral.

Figure III.10.

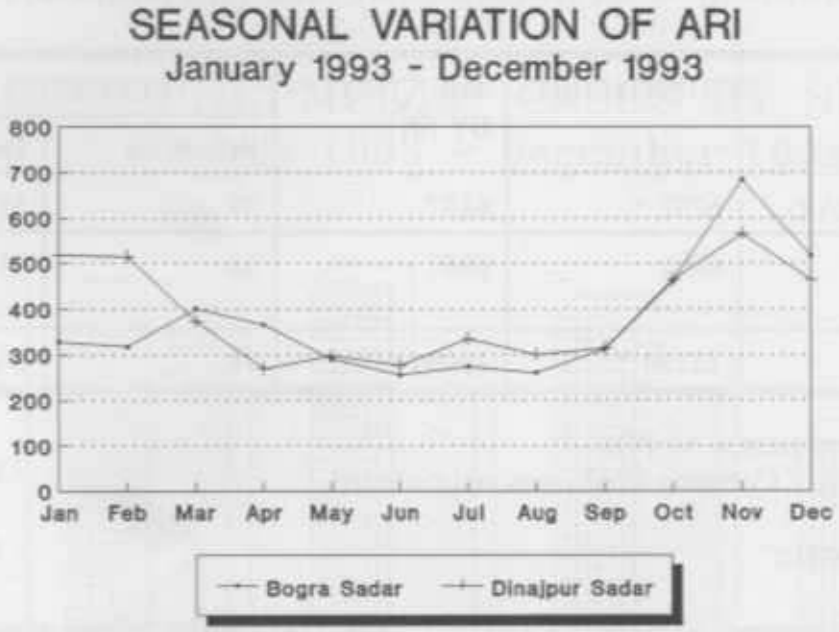
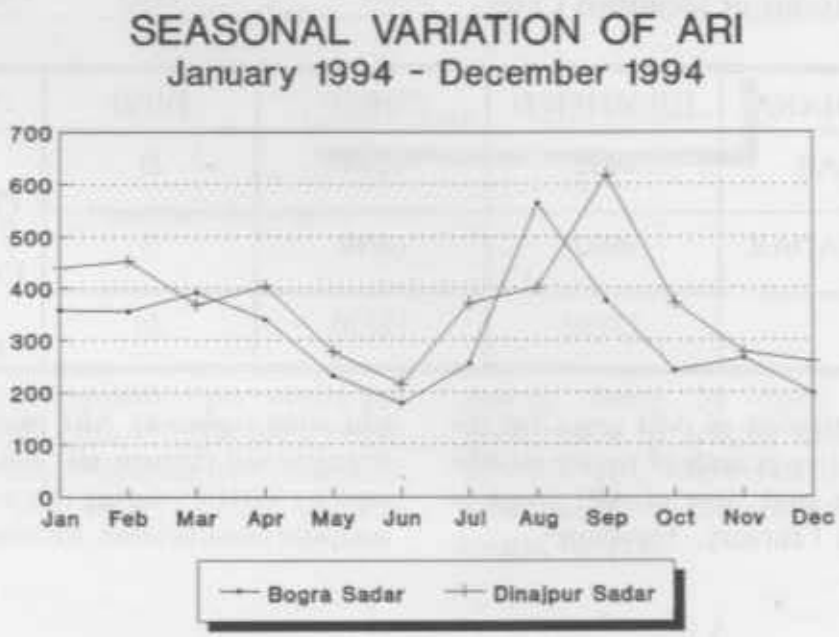


Figure III.11.



It may be noted here that among the cases 59% were from the TG and 41% were from the NTG. The proportion of cases from the NTG was less due to the fact that Shastho Shebikas are less acceptable as health care providers to the higher income group.

4. SUPPORT FROM GOVERNMENT OF BANGLADESH:

Good coordination has been established between the National ARI Control Project officials and WHDP through formal and informal contacts. The National ARI Project has provided the following support to the WHDP project:

- One month's training on ARI to two Medical Officers from WHDP at the Dhaka Shishu Hospital.
- Training five Medical Officers from WHDP on supervisory skills for ARI control programmes.
- 650 Respiration counting timers for the shebikas working in the ARI control project.
- Posters, flip charts and training modules for field based communication and training.

5. LESSONS LEARNT :

During the course of implementing this project, and specially during the reporting period, there have been several leanings, which we would like to discuss:

Table III.5 Death of ARI Cases by Age and Area

NAME OF THANA	0-6 MONTH	7-12 MONTH	13-24 MONTH	25-36 MONTH	TOTAL
BOGRA SADAR	17	2	-	-	19
DINAJPUR SADAR	2	-	1	-	3
TOTAL	19	2	1	-	22

i. 22 deaths from the 13,194 pneumonia and severe pneumonia cases identified were reported from the ARI project. However, through the reporting of vital events 78 deaths were reported from the two thanas. This means that in spite of the visits made to the homes by the Shastho Shebikas and the POs they tend to miss some of the deaths from ARI. Therefore, stronger emphasis is being given on death reporting during the refresher training of Shastho Shebikas and POs, and verbal autopsy of pneumonia cases has been initiated in the field, involving the SS.

ii. Case identification and treatment by the SS is crucial in a community based approach. However, there is a tendency among the Shebikas to over or under prescribe. Therefore, strict supervision needs to be ensured to guard against irrational use of drugs in this project. Specific guidelines for this are expected to be put into place soon in collaboration with the National ARI Programme.

iii. Operationalisation of this intervention has not been difficult and support from the government health infrastructure is possible with extensive input from BRAC. We hope to document this aspect of the programme soon.

vi. Identification of cases in the 0 -6 months group needs to be strengthened as cases in this age group are lower than expected. This is also receiving strong emphasis during the training.

III.C BIRTH WEIGHT RECORDING PROJECT

Birth weight is the single most important determinant of the survival, subsequent growth and development of a child. It is strongly conditioned to the intrauterine environment and thereby reflects the maternal nutrition and health status. For this reason distribution of birth weight in general, and the frequency of LOW BIRTH WEIGHT (LBW) in particular, is receiving increasing importance as a general indicator of the health status of population groups.

Due to the multiplicity of causes, there is no universal solution to LBW. However, cause specific interventions like prenatal care, nutrition supplementation, health education on the needs of the pregnant mother, family planning and measures aimed at improving the health and nutrition of the young have a role to play.

Aiming to gather precise information on trends in birth weight, and effects of the programme interventions on it, WHDP undertook to record the weight of the new born. Analysis of the collected data is expected to provide useful information on trends, variations, and geographical distribution of birth weight. The knowledge will also be used to facilitate programme effectiveness on the basis of any modification relative to affecting birth weight.

1. POPULATION AND GEOGRAPHICAL AREA:

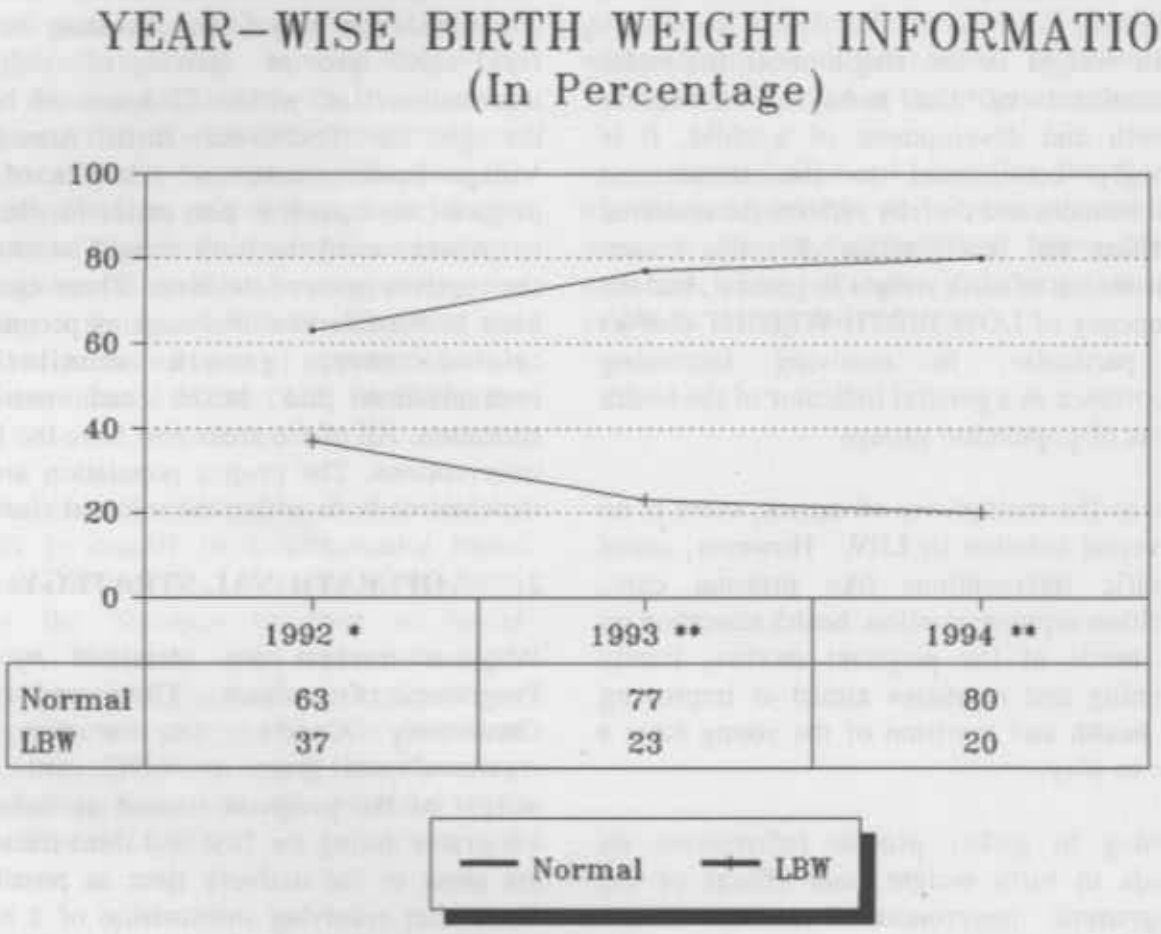
One village/cluster comprising of 2000 population was selected from each of the 30 areas. The selected village is at an accessible distance from the area office making communication easier, and assisting in the rapid and prompt arrival of delivery information (i.e. within 72 hours of birth) through the Traditional Birth Attendant/ Village health worker or relatives of the pregnant women. It is also easier for the PO to go and record the birth weight as soon as she receives news of the birth. These clusters have health interventions such as pregnancy related care, growth monitoring, immunization and health and nutrition education. All of the areas also have the RDP interventions. The project population are all the children born within the selected clusters.

2. OPERATIONAL STRATEGY:

Pregnant mothers are identified by the Programme Organizers, TBAs and other Community Cadres. The women are registered and given an ANC card. The weight of the pregnant women is noted in kilograms during the first and third trimester (as close to the delivery time as possible). Soon after receiving information of a birth, the PO measures the birth weight ensuring that this is done within 72 hours.

For each pregnancy the outcome and all birth weight related information is collected. If a pregnant woman delivers out side the CHDP working area or a mother refuses to allow her child to be weighed, the forms are filled up only with the available information.

Figure III.12.



	1992 *	1993 **	1994 **
Normal	63	77	80
LBW	37	23	20

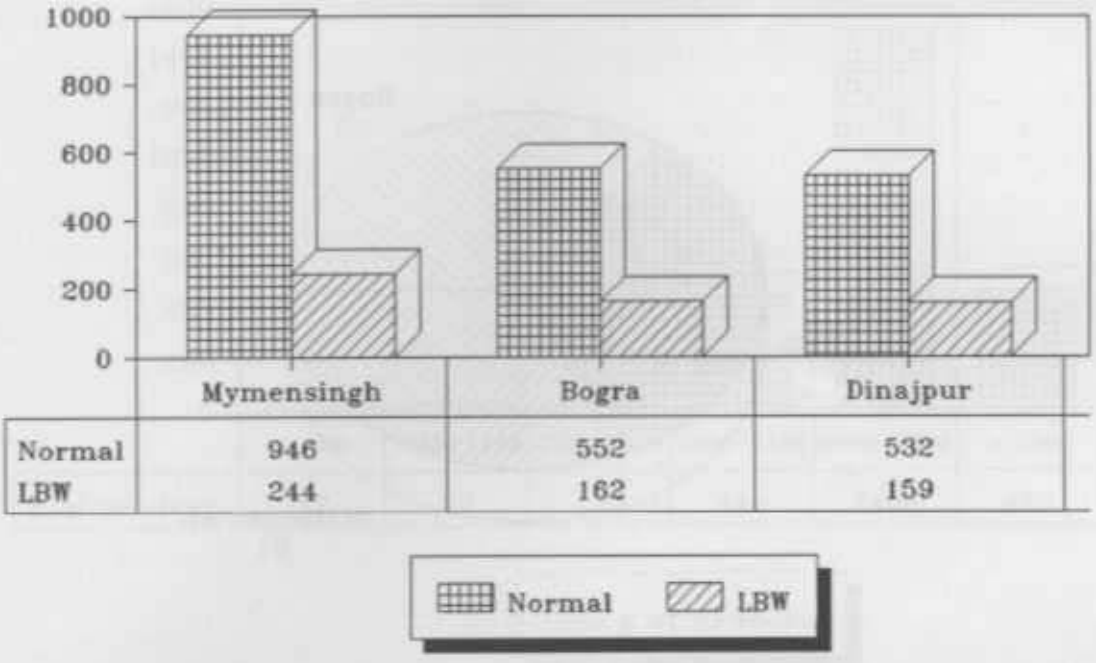
* (Nov.'91-Dec.'92) ** (Jan-Dec)

3. CURRENT BIRTH WEIGHT INFORMATION

On a year wise distribution of births and birth weights recorded, it is seen that number of weights taken has increased over time. A review of the weights recorded shows that, weight below 2.5 kg. is gradually decreasing. However, it should also be borne in mind that the interventions of WHDP, RDP and NFPE could be having a combined effect on birth weight.

Figure III.13.

REGION–WISE BIRTH WEIGHT RECORD
(JANUARY 1993 – DECEMBER 1994)*



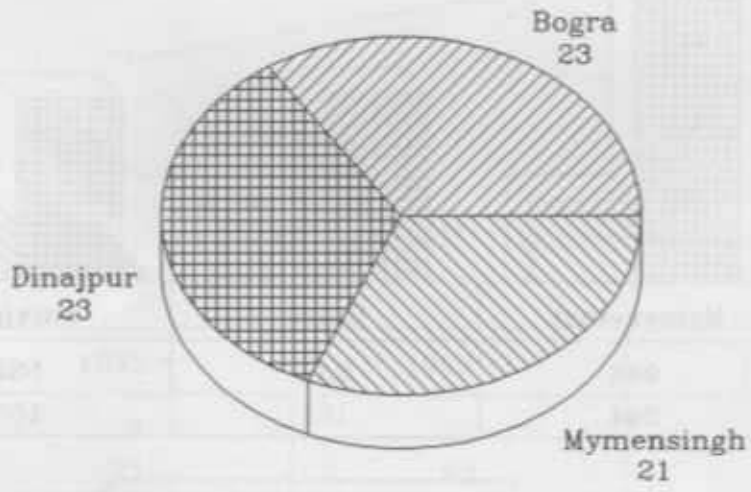
	Mymensingh	Bogra	Dinajpur
Normal	946	552	532
LBW	244	162	159

* 2,595 birth weights were recorded out of 3,273 births

A review of all births recorded in these 30 pilot areas during the period shows that weight of 79% of the 3,273 births were recorded, 22% of this was below 2.5 kg. (2500 gms.). 21% of the babies in Mymensingh, 23% in Dinajpur and 23% in Bogra had low birth weight.

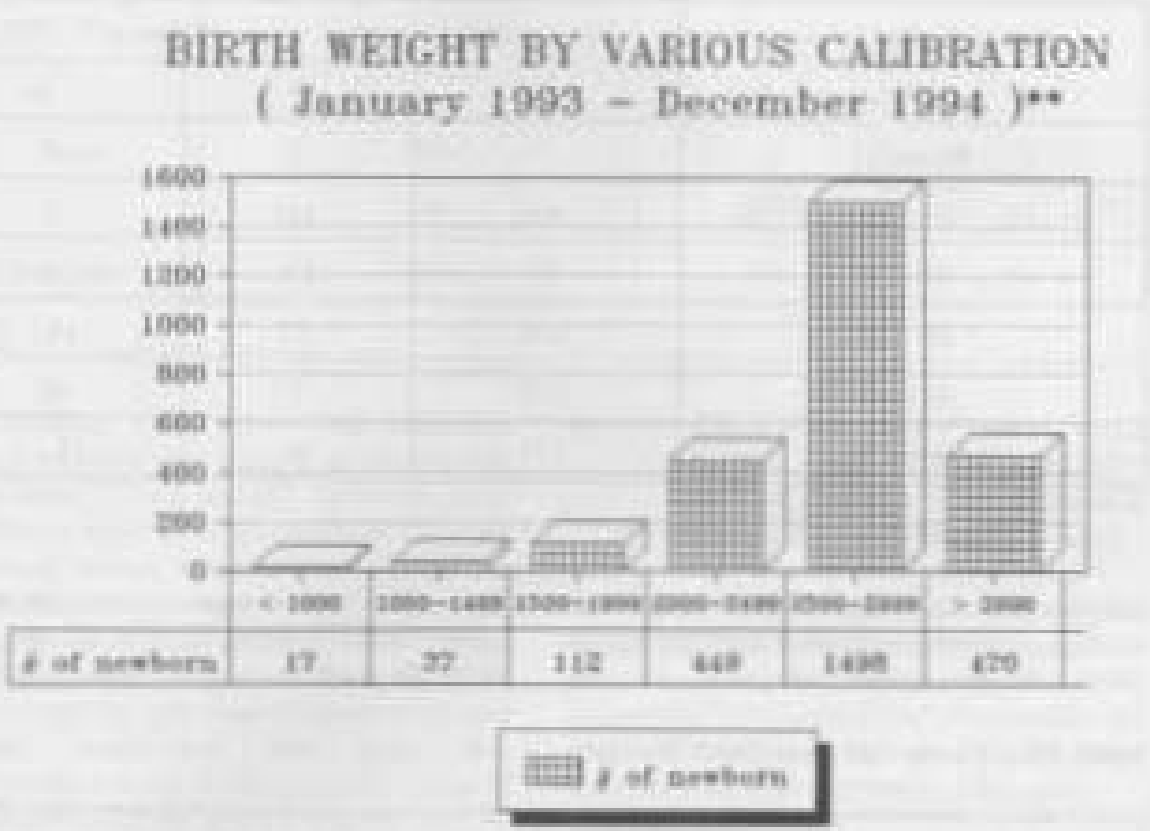
Figure III.14.

REGION-WISE LOW BIRTH WEIGHT RECORD (JANUARY 1993 - DECEMBER 1994)*



* In Percentage

Figure III.15.



* In Grams
** Data of 12 subjects missing

On further analysis of the weight, it can be seen that majority of the weights were between 2000 - 3400 gms., with the highest proportion (i.e., 58%) being in the range of 2500 - 2999 gms.

On the assumption that the children who recorded a birth weight above 2.5 kg have a better chance of physical and mental development, we can expect that 24% of the children have been born with a disadvantage.

Table III.6 Low Birth Weight by Age of Mother

Age of mother in years	Total births	LBW	
		#	%
Below 15	7	3	43
15 - 19	426	131	31
20 - 24	494	170	25
25 - 29	498	95	19
30 - 35	285	28	10
Above 35	113	26	23

* Data of 19 subjects missing

Mothers in the age range of 19 and below had the highest number of low birth weight babies (74%). As the mother's age increases the percentage of low birth weight infants decreases rising again in the age group above 35 years.

Table III.7 Parity and Low Birth Weight

Parity	Total births	LBW	
		No.	%
1st	608	210	35
2nd - 3rd	1073	233	22
Above 3rd	898	172	19

* Data of 16 subjects missing

In terms of parity the primi para registered the highest percentage of low birth weights. This could be related to the inexperience of the primigravidas and their families regarding the need of pregnancy related care and nutrition.

Table III.8 Low Birth Weight by Ante Natal Care Service

ANC Visits	Total births	LBW	
		#	%
None	250	71	28
1 - 3	809	237	29
More than 3	1524	307	20

* Data of 16 subjects missing

The analysis also shows that increased number antenatal care visits is associated with an increase in birth weight. However, what needs to be assessed is the quality of the visits in terms of service, education on nutrition and health and time provided.

Low birth weight is highest (77%) among the families owning less than 50 decimal of land thereby reinforcing the issue that improvement of the socio economic status is also essential for the overall improvement of the health status of the group.

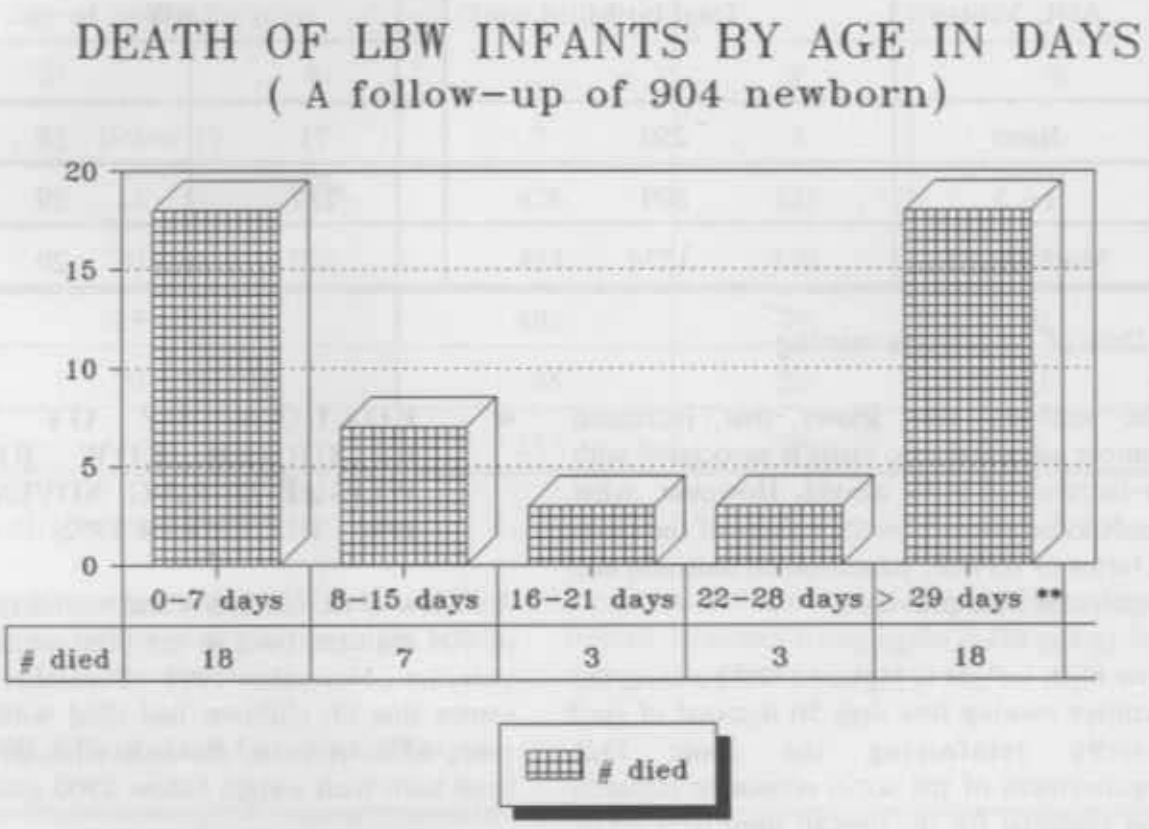
4. FOLLOW UP OF THE RECORDED LOW BIRTH WEIGHT DURING NOVEMBER 1991 - DECEMBER 1992

A review of the morbidity and mortality status of 904 children born in the pilot areas for a year, i.e., November 1991 - December 1992, shows that 86 children had died within the year. 65% of these children who died had been born with weight below 2500 gms.

Table III.9 Mortality Record According to Birth Weight

Birth Weight	Frequency	Percent
Above 2.5 kg	27	35%
2.5 kg and below	51	65%

Figure III.16.



* Births during Nov.'91 – Dec.'92
** >29 days = above 29 days upto 1 yr.

A look at the mortality data shows that approximately 50% of the deaths among the low birth weight neonates occur within a fortnight of birth. 83% of the deaths were from the target group families. Records show that higher number deaths were of male children.

* 8 (eight) deaths were excluded as they were twins

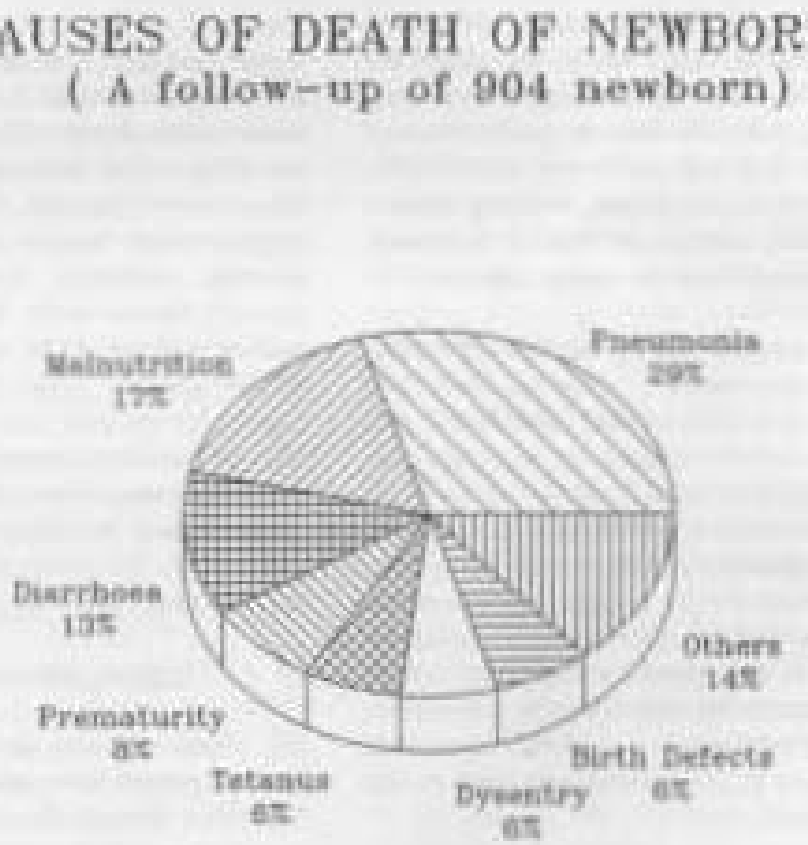
Table III.10 Death by Target Group

Group	No.	%
Target	65	83
Non Target	13	17

Table III.11 Death by Sex of Child

Sex	No.	%
Male	47	60
Female	31	40

Figure III.17.



* Births during Nov.'91 - Dec.'92

The highest number of deaths in this group were due to pneumonia followed by malnutrition and diarrhoea, a pattern which is familiar throughout the country.

III.D COMMUNITY BASED PILOT NUTRITION INITIATIVE

1. BACKGROUND

About half the people in Bangladesh are born with birth weight below 2.5 kg., the cut off point for low birth weight (UNICEF 1994). Though the battle for survival is fought hardest in the first six months of life, the hazardous voyage extends to about 24 months as 28% children under two years of age are wasted. This battle for survival is prolonged if the child is female and can survive beyond the critical first six months of its life. The price paid for the inadequate weaning foods is the small body size, an indicator of permanent harm, inflicted in the period of rapid growth.

Added to this, the girl is married off before her menarche and is bearing her first child while she is a child herself. Inadequate pre-pregnancy weight caused by undernourishment during childhood, low dietary intake of the mother, coupled with continued hard work during pregnancy results in the birth of a child with low weight for age, one who starts life with a distinct disadvantage. Maternal malnutrition also plays an important role in maternal morbidity and mortality. Therefore absence of appropriate knowledge, inaccurate practices and attitudes along with poverty lead to malnutrition.

With the overall goal to reduce the level of endemic malnutrition and consequent high morbidity and mortality in mothers and children, and improve the health and nutritional status of adolescent girls, the Community Based Pilot Nutrition Initiative was operationalized in 1993 in Muktagacha thana of Mymensingh district, covering a population of 168,000.

2. OPERATIONAL STRATEGY

The health and development activities in this pilot thana are similar to that of the other WHDP areas and has been described in the earlier sections.

The only difference is the use of food supplementation as a communication strategy, and the presence of a full time community based health worker (Shasthe Kormi/SK) for the village. Ten SKs are supervised by one Programme Organizer. The health workers register vital events, provide health and nutrition education, motivation, follow up through regular home visits. The rest of the staffing pattern is the same as that of other WHDP thanas.

The population covered by this pilot are children under two, adolescent girls, and pregnant and lactating women. The control population for this pilot is situated in Mymensingh sadar.

i. Children under two

All children born within the programme catchment area have their weight taken within 72 hours after birth, and then once every month at the growth monitoring centres through their 24th month of age.

The weight of the children are recorded in the growth cards and the significance of the growth curve is explained to the mother. Education on health and nutrition issues are given to the mothers by the Shasthe Kormis at

the centres as well as during the house hold visits. NFPE/AG school graduate assist in motivation and mobilization of the mothers, and assist at the centres.

Children under 12 months not showing a gain of 500 gms between three successive weighing, and those 12-24 months not showing a gain of 300 gms between four successive weighing, are recorded as having faltering growth. These children are then enrolled into the nutrition supplementation/ education programme. The supplementation is done in space provided by the community. Mothers feed their children the pre-packaged food supplied by BRAC. GC members are responsible for preparing and distributing the food.

The children remain in the supplementation programme for 90 days. This period is extended by 30 days for children who fail to attain the required weight. The children graduating out of the supplementation are kept under close surveillance.

ii. Adolescent Girls:

In addition to their curriculum in health and nutrition, the adolescent girls at the NFPE schools were given health cards where they recorded their age, height, weight, MUAC, menarche, menstruation, anaemia, and other illnesses with treatment. This was done monthly under the guidance of the NFPE teachers. The students received a daily midday snack during their school hours under supervision of the SK and the NFPE teachers. Special nutrition education was also provided to them. This is now continued through the Kishori Clubs.

iii. Pregnant / Lactating Women:

Pregnant women are identified and registered by the third month of pregnancy. During the provision of antenatal care the women having a BMI(body mass index) less than 18.5, are screened out and enrolled in the supplementation programme. The programme strategy focusses on primiparas in two areas, while all pregnant women are targeted in the remaining area. The Shastho Kormi distributes the supplementary food package prepared by Gram Committee members, through daily household visits. Nutrition education is also given during the visits. The woman remains in the programme upto six months of her post natal period and education on nutrition needs during lactation, breast feeding and appropriate weaning food and practices continues.

3. OUTCOMES

Of the total 16161 children under two, 13650 or 84% were weighed and their mothers were given nutrition education sessions. 75% of these children were found to be gaining weight. The remaining 3411 children whose growth were faltering were enrolled into the nutritional supplementation programme for practical education of their mothers.

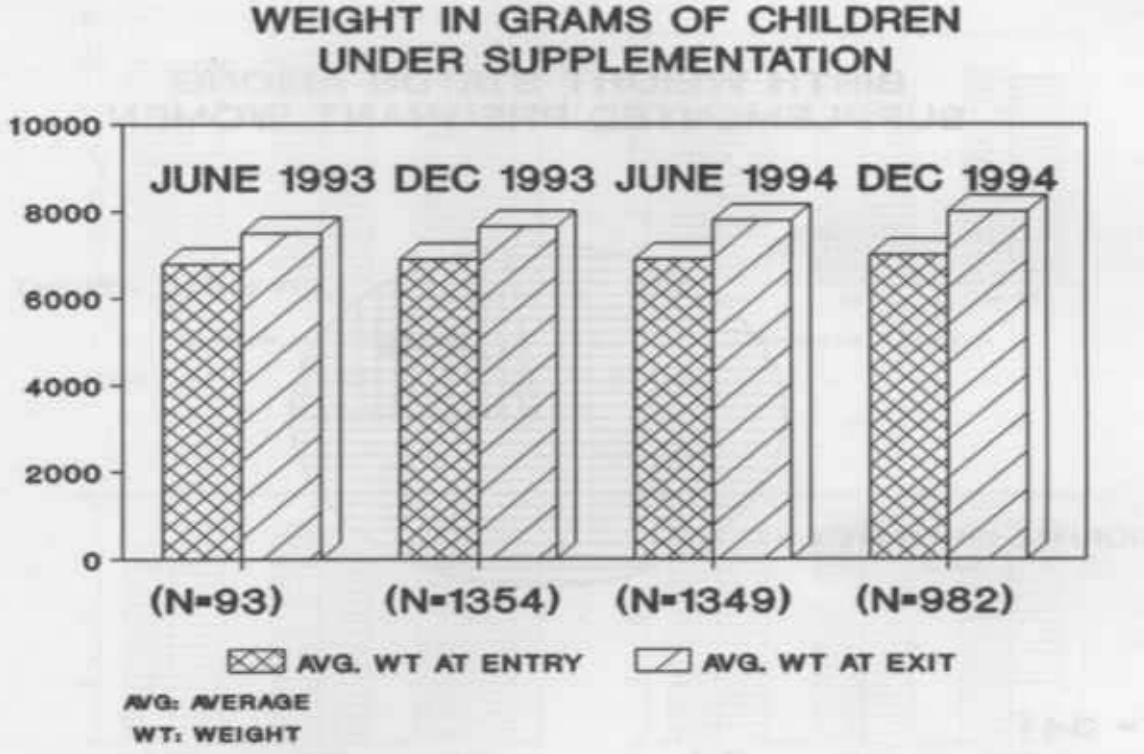
A review of the average weight of the children at entry and exit from supplementation (for those who graduated from the supplementation in June 1993, December 1993, June 1994 and December 1994), shows that the average weight gain of the cohort was 11- 15% of their starting weight.

Table III.12 Growth of Under Two Children

CHILDREN UNDER TWO YEARS			
PERIOD	TARGET	MONITORED	FALTERING
JULY - DECEMBER 1993	5258	4417 84%	1193 27%
JANUARY - JUNE 1994	5460	4641 85%	929 20%
JULY - DECEMBER 1994	5443	4592 84%	1289 28%

Among a total of 5654 pregnant women who availed antenatal care during the reported period, 1306 (23%) who had BMI less than 18.5 were enrolled into the supplementation programme. 443 of the women under supplementation delivered through December 1994 and the birth weight of 341 infants were recorded. 78 of the infants had birth weight below 2.5 kg. The field data indicates that women with higher initial BMI, seems to be having babies with higher birth weights.

Figure III.18.



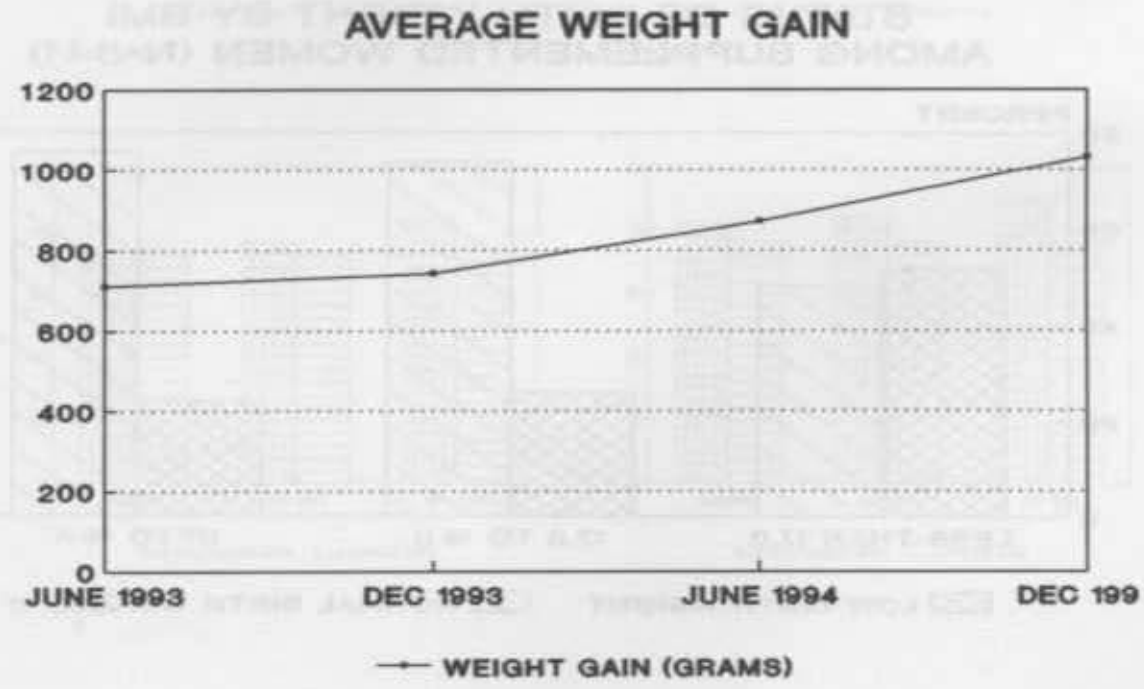


Figure III.19.

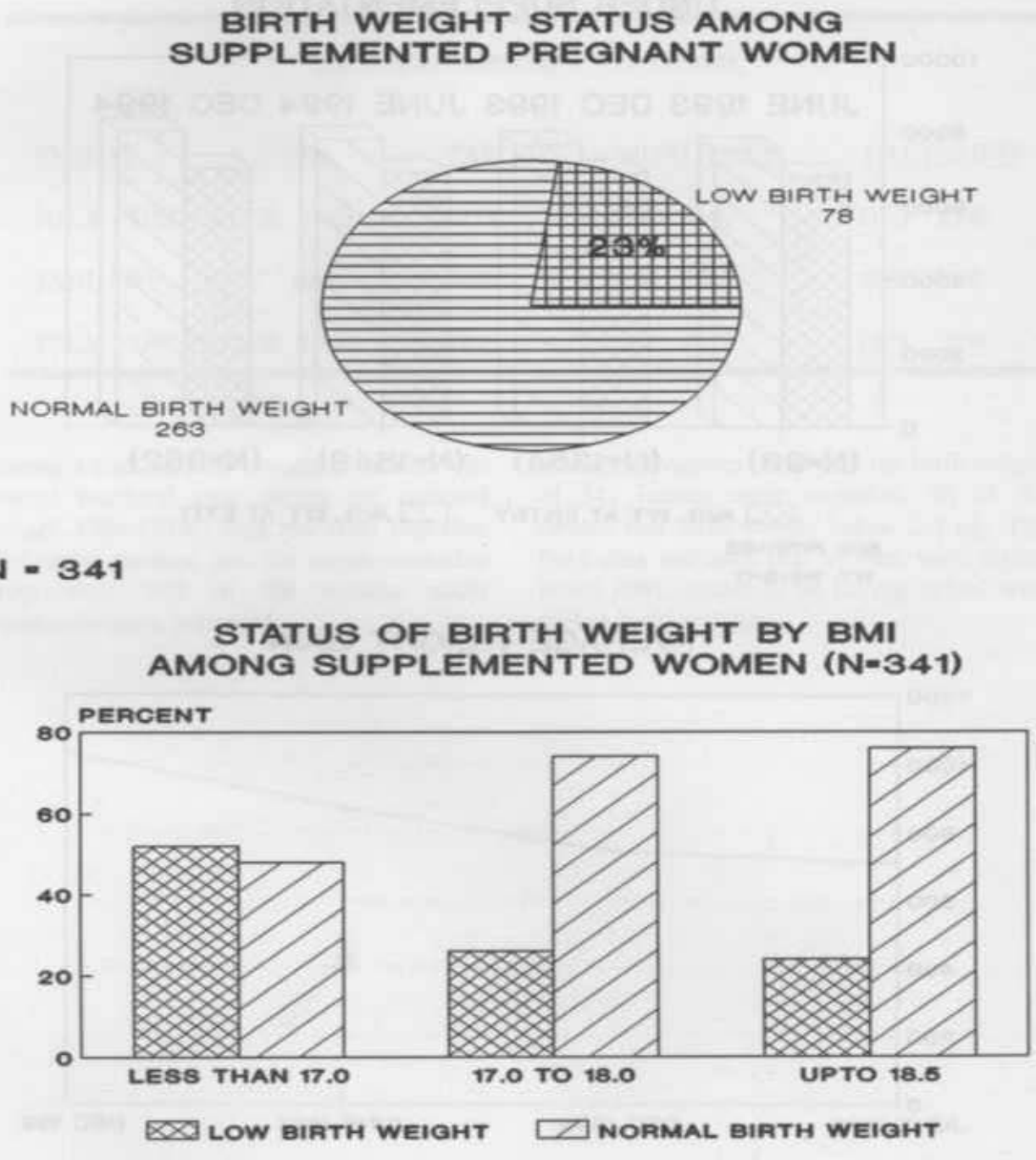
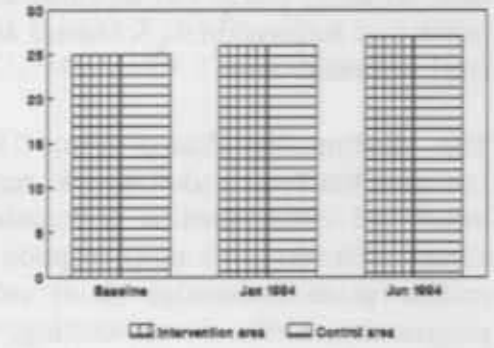
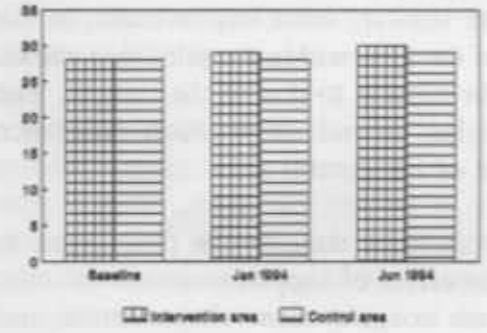


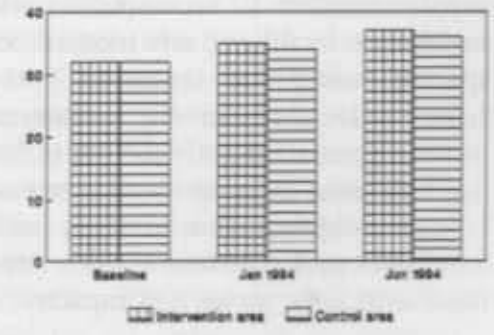
Figure III.20. Weight Status of Adolescent Girls by Age



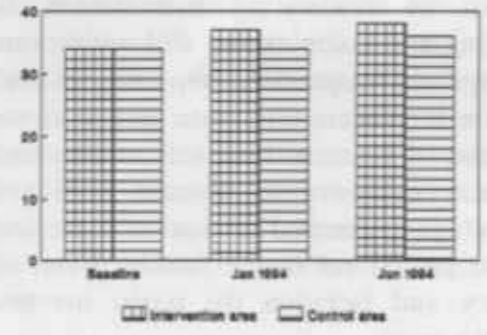
11 YEARS



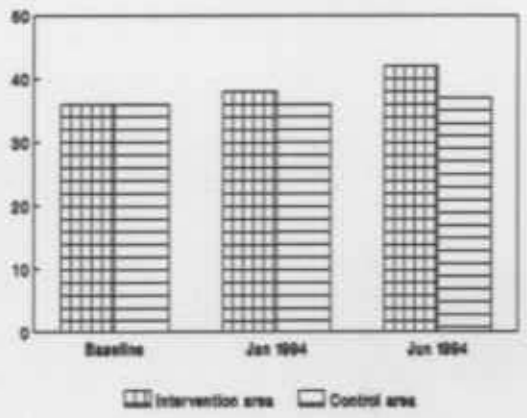
12 YEARS



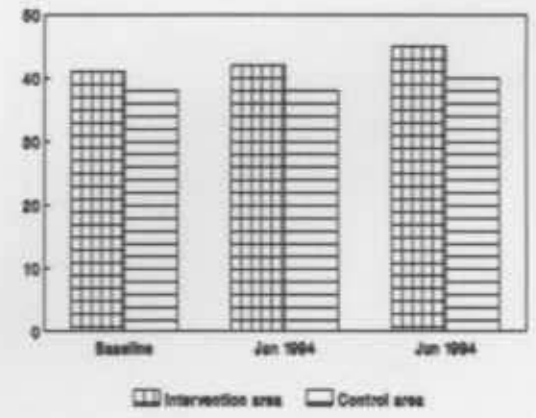
13 YEARS



14 YEARS



15 YEARS



16 YEARS

Even though the baseline weight of the adolescent girls in the intervention and control area were similar, some improvement in the weight of the girls within the pilot area can be noticed in relation to that of the control. The girls heights do not show much difference from that of the control area.

What needs to be done by the programme is to look at effect of supplementation on other issues such as age at menarche, anaemia, and morbidity for a realistic assessment of the impact of supplementation.

The goal of eradicating malnutrition is challenging and complex but still within our reach. Age old malpractice, superstitions and taboos are a constant hindrance and more so in the case of women. Low self esteem and confidence conditions the woman from her childhood not to demand any sort of care, and to be the last to eat in the family. Even in pregnancy and lactation the terms for her remain the same.

Enhanced nutrition knowledge alone cannot make a change unless accompanied with other health care interventions, economic and social empowerment.

The Community Based Pilot Nutrition Initiative has been undertaken to ensure that infant and child nutrition is focussed upon almost from the time of conception and the mother gains knowledge about subsequent pregnancies, births, breast feeding, weaning and appropriate child rearing practices. Since this project is part of the integrated health programme, nutrition education with food supplementation is accompanied with other health care facilities (safe motherhood , birth spacing, water and sanitation) as well as female education, credit, employment and income generation activities. It is hoped that this will assist to bring about better nourished female children, who in turn, will be the forbearers of a generation much improved in their nutritional status and capacity.

III.E PROJECT ON COST-EFFECTIVENESS OF VARIOUS CHEMOTHERAPEUTIC REGIMENS IN TB CONTROL

A pilot TB project in Phulpur thana of Mymensingh District was designed to evaluate the cost effectiveness of three alternative treatment schedules: the 12-month standard course, the 8-month, and, 6-month short course of treatment.

In the four areas of Phulpur thana the three schedules of treatment are followed in the following manner: Balia and Tarakanda areas with 115,144 populations has the standard 12-month course (described in Part II.A.3.b.i. under the routine TB Control activities); Phulpur Sadar with 53,476 population has the 8-month course consisting of isoniazid, rifampicin and pyrazinamide in daily dosages and streptomycin on alternate days for the first two months, followed by thiacetazone and isoniazid for the remaining six months; and, finally Kashigonj with 61,024 population implements the 6-month course, consisting of isoniazid, rifampicin, pyrazinamide daily , and streptomycin on alternate days for the first two months, followed by isoniazid and rifampicin daily for four months.

An initial analysis of the data shows that the cost per case cured is Tk. 8,050 in the 12 month regimen, Tk. 10,359 in 8 months regimen 10,396 in 6 month regimen. These results have suggested that in the short-course chemotherapy of 6 months the cost of drugs is approximately 25% of total cost. While in the 12 month therapy, though the drugs are much less expensive, higher number of drop-outs, higher reporting of side effects, lost time from work, lower efficacy and higher mortality rates are reported. The 8 months therapy having lower drug costs than the 6 months therapy, less opportunity costs, less side effects, more efficacy and less mortality than the standard 12 months regimen, is believed to be most cost-effective regimen of therapy.

Table III.13 Estimated cost and treatment outcome in different treatment schedule

	12 months regimen	8 months regimen	6 ;months regimen	Remarks
A. Cost per patient cured	Tk.8,050	Tk.10,359	Tk.10,396	Financial and opportunity cost have been analysed in December 1993 for the period of July 92-June 93
B. 1. Cure rate in specific treatment schedule	109 (71%)	54 (86%)	62 (82%)	Patients were enrolled in treatment during April 92 - June 93
B. 2. Fatality rate during treatment	29 (19%)	6 (10%)	2 (3%)	
B. 3. Dropped out from treatment	3 (2%)	0	2 (3%)	
B.4. Chronic cause (sputum positive after retreatment schedule)	1 (.07%)	0	2 (3%)	
C. Reactions (Hypersensitivity reaction and Jaundice)	4	1	4	During the reporting period July 93 - December 94.

It is very difficult to reach any conclusion here since this study is only based on the first year's activities and the number of TB cases are higher in 12 months regimen than the 8 months and 6 months regimen.

FUTURE PLANS:

The project will be continued till June 30, 1995, after which the final analysis will be done in collaboration with RED. Findings of this pilot are expected to help BRAC work towards the most cost-effective regimen of therapy.

Part IV :

Facilitation Of The Government Programmes

VI.A EXPANDED PROGRAMME ON IMMUNIZATION (EPI):

1. BACKGROUND:

The EPI programme in Bangladesh was initiated in 1979. But there was no demonstrable effect of the programme in subsequent years. At the 40th anniversary of the United Nations in New York in 1985, the Bangladesh President made the commitment to reach the goal of Universal Child Immunization (UCI) by 1990. Since then, the government has worked hard to reach the set target. As a result of this Bangladesh has achieved a "near miracle" in its immunization programme. The Government has committed to continue the current achievement and work towards the following as a part of the mid-decade goals:

1. Eradication of polio by the year 2000
2. Elimination of neonatal tetanus by 1995
3. Reduction in measles by 95% by the year 1995.

2. BRAC'S INVOLVEMENT IN EPI:

As the Government has been unable to achieve the goal of UCI in all districts, it has requested BRAC as well as other NGOs, to assist them. BRAC's facilitation assistance to the EPI is focussed currently on 42 thanas of six low performing districts under Chittagong region covering a population of 9.5 million.

3. OBJECTIVES:

Objectives of the EPI facilitation (EPI-F) programme of HPP are: (1) to create a demand for government services, and (2) to prepare and activate the government machinery to respond to this demand.

BRAC's involvement in this activity is in terms of community mobilization, training of government workers, coordination between the government and BRAC staff at all levels from thana to district leading to improved and strengthened performance in EPI.

4. WORKING STRATEGY:

The EPI-F initiative is coordinated by a Regional Manager who works under the guidance of the Programme Manager and the Director, HPP. The Regional Manager supported by the Area Managers supervise the work of 42 thana-based field teams. Each field team is headed by a Team Coordinator who supervises the work of three Programme Organizers (POs). They are backed by sufficient resources for logistics and mobility, critical aspects for the success of operations.

BRAC's strategy for the EPI-F has been to work in the low performing and hard to reach areas, where government health services face constraints in meeting the needs.
BRAC's strategy includes facilitation of the government activities through management support, strengthen combined service delivery, social mobilization, supportive supervision and monitoring, and activate and strengthen the government disease surveillance for the EPI diseases and assisting to develop a sustainable programme effect.

Table IV.1 HPP's Working Area for EPI Facilitation:

Sl. No.	Name of District	No. of thanas	Target	
			Child 0-1 year	Pregnant women
1.	Hobigonj	8	50,290	62,086
2.	Sunamgonj	10	57,602	69,111
3.	Maulvibazar	6	45,917	57,084
4.	Cox's Bazar	7	46,547	57,467
5.	Feni	5	36,898	45,554
6.	Noakhali	6	73,114	90,264
TOTAL		42	310,368	381,566

This report will attempt to quantify the achievements for each of the activities undertaken by WHDP in the 42 thanas.

5. ACTIVITIES AND ACHIEVEMENT:

Following are the activities and achievement during the reporting period.

i. SOCIAL MOBILIZATION:

To increase the EPI coverage the following fora and meetings have been conducted by BRAC.

- **Female / Male seminars:**

To mobilize the people for improving coverage seminars were conducted during the reporting period.

Table IV.2 Female - Male Seminars

Name of district	Male seminar			Female seminar		
	Planned	Held	# of Partic-ipants	Planned	Held	No. of Part-icipants
Cox's Bazar	1744	1787	23998	1375	1346	17290
Feni	1619	1722	24053	1807	2224	30613
Noakhali	2252	2218	30689	3004	3339	43893
Moulvibazar	2304	1969	28925	2527	2512	35684
Hobigonj	2360	2226	27653	1966	2290	29152
Sunamgonj	4560	4574	66433	4251	4574	66218
Total	14639	14496	201751	14930	16285	222850

- **Mother of Fully Immunized Children (MOFIC) meeting and Out Reach Site Care Taker (ORSCT) meeting**

To increase person to person mobilization, 3,157 meetings were held with 31,502 Mothers of Fully Immunized Children (MOFIC) attending. To improve community participation for better management of outreach sites, 277 Out Reach Site Care Taker (ORSCT) meetings with villagers who give support to the program by providing space in their houses to organize the EPI sessions.

Table III.3 MOFIC and ORSCT Meetings

Name of district	MOFIC meeting			ORSCT meeting			School meeting		
	Planned	Held	Parti-cipants	Planned	Held	Partici-pants	Planned	Held	Parti-cipants
Feni	267	553	5609	67	34	546	1027	948	145512
Cox's Bazar	165	145	7759	35	29	580	900	743	78159
Noakhali	399	405	4876	40	37	381	1696	1579	160581
Moulvibazar	204	798	2035	100	25	269	1388	1160	97796
Habiganj	342	437	3289	173	86	802	1132	1015	78517
Sunamganj	1510	1419	15924	535	64	849	1888	1782	148786
Total	3085	3157	31502	514	277	3475	8031	7228	721949

- **School meetings**

Schools students are mobilized through meetings. They are expected to motivate the villagers to villagers to attend the EPI outreach sessions.

- **Village Doctor Meeting**

The village doctors are expected to play a vital role in social mobilization. 424 village doctors' meetings were held. The purpose is to motivate the village doctors for immunization and have them utilize their contacts with the patients to educate and further reiterate the knowledge of the families.

Table III.4 Village Doctor Meetings, Mosque and Imam Forum

Name of district	Village doctor meeting			Mosque forum			Imam forum		
	Planned	Held	Parti-cipants	Planned	Held	Parti-cipants	Planned	Held	Parti-cipants
Noakhali	120	76	1199	820	708	51436	101	77	1385
Feni	64	61	864	606	595	38646	59	48	996
Hobigonj	80	51	649	644	451	14706	76	43	511
Moulvibazar	79	71	872	645	512	22051	63	51	874
Sunamgonj	154	102	1319	1497	1361	35239	108	86	1542
Cox's bazar	108	63	875	520	422	20553	115	58	1102
Total	605	424	5778	4732	4049	182631	582	363	6410

- **Mosque and Imam fora**

To involve the religious leaders in mobilization, Imam fora are held to ensure the Imams assistance in motivating the villagers to accept and complete the immunization requirement. On the other hand, regular weekly meeting are being held in the mosques after the Friday prayer. This forum ensures that a larger and wider audience listens to discussions on basic health care and immunization.

- **Vulnerable Group Development (VGD) cardholder meeting**

The VGD (Vulnerable Group Development) program provides a monthly food ration to the poorest of women in each union for a period of two years. The program utilizes the opportunity of these organised groups for motivation and education on EPI.

Table III.5 VGD Card Holders and, UP/Chairman Meetings, Rallies Held on Special Occasions

Name of district	VGD card holder meeting			UP chairman/member meeting			Rally on special occasions		
	Planned	Held	Parti-cipants	Planned	Held	Parti-cipants	Planned	Held	Parti-cipants
Noakhali	60	38	936	208	242	5175	65	71	11841
Feni	53	35	783	250	238	4400	61	144	40465
Moulvibazar	57	44	1053	230	158	2107	60	77	20077
Sunamgonj	159	64	1889	327	237	3547	54	67	15128
Cox's Bazar	29	26	549	290	175	2633	55	146	38917
Hobigonj	109	67	1925	339	231	3196	75	81	13221
Total	467	274	7235	1644	1281	21058	370	584	139649

- **Union Parishad members / Chairmen's meeting**

To involve the local government 1,281 meetings were held with participants from the union parishad. The focus of these meetings has been to ensure assistance by the local body to EPI service provision.

- **Rally on special occasions**

Rallies were also facilitated on special occasions such as the measles catch-up campaign.

ii. FACILITATION OF GOVERNMENT SERVICE CENTRE:

Facilitation of government service centres is a prime activity of this facilitation programme. It is done through assistance to finalize the EPI center schedule, cold chain, up dating of registration and strengthened joint field supervision by mid-level managers. During the reporting period out of the 179,338 planned EPI outreach centres, 88% EPI centres were held.