THIRD DRAFT

HEALTH POPULATION & NUTRITION SECTOR STRATEGIC PLAN (HPNSSP)

2011 – 2016

SEPTEMBER 2010

Planning Wing

Ministry of Health and Family Welfare

Government of the People's Republic of Bangladesh

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PREFACE

In line with goals and targets of Millennium Development, the NSAPR II strategies, the draft National Health Policy objectives and the 6th FYP targets of the Government of Bangladesh, the next Health Population and Nutrition Sector Strategic Plan (HPNSSP) identifies the key interventions required to accelerate the pace of the Health, Population and Nutrition sector in Bangladesh, so that it becomes more responsive to clients' needs, more efficient in the delivery of services and more effective in providing key services for poor people.

This HPNSSP document is the culmination of a process, led by MOHFW that began in 2009 with formation of a High Level Committee, a Technical Committee, a Program Preparation Cell (PPC) and extensive consultations with the sector's stakeholders. The result was a Program Concept Note (PCN), which sets out an analysis of the sector's performance and the priority issues that needed to be addressed. The PCN was formally launched in January 2010 by the MOHFW in partnership with the Development Partners. It provided the basis for MOHFW to prepare a first draft of the Plan Document. This was shared with the public sector program directors, Line Directors and managers. It was also placed for public review at divisional, district, upazila and community clinic level. Development Partners also reviewed the document. Comments obtained from those review meetings and workshops and from the Development Partners were used to modify and improve on the Planning document.

The next phase included the various systems and SWAp related issues and added a preliminary budget. A revised (still incomplete) version was then presented to working groups of the MOHFW. Comments were incorporated while some of the gaps in the document were filled with help from a variety of technical persons. This enabled the Technical Committee (TC) to finalise the document and submit it to MOHFW for presentation to the Pre-Appraisal team on the 26th of September.

The HPNSSP sets out what the sector's strategic priorities are and explains to a certain extent how these will be addressed. Its purpose is not to spell out all the activities and interventions along with detailed implementation mechanisms to address these priorities. These details will be developed in a Program Implementation Plan (PIP) and incorporated into the Operational Plans developed subsequently.

HPNSSP has been prepared with the objectives of:

- Defining an overall strategic framework to guide investments in the health sector. More specifically, it is intended to provide the basis for PIP preparation and health sector investments over the next five years in a consistent direction.

- The Plan document is also intended to define the Government's intentions for the health sector as the basis for negotiating Development Partner assistance for a period of five years commencing July 2011.

The hallmark of its success will be that all Bangladeshis have access to health services that extend life and improve its quality, allowing them to attain their full potential without recourse to services from abroad.

FOREWORD

I am delighted that the 'Health Population and Nutrition Sector Strategic Plan (HPNSSP) has been formulated by the by the Ministry of Health and Family Welfare, as an improved framework for the HPN service delivery, planning, budgeting, implementing and monitoring the next sector programme (2011-16) commencing July 2011. This strategic document supports the goal of quality and equitable health care for all citizens of Bangladesh and is in line with the various national policy documents.

This strategic document describes Government's intentions for developments and innovations of the next sector program, taking into account the strengths, lesson learned and challenges reflected through the past HPSP and the current HPNSP implementation. Scaling up of HPN services, equity in health care, revitalization of Community Clinics as part of a functional Upazila Health System, NCD priority services, health system strengthening and mainstreaming nutrition are the various 'drivers', identified for achieving improved health status for the poor, women and the marginalized. This provides the Government's overall guidelines on which the detailed activities can be chalked out. It reflects the directions and determination of our Government's commitment to serve people with their needs of health, population and nutrition services, as the Honourable Prime Minister committed the country when addressing the 65th General Assembly of the UN on progress in attaining the MDGs:

> *"Doubling the percentage of births attended by a skilled health worker by 2015 (from the current level of 24.4%) through training an additional 3000 midwives, staffing all 427 sub-district health centres to provide round-the-clock midwifery services, and upgrading all 59 district hospitals and 70 Mother and Child Welfare Centres as centres of excellence for emergency obstetric care services.*
> *Bangladesh will also reduce the rate of adolescent pregnancies through social mobilization, implementation of the minimum legal age for marriage, and upgrading one third of MNCH centres to provide adolescent friendly sexual and reproductive health services.*
> *Bangladesh will halve unmet need for family planning (from the current level of 18%) by 2015; and ensure universal implementation of the Integrated Management of Childhood Illness Programme".*

I appreciate the hard work of the DGHS, DGFP, all LDs and PPC members under the guidance of the Planning Wing, who participated actively in the preparation of the document with the assistance of local and expatriate consultants. It has been prepared through a wide consultation process. I thank all who directly or indirectly have supported and contributed to the preparation of this document.
We all must work with utmost dedication for implementation of the sector program involving all stakeholders including DPs to assist in the process of best funding modality, monitoring the future activities with results framework for smooth implementation of the programme, which will have system-wide development impact. We must be able to respond quickly and appropriately to face the challenges and opportunities at hand.

The Development Partners (DPs) have been playing a significant role in the sector development of Bangladesh. I expect them to continue with their support in line with principles of Paris Declaration. I hope that the DPs will show their investment with a higher level of support for the next sector program and that we will remain hand-in-hand in implementing of HPNSSP.

Md. Humayun Kabir (Secretary MOHFW)

ABBREVIATIONS

ABCN	Area Based Community Nutrition
ADB	Asian Development Bank
ADP	Annual Development Programme
AIDS	Acquired Immune Deficiency Syndrome
AMC	Alternate Medical care
ANC	Antenatal Care
APR	Annual Program Review
APIR	Annual Programme Implementation report
ARI	Acute Respiratory Infection
BBS	Bangladesh Bureau of Statistics
BBC	Behavioral Change Communication
BDHS	Bangladesh Demography and Health Survey
BMDC	Bangladesh Medical and Dental Council
BMMS	Bangladesh Maternal Mortality Survey
BNC	Bangladesh Nursing Council
BNNC	Bangladesh National Nutrition Council
BRAC	Bangladesh Rural Advancement Committee
BSMMU	Bangabandhu Sheikh Mujib Medical University
BRAC	Bangladesh Rural Advancement Committee
BUET	Bangladesh University of Engineering and Technology
CBO	Community Based Organization
CBR	Crude Birth Rate
CC	Community Clinic
CCPU	Climate Change and Promotion Unit
CCMG	Community Clinic Management Group
CDC	Communicable Diseases Control
CDR	Crude Death rate
CGA	Comptroller General of Accounts
CHCPs	Community Health Care Providers
CHT	Chittagong Hill Tracts
CIDA	Canadian International Development Agency
CME	Centre for Medical Education
CMYP	Comprehensive Multi Year Plan
CMT	Clinical Management Training
CNO	Community Nutrition Organizer
CNP	Community Nutrition Promoter
COPD	Chronic Obstructive Pulmonary Diseases
CPR	Contraceptive Prevalence rate
CPTU	Central Procurement Technical Unit
CS	Civil Surgeon
CSBA	Community Skilled birth Attendant
CWM	Clinical Waste Management
DALYs	Disability Adjusted Life Years
DDA	Directorate of Drug Administration
DFID	Department for International Development (UK)
DG	Directorate General
DGFP	Directorate of family Planning
DGHS	Directorate General of Health
DLI	Disbursement Linked Indicators
DMIS	Data Management Information System

DNS	Directorate of Nursing
DOTS	Direct Observed Treatment-Short Course
DPs	Development Partners
DPA	Direct Project Aid
DSF	Demand Based Financing
ECNEC	Executive Committee of National Economic Council
EGV	Equity Gender and Voice
EDPT	Early Diagnosis and Prompt Treatment
EmOC/EOC	Emergency Obstetric Care
EMP	Environmental Management Plan
EPI	Expanded Programme on immunization
EP&R	Emergency Preparedness and Response
ESD	Essential Service Delivery
ESP	Essential Service Package
FMAU	Financial Management and Audit Unit
FMR	Financial Management report
FP	Family Planning
FWA	Family Welfare Assistant
FWV	Family Welfare Visitor
FWVTI	Family Welfare Visitor Training Institute
FY	Financial Year
GFATM	Global Fund for AIDS Tuberculosis and Malaria
GMP	Good Monitoring and Promotion
GOB	Government of Bangladesh
HA	Health Assistant
HCV	Hepatitis C Virus
HDS	Health and Demography Survey
HED	Health Engineering Department
HEU	Health Economic Unit
HFS	Health Facility Survey
HFWC	Health and family Welfare Centre
HIS	Health Information
HIV	Human Immunodeficiency Virus
HNP	Health Nutrition Population
HNPSP	Health Nutrition Population Sector Programme
HPSP	Health Population Sector Programme
HPN	Health Population Nutrition
HPNSP	Health Population Nutrition Sector Programme
HPNSSP	Health Population Nutrition Sector Strategic Plan
HR	Human Resource
HRD	Human Resource Development
ICDDR,B	International Centre for Diarrhoeal Diseases Research, Bangladesh
ICM	International Confederation of Midwife
IDA	International Development Agency
IEC	Information Education and Communication
IEDCR	Institute of Epidemiology, Disease Control and Research
IEM	Information Education Motivation
IHSM	Improved Hospital Service Management
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate
IPHN	Institute of Public Health Nutrition
IPH	Institute of Public Health
ICT	Information Communication Technology
IDH	*I*nfectious Diseases Hospital
IT	Information Technology

ITMN	Insecticide Treated Mosquito Net
IUD/ICD	Intra Uterine Contraceptive/ Devise
IYCF	Infant and young Child Feeding
JCS	Joint Cooperation Strategy
JC	Joint Chief
JS	Joint Secretary
LD	Line Director
LLP	Local Level Planning
MA	Medical Assistant
MARPs	Most At Risk Population
MATS	Medical Assistant Training School
MBT	Medical Biotechnology
MC	Microscopy Centers
MDA	Mass Drug Administration
M&E	Monitoring and Evaluation
MEU	Monitoring and Evaluation Unit
MCH	Maternal and Child Health
MCRH	Maternal Child and Reproductive Health
MCWC	Maternal and Child Welfare Center
MDGs	Millennium development goals
MDR	Multidrug Resistance
MICS	Multi Indicators Cluster Survey
MIS	Management Information System
MNCH	Maternal Neonatal Child health
MNH	Maternal and Neonatal Health
MOWCA	Ministry of Women and Children Affairs
MOE	Ministry of Environment
MOF	Ministry of Finance
MOHFW	Ministry of Health and Family Welfare
MOLGRDC	Ministry of Local Government Rural Development and Cooperatives
MoU	Memorandum for Understanding
MOCYS	Ministry of Youth and Sports
MR	Menstrual regulation
MSA	Management Support Agency
MTEF/MTBF	Medium term Expenditure/ Budget framework
MTR	Mid term Review
MWM	Medical Waste management
NTD	Neglected Tropical Diseases
NASP	National AIDS STD Programme
NCD	Non Communicable Diseases
NEMEW	National Electro Medical Equipment Workshop
NGO	Non Government Organization
NIO	National Institute of Ophthalmology
NIDCH	National Institute of Diseases of Chest and Hospital
NIPORT	National Institute of Population Research and Training
NIPSOM	National Institute of Preventive and Social Medicine
NITOR	National Institute of Traumatology and Orthopedic Rehabilitation
NMR	Neonatal Mortality Rate
NNP	National Nutrition Programme
NRR	Net reproduction Rate
NSP	Nutritional Services Programme
NSV	Non Scalpel Vasectomy
NTCBM	National Technical Committee on Medical Biotechnology
NTBB	National Task Force on Biotechnology of Bangladesh
NTP	National TB control Programme

NWT	National Working team
OP	Operational Plan
OPD	Out Patient Department
OTS	Online Tracking System
PA	Project Aid
PAC	Post Abortion Care
PCB	Pharmacy Council of Bangladesh
PCN	Programme Concept Note
PDS	Personal Data Sheet
PHC	Primary Health Care
PIP	Programme Implementation Plan
PLMC	Procurement and Logistic Monitoring Cell
PMA	Programme Management Agency
PMIS	Personal Management Information System
PPC	Programme Preparation Cell
PPP	Public Private Partnership
PNC	Post natal Care
PRSP	Poverty reduction Strategy Paper
PSO	Programme Support Office
PW	Planning Wing
PWD	People With Disability
QA	Quality Assurance
QATG	Quality Assurance Task Group
RDU	Rational Drug Use
R&D	Research and Development
RMCS	Revised malaria Control Strategy
RH	Reproductive Health
RDT	Rapid Diagnostic tests
RFW	Results Framework
SAM	Severely Acute malnutrition
SACMO	Sub Assistant Community Medical Officer
SBA	Skilled Birth Attendant
SBTP	Safe Blood Transfusion Programme
SMC	Social Marketing Company
SOP	Standard Operating procedure
SSFP	Smiling Sun Franchise Programme
STD	Sexually Transmitted Disease
STH	Soil Transmitted Helminthes
SVRH	Sample Vital registration System
SWAp	Sector Wide Programme Management
SWP	Sector Wide Programme
TA	Technical Assistance
TB	Tuberculosis
TEMO	Transport Equipment maintenance Workshop
TFIPP	Thana Functional Improvement Pilot project
TFR	Total Fertility Rate
TOE	Table of Equipment
TOR	Terms of Reference
TT	Tetanus Toxoid
TTU	Technical training Unit
TQM	Total Quality Management
UESD	Unification of Essential Service Delivery
U5	Under 5 Years of age
U5MR	Under 5 Mortality Rate
UHC	Upazila Health Complex

UHS	Upazila health System
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children Fund
UPHCP	Urban Primary Health Care Project
USAID	United States Agency for International Development
VAD	Vitamin A Deficiency
VAW	Violence Against Women
WATSAN	Water and Sanitation
WB	World Bank
WHO	World Health Organization
WID	Women in Development

SECTOR PERFORMANCE INDICATORS AND TARGETS 2004 - 2016

Table XXX. Sector performance indicators and targets 2004 - 2016

The sector performance indicators and targets table (2004-2016) below brings together (i) the performance of the health sector since 2004, when the previous sector programme started, (ii) linking it to the latest results (APR 2008) and (iii) allowing a comparison with the initial targets set for 2010.
In addition, the upcoming results of the APIR 2010 (expected in October) will provide the baseline for the next sector program, linking it with the MDG targets of the GOB (2015) and the targets (2016) that will be defined for this new sector program.

	HNPSP Baseline	MTR 2008	HNPSP APR 2009	PAD	APIR	MDG	HPNSSP
	2004	2007	2008	2010	2010	2015	2016
			Target	*Target*	*Result*	*Target*	*Target*
Total population (million)	137m	143m	145m				
Women of reproductive age (15-49 yrs) (%)	52						
Life expectancy at birth (male/female)	64 / 65	65 / 68	67 / 70				
Annual growth rate (%)	1.4	1.9					
Per capita GDP (USD, 1995/6 constant/current price)		312 487	329 554				
Infant mortality rate*	65	52	*42*	*37*		*31*	
U5 mortality rate*	88	65	*NS*	*52*		*48*	
Neonatal mortality*	41	37	*NS*	*30*		*20*	
% Children U5 (24-59m) stunted*[1]	48.4	42.3	*NS*	*30*		*25*	
% Children U5 (6-59m) stunted*[1,2]	46.5	38.5	*NA*	*NA*		*NA*	
% Children U5 (0-59m) underweight*[1]	47.5	46.3	*38*	*34*		*33*	
% Children U5 (6-59m) underweight*[1]	51.7	49.7	*38*	*34*		*33*	
Maternal mortality ratio (per 100,000 live births)*	320	NA	*256*	*240*		*147*	
% ever married women under 50 with low BMI	34.3	29.7	*NA*	*NA*		*NA*	

	HNPSP Baseline	MTR 2008	HNPSP APR 2009		PAD	APIR	MDG	HPNSSP
	2004	2007	2008		2010	2010	2015	2016
			Target		*Target*	*Result*	*Target*	*Target*
Total fertility rate*	3.0	2.7	*2.5*		*2.2*		*2.2*	
Prevalence of HIV among pregnant women (15-24 yrs)	<1	<0.5	*NA*		*NA*		*NA*	
Utilisation rate of ESD (%)	55	NA	*75*	NA	*80*		*NA*	
TB cure rate (%)*	85	92	*NS*	93	*85*		*NA*	
Contraceptive prevalence rate (modern methods)*	47	48	*NS*	50	*70*		*NA*	
% women on long lasting birth control methods*	7	7	*NS*	7	*9.3*		*NA*	
% children (9-59 months) receiving vitamin A capsules*	82	88	*90*	88	*> 90*		*NS*	
% babies exclusively breast fed for 6 months	42	43	*NS*		*NS*		*NA*	
% children (12-23 months) fully immunized	73	82	*NS*	83				
% children (12-23 months) received DPT3 vaccines.	81	91	*90*	91	*95*			
% children (12-23 months) received Measles vaccine*	76	83	*NS*		*> 80*			
% pregnant women who had at least one ANC visit from a medically trained provider by 2 lowest quintiles	48.8 LQ: 24.9 SQ: 38.2	51.7 LQ: 30.8 SQ: 36.3		51.3 LQ: 30.9 SQ: 40.7				
% births attended by skilled health worker by 2 lowest quintiles (%)*	13.5 LQ: 3.4 SQ: 4.3	18.0 LQ: 4.8 SQ: 6.7	*34*	21.4 LQ: 5.1 SQ: 11.1	*43*		*50*	
% pregnant women receiving IPT for malaria								
% children under five using bed nets*	< 15			40	*80*			
% population without access to improved sanitation								
TB case detection rate (%)	46	72	-	73	*70*		-	
DOTTS coverage (%)	99	100		100				
Leprosy case detection rate (%)	61	72		72.5				
Caesarean section rate (%)	3.5	7.5						
Bed occupancy rate in Upazila Health complex (%)	79	73						

	HNPSP Baseline		MTR 2008	HNPSP APR 2009		PAD	APIR	MDG	HPNSSP
	2004		2007	2008		2010	2010	2015	2016
				Target		*Target*	*Result*	*Target*	*Target*
% districts with Disease Surveillance Reports*			47	*50*	85	*80*			
% share of total GOB budget allocated to MOHFW budget*		6.5	7.0	*10*	6.5	*10*			
% total MOHFW expenditure allocated to the 25% poorest districts*		NS	15	*NS*		*40*			
Expenditure as % of original budget: revenue and development budget			rev: 103 dev: 63		rev: 90 dev: 61				
% Upazila and below level share in total health expenditure	46		52	*50*		*>50*			
Per capita public health spending of poorest districts as % of average district p.c. spending			0.9	*110*					
Proportion of contracts awarded within initial bid validity period*		92	90(DGHS) 55 (DGFP)		*NA (DGHS)* *100 (DGFP)*	*> 95%* *in 2006*			

1. INTRODUCTION

Health, Population and Nutrition (HPN) are intimately related and complimentary to each other, both as an outcome and also as an input. HPN status is universally regarded as an important index of human development. HPN services are also fundamental rights of the people. Constitutionally, the Government of Bangladesh (GOB) is obligated to ensure provision of basic necessities of life including medical care to its citizens (Article 15(a)) and to raise the level of nutrition and to improve public health (Article 18 (1)).

Bangladesh has been implementing sector-wide approach (SWAp) in health sector since 1998. The first SWAp – the Health and Population Sector Program (HPSP) - was implemented during 1998-2003. The program currently under implementation is the Health, Nutrition and Population Sector Program (HNPSP) for 2003-2011. The next sector program will be implemented from July 2011 onwards, without any interruption between the current and next sector program.

The framework of the proposed health sector program from July 2011 to June 2016 is set against the broader perspective of the GOB's commitments (Constitution, MDGs, Vision 2021, the proposed National Health Policy and the National Population Policy) and other programs, policies and strategies including the National Strategy for Accelerated Poverty Reduction II. The health sector is actively involved in the preparation of the government's Sixth Five Year Plan (SFYP) for 2012- 2016.

1.1. Strengths in previous sector interventions

Commendable progress in the development of the health sector has been achieved over the past twenty years as evidenced by the findings of successive Bangladesh Demographic and Health Surveys, partly as a result of HPSP and HNPSP implementation (see the summary of the Sector Performance Indicators at the beginning of this document). Bangladesh is on track to achieve MDG 4 with infant mortality rate per 1000 live births declining from 82.2 in 1996-97 to 52 in 2007 and under-five mortality rate per 1000 live births declining to 65 in 2007 from 115.7 in 1996-97. The achievements in the area of child health are due to the successful implementation of EPI, IMCI, diarrheal disease control and control of acute respiratory tract infections, facilitated by an improvement in the care seeking behavior of the people. However, neonatal mortality rate per 1000 live births has shown only a small decline to 37 in 2007 from 42 in 1996-97 The maternal mortality ratio (MMR) declined from 574 in 1990 to 348 (SVRS, 2008), but much of this decline is attributed to success in fertility reduction, and gains in female literacy and increased age at first childbearing. Much work has been done in strengthening services for dealing with life-threatening emergencies during childbirth but much more needs to be done to reach MDG 5 target of 143 deaths per 100,000 live births by 2015. Polio and leprosy are virtually eliminated. HIV prevalence is still very low, but there is high risk of increase in its prevalence.
For these reasons the 65th UN General Assembly awarded Bangladesh' Prime Minister, the MDG award for progress towards MDG 4.

Strong policy and investment interventions led to continuous reduction in the annual growth rate of population 1.48 (2007). The total fertility rate (TFR) went down from 3.3 in 1996-97 to 2.7 (2007). The contraceptive prevalence rate (CPR) reached 55.8 per cent in 2007. Life expectancy at birth has continuously been rising (66.6 years BBS-SVRS 2008) from the level of 58 (1994). There has been considerable progress in reducing malnutrition and micro-nutrient deficiencies in

Bangladesh. Percentage of children 1-5 years receiving vitamin-A supplements in last six months has increased from 73.3 (1999-2000) to 88.3 (2007).

Various output indicators are also laudable. The percentage of children who completed vaccination has improved to 81.9 in 2007 from 54.1 in 1996-97. The TB case detection and cure rates have already almost achieved MDG targets. The percentage of ante-natal check-ups by the trained providers has improved from 29 in 1996-97 to 51.7 in 2008. However, the percentage of delivery by trained persons shows only a slight improvement, i.e., an increase from 12 in 1995-96 to 18 in 2007. Gains were also impressive in the areas of malaria, soil transmitted helminthiasis, night blindness and iodine deficiency disorders, due to prompt identification, case holding, communication interventions and improvement in water and sanitation.

The development of a countrywide network of health care infrastructure in public sector is remarkable. Various communication interventions, taken by Government and NGO service providers show encouraging results, similar to the overall expansion of literacy, female income generating prospects and expansion and utilization of mass media portals, e.g., television etc.

1.2. Challenges in previous sector interventions

Service Delivery

Despite significant improvements over the recent years with the expansion of EmOC services at the district and upazila level and successful piloting of the maternal voucher schemes, institutional deliveries remain at a low level of only 15% of all births. More than 60% of births in Bangladesh are assisted by non-trained birth attendants and 6% are attended by relatives, friends or neighbours (BDHS, 2007). Only 18% of all births were delivered by a medically trained provider. There are real concerns around availability and quality of skilled attendance at birth. In addition, there are significant inequities in the use of maternal health service by wealth quintile as well as rural/urban disparities. Furthermore there are wide differences in the availability and use of maternal and newborn health services between the various administrative divisions and districts. In spite of efforts taken by the government, high rates of malnutrition (stunting!) and micronutrient deficiencies along with gender discrimination still remains a challenge. Further gains in maternal and neonatal mortality will require access to trained birth attendants, backed by access to institutional delivery and EmOC and facilities that can treat neonatal disorders.

While disease control efforts appear well on track, the increasing incidence of injuries including acid and other burn injuries, accidents (drowning being the leading cause of mortality for the 1-5 years old children) and a growing risk of spread of HIV/AIDS, Hepatitis B and C, emerging and re-emerging diseases, some due to climate change, effects of natural disasters, arsenicosis, etc. are now more common and more disastrous along with the steep increase of non conventional, non-communicable diseases. Amongst non-communicable diseases (NCD), cancer and cardio-vascular diseases have become leading causes of morbidity and mortality and deserve more attention than hitherto given. Ischemic heart disease is now the major individual cause of death with cancer deaths also increasing rapidly. Diabetes prevalence is currently thought to be about 7%, with Bangladesh projected to be among the top ten countries for numbers living with diabetes by 2025.

In the face of failure of the supply side ventures from the public health sector side, a renewed interest has grown on exploring the demand side options. Piloting has been done on maternal

health vouchers, which could be considered for further scaling up. These new paradigms and the fact that the health sector has expanded to an enormous size, facing challenges of effectiveness and efficiency, makes it imperative that various reforms are adopted to manage these paradigm shifts.

Gender, disability, age, type of disease and cultural differences are the basis for discrimination, access and utilization of services in Bangladesh. Poor women and children, especially those from tribal populations are poorly served by the current system, as are People with Disabilities (PWD), the Elderly, Adolescents and HIV/AIDS patients. People living in flood prone areas are very vulnerable to further impoverishment and deterioration of their health status. Often the 'voice' of the poor and vulnerable - whenever expressed - gets trapped at local level, which may partly explain the lack of responsiveness of the central level to the needs of these vulnerable groups.

Support Systems

Planning and budgeting procedures do not provide adequate flexibility for Operational Plans (OPs) revisions with regard to certain percentages of approved PIP enhancement and inter-OP and intra-OP cost increase/adjustment.

Due to the bifurcated structure in the MOHFW, adequate and timely monitoring of sector performance is not yet a reality, partly because a culture of using information for decision-making has not yet taken roots. Adherence to good monitoring practices and incentives for good performance and attractive allowances for serving in the rural and hard to reach areas on a continuous basis must be devised to address the absenteeism problem from the service providers. Responsiveness of the service providers especially to the socially excluded service seekers need to be monitored while deciding for rewards or other incentives.

Human Resources inadequacies remain a major obstacle to use and quality service delivery. The main problems are absolute shortage of human resources for health and family planning, inappropriate skill and gender-mix, poor coordination and inefficiency in their utilization and deployment, skewed concentration in urban areas and inadequate presence in rural areas. It has not been possible to alter substantially the recruitment, deployment and promotion policy or the structure of incentives to providers to reward good performance and sanction bad performance.

The recent financial performance of the sector reflects a conundrum. On the one hand, MOHFW has not been able to fully utilize its allocations from the Ministry of Finance (MOF) or spend all of its project aid funds. On the other hand, the services it provides are under-funded and there are unmet needs. The resolution of this contradiction calls for a radical re-examination of sector strategies along two lines: (i) how to utilize public-sector funds more efficiently and (ii) how to increase the HPN financial resource base. The sequence is important, as until resource management improves, it is unlikely that the sector will benefit substantially from increased financing. A more judicious way of public resource management therefore might be, (i) spending more on the most important services, to be decided based on some evidence and policy dictums, (ii) improving the efficiency of HPN service delivery, so that more services of a better quality are delivered for the same expenditure, (iii) spending more and better on the lowest quintiles and (iv) improving the efficiency of the budget management processes.

Overall public allocation on health in comparison to the need was not enough and unfortunately, spending of what is available remained too low, partly due to conditional ties in Project Aid and GOB procedures and also due to lack of effective and informed leadership among line directors.

Allocation of public resources continued to be incremental on the basis of historical norms, such as the number of beds in a health facility, rather than on indicators on the extent of poverty, disease incidence and prevalence, population size and peculiarities of the localities and topographies. Although the allocation to the Annual Development Program (ADP) takes into account HNPSP goals and objectives from the Operational Plans (OP), the revenue and development budgets are yet to be geared up towards the same goals and targets, thus avoiding duplication in inputs. This is possible only when these two budgets are brought under a unified expenditure framework and monitoring system.

Centralized procurement procedures coupled with lack of adequate capacity in GOB/WB procurement planning, management and maintenance of supply systems creates delay and inefficiency, notwithstanding the fact that for economy of scale, bulk purchase is useful. Inefficiency in procurement is due to: (a) inadequate skills in the area of logistic planning and management, (b) inadequate space and equipment for storage and distribution, (c) poor planning for procurement and allocation leading to inappropriate goods being delivered, (d) a mismatch between demand and supply, (e) slow and complicated delivery process and (f) inadequate supervision and leakages at various levels of the system.

People are paying for the service they get. In fact two third of the sector's expenditure comes from their pocket and 80% of this goes for medicines of doubtful quality and effect. Steps are to be taken to mainstream this expenditure, through controlling 'over the counter sale' of expensive medicines that should not be available without medical prescription. Strengthening of the Directorate General of Drug Administration (DGDA) to control this through increasing the number of inspectors and using skilled personnel of other departments at the district and upazila levels, are being considered along with medical auditing and accreditation of health facilities.

Despite the huge expansion/construction of physical facilities, the utilization of public health facilities by the poor remained low due to other supply-side barriers, such as lack of human resources, inadequate drugs and supplies, poor maintenance, various management inadequacies and negative attitudes of the service providers towards the clients / service seekers.

Governance and Stewardship

Stewardship role of the public sector was constrained by a weak legal framework and institutional inadequacies of regulatory agencies, e.g. DDA, DGHS, DGFP, DNS, BMDC, State Medical Faculty, BNC, etc. Although some reforms have taken place in BNC and BMDC, these need to be put in practice, through installing effective, technically and socially skilled leadership. Institutes which were created for certain public health functions, i.e., IEDCR, IPH, IPHN, NIPSOM, NIPORT, etc. are suffering either from lack of effective use, quality, support or leadership and hence are unable to contribute to their fullest potential.

Challenges still remain in terms of too many Operational Plans (currently 31), diluting and duplicating program priorities and activities and offering bifurcated services with limited coordination among Line Directors, program managers and focal points working in independent offices. Duplication of services, delay in placing manpower, equipment etc. still reduce the possibility to make facilities fully functional. This also results in poor service delivery. Some of the OPs do not have well demarcated and effective spans of responsibilities, calendar of events, long-term positions, program-wide financial commitments and clear lines of accountability.

Insufficient coordination between various sub-sectors in health, population and nutrition resulted in duplication, wastage and missed opportunities both at the top as well as at the operational level.

While there is multiplicity of line directorship at the national level, implementation of their programs falls on the shoulder of far fewer numbers of workers at the lower levels.

Coordination and collaboration with other ministries affecting health outcomes, e.g., Ministries of Planning, Finance, Establishment, Education; Information, Science and Technology; Local Government Rural Development & Cooperatives, Home Affairs; Religious Affairs; Food and Disaster Management; Agriculture; Transportation etc. is also inadequate. Mainstreaming of gender and poverty sensitive programs and activities will have to be focused in a meaningful and effective way.

Rigid fund release and disbursement procedures, limited capacity coupled with frequent change of key personnel at the policy/program implementation level, results in limited and delayed access to and utilization of resources and limited understanding of the fund release, expenditure and fiduciary practices.

Categorized pooled funding covering limited area of procurement of goods, works and services (including training) in a centralized environment, provides little opportunities for manpower hiring, procurement or using funds locally, when there is an instant need. Cumbersome World Bank's fund management procedures resulted in barriers to access funds to accomplish the program activities. Parallel and non-pool development partner harmonization is also yet to be achieved.

There was increasing recognition of the importance of improved gender equity in health sector plans and programs. But implementation of policies and plans was limited mainly due to weak institutional mechanisms and leadership. The sense that no equity will be achievable until there is equity in inputs has not yet come into practice. So inputs will have to be gender sensitive and sensitive to other parameters that also affect equity, e.g. geographical location, poverty, illiteracy.

With the signing of the Joint Cooperation Strategy (JCS June 2010) by the Government of Bangladesh and the Development Partners, the MOHFW is faced with a new challenge of developing in-house capacity for addressing performance-based financing (PBF). By linking allocations of financial resources to achievement of pre-defined performance targets, PBF is seen as a strategy to align the incentives of providers and purchasers of health care services, thereby improving health systems efficiency.

1.3. Lessons Learned

The revitalization of community health care initiative in Bangladesh is likely to be effective in ensuring health care service delivery at the grass root level, if integrated in a wider Upazila Health System. Therefore, all the interventions being provided through the community clinics (CCs) will be mainstreamed with the next sector programme.

Although some improvements have been put in place in the area of maternal and newborn health, such as upgrading of selected facilities and training for Emergency Obstetric Care (EmOC) the overall impact is yet awaited. The main reason is the huge inadequacy of skilled persons for childbirth, both in normal conditions and worse, in emergency situations. Also, for emergencies, service providers with the necessary skills such as obstetrics and anesthesia, and the facilities, supplies and equipment they need are not available in combination, close to where they are needed. Another area of concern is the absence of any effective intervention program on neonatal

health care. This has reduced the gains in the reduction of the child mortality. Achievement in the area of nutrition is an indicator of a worsened situation and reflects chronic or stunted nutritional damage.

The first SWAp (HPSP) marked a shift from a multiple project approach to a single sector program. This not only ensured Government's leadership in preparing and implementing the program but also created an opportunity for better coordination, harmonization and alignment of multiple donor funded projects and resources. The SWAp helped to focus on critical development objectives like equity and access and also led to efficiency gains. It enabled the government to establish connections between identified objectives, strategies, activities, resources and outcomes. It also reduced the transaction cost and the multiple missions of development partners that were needed to be catered by the government and funded by the development partners.

Both the sector programs - HPSP and HNPSP focussed on pro-poor essential services packages (ESP), which resulted in reducing gap between rich and poor with respect to outcomes in rural areas. There are still gaps in primary health care coverage of urban areas, except in areas covered by UPHCP, SSFP and some other NGO providers, where poor are being served in a focused way. However, the quality and accessibility of health and family planning services is yet to be managed efficiently either in public or in private sectors. At the same time, improvements are needed to address the weaknesses in the systems that allow the service providers to do their work timely and adequately (staff, drugs, money, materials, equipment). Both, the service providers and the support systems need to be guided by effective decision-making, being the prerogative of senior management of the MOHFW. It are the intensive and coordinated interactions by these three components that ultimately define the performance of the health sector as a whole.

2. FRAMEWORK FOR HNPSSP 2011-2016

2.1. The Premise

The government seeks to create conditions whereby the people of Bangladesh have the opportunity to reach and maintain the highest attainable level of health as a fundamental human right and social justice. Government has targeted to achieve part of the MDG 1 and 8 and MDG 4, 5, and 6 in general and also part of the vision 2021 through the next health sector program. To this end Government wants to establish a people oriented and people responsive health care delivery system which will, in particular emphasize more on women, children, adolescents, the elderly, the poor and the marginalized. Government wants that an effective, efficient and sustainable health service delivery is developed in the country with especial emphasis on the development of a sustained health system and an improved and responsive human resources development and management system.

2.2. Key Characteristics of the next Sector Program

The proposed program is in line with the NSAPR II and the Draft 6th 5-Year-Plan. NSAPR II aims at providing quality health, nutrition and family welfare services. It has focused on improving the health status, reducing health inequalities, and expanding the existing health services for the poor and vulnerable. It also aims at ensuring access to and empowering the poor while also increasing accountability of service providers through community participation. The Draft 6th 5-Year-Plan reflects the government's commitment of improving access to and utilization of HPN services and information in order to reduce morbidity and mortality, particularly among infants, children and women to reduce population growth rate. The government is also committed to improve the nutritional status especially of women and children. In the Draft National Health Policy, the government reiterates providing quality healthcare service in a cost-effective manner. The proposed sector program will succeed the current HNPSP and will capitalize on its strengths and integrate the lessons learned from its implementation.

The new Health Sector Programme sets out several 'drivers' for achieving the 5 year goal of improved health status for the poor, women and the marginalised. These include:

1. Scaling up services for the achievement of the MDG 1, 4. 5 and 6 targets (2015)
2. Addressing population growth with vigorous, fully integrated family planning services, and cross-cutting, multi-sector interventions
3. Mainstreaming nutrition in all service delivery points
4. Expanding access to health services for priority non communicable diseases
5. Improving health equity for the poor (men/women) and geographically marginalized populations
6. Revitalizing the Community Clinic services for people in rural areas as part of a functional Upazila Health System.
7. Overall health system strengthening including health information systems

The health sector program will in this way contribute - with support by DPs - to effective and efficient health service delivery and strengthened health systems with special focus on results.

The purpose of this program document is to:

1. Define an overall strategic framework to guide investments in the sector, both by MOHFW and by the DPs. More specifically, it is intended to provide the basis for sector developments and innovations over the next five years in a consistent direction.
2. Define the Government's intentions for negotiating DP assistance for a period of five years commencing July 2011.
3. Highlight the sector's strategic priorities and explain to a certain extent how these will be addressed. Its purpose is NOT to spell out all the activities and interventions along with detailed implementation mechanisms to address these priorities.

The components of the next health sector program are:

1. **Component 1-** Improving Health Service Delivery
2. **Component 2 -** Strengthening Health Systems
3. **Component 3** Stewardship and Governance.

Under component 1, the program will support:

- Delivery of essential health services which seek to improve reproductive, maternal, neo-natal and child health
- Reduce TFR with increased use of long-term family planning methods
- Prevention, control and management of communicable and non-communicable diseases
- Mainstream essential nutritional services, especially of pregnant women and children, and
- Increase access to and use of the essential health services.

Under component 2, the program will strengthen the various health systems, required to implement effectively the various service delivery activities. In this document they are identified as (i) sector planning and budgeting, (ii) health information systems, monitoring / evaluation and research, (iii) human resources for health, (iv) financing of the health sector, (v) quality improvements, (vi) management of pharmaceuticals and supply chain management, (vii) procurement and (viii) physical facilities development and maintenance.

Under component 3, the program will address stewardship of the sector in the areas of (i) governance structures and the legal framework, (ii) sector policy development, reforms and issues of equity, gender and citizen's voice (ii) decentralisation and Local Level Planning, (iii) partnerships and coordination, (iv) sector-wide approach, including aid effectiveness, (v) financial management in the health sector, and (vi) technical cooperation.

2.3. Vision, Mission, Goal, Strategies and Priorities of the next HPNSP

The **Vision** of the health sector is to see the people healthier, happier and economically productive to make Bangladesh a middle income country by 2021, the golden jubilee year of Bangladesh's independence.

The **Mission** is to create conditions whereby the people of Bangladesh have the opportunity to reach and maintain the highest attainable level of health. This vision and mission are derived from the constitution of the People's Republic of Bangladesh that recognizes health as a fundamental

basic need and, therefore, the need to promote health in the spirit of citizen right and social justice.

The **Goal** is to ensure quality and equitable health care for all citizens in Bangladesh by improving access to and utilization of health, population and nutrition related services with special attention to improving the health status of the disadvantaged and the underserved – poor, women, children, elderly, marginalized and physically and psychologically challenged.

In line with MDG and NSAPR-2 goals and targets, the **Strategic Objective** of the HPNSSP is to ensure equitable and quality health care for all citizens in Bangladesh by improving access to and utilization of evidence-based high-impact health, population and nutrition related services; strengthened systems to support service delivery; and effective stewardship and governance.

Some of the most important specific strategies to be pursued are:

1. Expand the access and quality of maternal and child health services, in particular supervised deliveries (MDG 4 and MDG 5).
2. Revitalise various family planning interventions to attain replacement levels by 2016, through priority for (i) efforts to delay marriage and the age of childbearing and (ii) increase in use of long-term and permanent methods.
3. Improve nutritional service interventions through mainstreaming nutrition within the regular DGHS and DGFP services (MDG 1).
4. Expand (non-)communicable disease control efforts at all levels by streamlining internal referral systems (MDG 6). In hospitals, accreditation and management systems will be strengthened.
5. Strengthen the various support systems by increasing the health workforce at Upazila and CC levels, and focus on annual planning of OPs, MIS and M&E functions.
6. Drug management and procurement will be supported with ICT and additional staff to improve drug provision and reduce the time between procurement and distribution.
7. In the area of stewardship, decentralization of the service delivery system will be pursued through the PHC / Upazila Health System, Local Level Planning and decentralised administrative and financial authority, accountable to unified area based LLPs and LDs.
8. Stimulating quality and demand for services through addressing certification and accreditation procedures in the public, private and NGO sectors will improve low levels of service utilization and high (out of pocket) costs for the clients.
9. Strengthen internal coordination of MOHFW activities by following an unified coordinated approach. Coordination with the various stakeholders aims to increase coverage and quality of services by teaming up with other intra and inter-sectoral and private sector service providers, as per relative strength of each partner.
10. Various innovative ideas will be pursued, such as health insurance for the public servants, the Upazila Health System, decentralization and local level planning, public private partnership, integration of revenue and development budget, etc.

A willingness to embrace change and bold decisions to tackle difficult tasks along with quality and result based management will be required it these strategies are to be implemented in the next health sector program.

COMPONENT 1A: SERVICE DELIVERY

Responsibility for Service Delivery is shared among the Directorate General of Health Services (DGHS), Directorate General of Family Planning (DGFP) and the Nutrition Service Program (NSP). In order to mainstream nutrition with DGHS and DGFP, streamline operations, improve efficiency and coordination, MOHFW recently has reviewed the tasks and responsibilities and most of the interventions by the NNP. In the section headings below the various Line Directors, responsible for the different areas of intervention, will be mentioned between brackets. Each of the 31 Line Directors is responsible for the elaboration and implementation of their respective Operational Plan with budgets, for reporting on their results, achievements and their expenditures. Details of these various OPs can be found in the PIP.

3.1. Maternal, Neonatal, Child and Adolescent Health

3.1.1. Maternal and Neonatal Health

(LD MNCH, DGHS and LD MCRH, DGFP)

Maternal and Newborn Health are closely inter-related, and many interventions are delivered simultaneously. Therefore this section coordinates the discussion of issues and interventions for both maternal and newborn health.

Maternal Health

MMR remains very high[1] despite the significant decline from 574 in 1990 to 290 in 2009 (MOHFW HRD data sheet 2010) per 100,000 live births. SVRS trend data suggest poor decline, with a growing gap between the rich and poor during 2001-2008. MDG indicator 5.1 is to reduce MMR by 75%, by 2015, compared to 1990, i.e. 143 per 100,000 live births by 2015. Bangladesh is yet to be on course to achieve this goal[2]. In concert with MMR, neonatal mortality rate remains high at 37 per 1000 live births (BDHS 2007), and is the only component of childhood death that is not showing satisfactory reduction. The incidence of births to adolescent mothers remains high, with 33 percent of the women beginning childbearing when they are in their teens and are at higher risk of pregnancy complications and death. Seventy percent of mothers suffer from nutritional anemia. Issues related to nutrition and adolescent pregnancy is dealt with in later sections.

Maternal mortality reduction in Bangladesh has been achieved through strong Government commitment in HPSP, HPNSP and other national policies and program implementation, notably the successful expansion of CEmOC facilities services, CSBA training, FP service coverage, the provision of safe MR services, expansion of private sector services, piloting of maternal voucher schemes and the expansion of female education at large.

Skilled birth attendance during pregnancy, childbirth and the post-natal period remains a critical issue. Successive BDHS in 2004 and 2007 showed that a slight increase in antenatal care

[1] UNICEF: Countdown to 2015, Maternal, Newborn and Child Survival: Tracking progress in maternal, newborn and child survival, The 2008 Report

[2] Bangladesh MDGs Progress Report 2008.

coverage with a skilled provider from 21 percent to 52 percent in 2007, but only 21 percent made the recommended four or more antenatal visits in 2007. Only 18% of all births were delivered by a medically trained provider, which includes qualified doctors, nurses, midwives, paramedics, family welfare visitors (FWVs) and community skilled birth attendants (CSBAs). There is a large disparity between urban (48%) and rural (24%) use of skilled birth attendants, and there are real concerns around availability and quality of skilled attendance at birth. The types of medical conditions that contribute to Bangladesh's high MMR are well documented, and, would be very amenable to prompt and effective clinical management that are the purposes of skilled attendance and emergency obstetric services (EOC). But the proportion of the pregnant women receiving EOC for complications during delivery is estimated to be only 35 percent of those suffering from such complication. Effective postpartum care by skilled attendants can prevent many deaths among mothers or their newborn. However, the proportion receiving post-partum care from a trained provider is very low, 38.9% in urban area and 16.5% in rural areas. Maternal morbidity is also a big issue, especially obstetric fistula.

Several studies indicate that the main reasons for poor use of maternal and newborn health services are: (a) dearth of health care personnel for care during pregnancy, childbirth and postpartum period; (b) scarcity of functioning emergency obstetrics care at the Upazila level; (c) absence of advice from family regarding when and where to seek medical care; and (d) lack of decision-making authority of women.

MDG indicator 5.2 (50 percent, skilled attendance at delivery by 2015) will be difficult to be achieved. Through HPSP and HPNSP, the government has sought to address the need for skilled birth attendants (SBA) accessible to rural women who deliver mostly at home, and to improve the provision of EmOC. About 5,500 existing health workers, Family Welfare Assistants (FWAs) and Female Health Assistants (FeHAs) have been trained as community based skilled birth attendants (CSBAs) to provide home based maternal health services in addition to their designated functions in promoting family planning or immunization. However, there are concerns about the quality and coverage of the MNH services provided by them. Facilities for EmOC are now available in 132 out of 410 UHC's, in all 59 District hospitals and 70 MCWCs, and there was a 93% increase in deliveries in the upgraded EOC facilities. In addition 1500 UHFWCs are upgraded to provide Obstetrics first aid services. However, there is much variation between the availability of facilities in the different Divisions, and no district has the required number of basic EmOC facilities that are needed compared to WHO recommendations. Additionally, the BHFS 2009[3] showed serious deficiencies in availability of essential drugs and equipment.
The HR challenges specific to maternal care are further discussed in the section on Human Resources; issues related to availability of drugs and equipment are dealt with in Component 2.

Interventions
Improvement in maternal and newborn health cannot be achieved by vertical interventions. It requires a coordinated systems approach which is best coordinated at the district, upazila and CC level. Several interventions are critical from a technical viewpoint. The implementation of these interventions will be adapted to local (district, upazila, and city corporations) levels based on the strengths of physical and human resources in the public and private sectors, and the characteristics and needs of the poor. Lessons from projects such as the ongoing upazila level MNCH, MNH and MNCS projects, Safe Motherhood Promotion Project, Urban Health Service

[3] Bangladesh Health Facility Survey, 2009. Draft Final Report submitted by Tulane University SPHTM, New Orleans and ACPR Dhaka.

Project, Local Level Planning and Demand Side Financing (maternal vouchers or conditional cash transfers) will be used in implementing the interventions.

The most critical interventions will aim at improving the availability and use of good quality services by rural and urban poor women and newborns. Such services will address needs during preconception and pregnancy, childbirth and the immediate postpartum period and be provided by skilled birth attendants and together with prompt and appropriate management of complications in EOC facilities staffed and equipped to provide 24 hour services, 7 days a week.

The current strategy of promoting home-based services for childbirth and facility care for emergencies will not be sufficient. It will not be feasible to achieve 50% skilled birth attendance by relying only on an increase in home-based skilled attendance. Furthermore, home-based services by workers who have other primary tasks is neither efficient nor effective, and Bangladesh women are demonstrating increasingly their willingness to use facility-based services that are affordable, accessible and of adequate quality. A major policy shift is needed to encourage a gradual and progressive shift from home-based to facility-based safe delivery services for the majority of women and neonates. The current strategy of home based services will continue to be needed for those who are constrained by geographic or social restrictions. Therefore a two-pronged strategy is needed: (i) to promote institutional services in all upazilas while (ii) sustaining and expanding home-based services, particularly in places with geographic or social restrictions on seeking care from facilities. The implementation of this strategy will vary in different upazilas and districts. Therefore district- and upazila-specific planning and monitoring will be needed.

Community clinic-based preconception and pregnancy services by trained providers will be promoted to replace home-based services and satellite clinics. With the existing HR and facilities maternal and neonatal care services might be improved through a single line of service delivery at district, upazila, union, CC and domiciliary level will provide woman-friendly preconception and pregnancy care (such as specific ANC days and ANC corners), MR and post-abortion services, and 24/7 services for childbirth, newborn and immediate postpartum care. Services for the newborn will emphasise prevention and management of asphyxia and neonatal infections, and care for the Low Birth Weight and pre-term babies. Where possible, similar services by NGOs will be encouraged. In such upazilas, institutional childbirth will be promoted actively through BCC and integration of routine counseling on birth planning.

The types (such as CSBAs or midwives or FWVs etc), numbers and quality of service providers for home-based, clinic-based and facility-based MNH, including EMOC services for each division will be evaluated. Strategies will be put in place for the improvement of quality as well as clinical supervision and support of workers. Measures to increase the availability and quality of EmOC services will continue, and strategies to improve referrals will be implemented.

Specific measures are needed to reduce long-term maternal morbidities, due to complications of pregnancy and childbirth among the women of reproductive age. Long-term illnesses include obstetric fistula (1.69/1000 ever married women), uterine prolapse, perineal tear, vaginal stenosis, urinary incontinence etc. Obstetric fistula is the most devastating maternal illness. Fistula repair surgeries, prevention and rehabilitation services should be expanded from the 10 Government Medical college Hospitals (including the National Fistula Center at Dhaka Medical College Hospital) and 4 private hospitals. Where possible, integrate services for HIV/AIDS, cervical and breast cancer and surveillance of STI/RTI.

Specific attention will be give to promote essential newborn care through trained providers. This will require extensive training of new (short term) workers and existing community based workers (FWA, FHA, NGOs workers) and supporting them through operational guidelines and incentives, monitoring and supervision. A specific task to be ensured is a home-visit by a trained worker within two days of child birth. Sick newborn services will be strengthened at the UPC and district hospitals with rapid referral systems of sick newborns to these facilities.

Priority will be given to:

- Improve the quality, reliability and coverage of preconception, ANC and pregnancy planning at all levels in the facilities, outreach, community and households. Provide MR and post abortion care (PAC) services, mainstreamed in maternal health services.
- Review and improve strategies to expand skilled birth attendance during home deliveries including the type, training and numbers of community level workers
- Strengthen 24/7 EmONC services through improved HR placement and appropriate training at district hospitals and MCWCs, and UHCs, including their family planning wings.
- Strengthen Community Support System to identify and remove barriers that lies between poor women and Safe Delivery including EmOC facilities
- Scale up proven interventions and best practices on reduction of maternal mortalities such as use of Misoprostol for PPH, if oxytocin is not available and use of Magnesium Sulphate for prevention of pre-eclampsia.
- Promote MNCH services in urban slums, in collaboration with MOLGRDC, NGOs and the private sector.
- Develop operational strategies for Post Natal Care (PNC). Strengthen newborn care services at all levels, particularly at the UHC and DH levels and provide rapid referral mechanisms.
- Ensure a home visit by a trained community health worker within two days of childbirth
- Strengthening National MNCH forum and MNCH Task Group to provide technical guidance to the government on any issues related to MNCH
- Implement the National Adolescent Reproductive Health Strategy, MOHFW 2006.
- Provide nutritional counseling to adolescent girls, pregnant and lactating mothers, together with Vitamin-A supplementation of mothers at their postnatal period.
- Provide physical, psychological and legal services for survivors of GBV, including adequate referral systems. The GNSP Unit should develop coordination mechanism with OCC (see EGV, section 5.5.2).
- Strengthen the pre-service curriculum of doctors, nurses, midwifes and paramedics in reproductive health, essential and sick newborn care and adolescent health.

3.1.2. Child Health

The MDG target 4.1 is reduction by two-thirds, between 1990 and 2015, of the under-five mortality rate, which should be 48-49/1,000 live births by 2015 from the present level of 60/1,000 live births as per the SVRS, BBS 2008. The under-five mortality rate is over 72 per 1,000 live births for the poorest quintile while the richest quintile records a rate of below 47 per 1,000 live births. The MDG target therefore has been reached already among the richest quintile.

MDG indicator 4.2 is on the infant mortality rate. Similar to the under-five mortality rate (U5MR), substantial reductions have been documented in the infant mortality rate (IMR), which declined from 94 per 1,000 in 1990 to 43 live births. This should be 31/ 1,000 by 2015 as per the MDG 4 and 15 by 2021 as per the Vision 2021; The infant mortality rate is over 41.2 per 1,000 live births for the poorest quintile while the richest quintile records a rate of below 31 per 1,000 live births as per SVRS, BBS 2008.

One of the major challenges in achieving MDG 4, as has been said earlier, is the slow progress in preventing neonatal deaths, which now account for 57% of all under-five deaths and 70% of infant deaths (GoB, 2007). Acute Respiratory Infections (ARI, 21%) and Diarrheal Diseases (5%) still threaten the lives of countless children and are responsible for more than one-quarter of under-5 deaths. As infection related death reduces, childhood injuries, especially drowning, emerged proportionately as a considerable public health problem responsible for a full quarter of the deaths among children 1-4 years of age.

The high prevalence of under-nutrition presents an additional serious challenge to the continuing progress in reaching the child survival goals. The BDHS 2007 found that 41 % of children under-five years of age were underweight, while a national Household Food Security and Nutrition Assessment found a comparable underweight prevalence of 37.4% for this age group. As a result of infections and the poor intake of food, rich in iron and folic acid, anemia affects around 46% of pregnant women, 39% of non-pregnant women, and almost one-third of adolescent girls.
The remarkable improvement in service delivery coverage of vertical programs such as EPI and Vitamin A supplementation masks the socio-economic disparities in other interventions and outcomes, which reflect poor access and utilization of health services by the poorer quintiles.

IMCI
The Government of Bangladesh decided to adopt the IMCI strategy in 1998. A national steering committee was formed and a functional secretariat established under the auspices of the Deputy Program Manager CDD. After adaptation of the generic guidelines, implementation started in 2001 in three upazilas. After a formal review in February 2003, the Government made provisions for rapid scaling up. Accordingly, in December 2003, the National Working Team (NWT) has developed a plan for scaling-up of Facility IMCI (F-IMCI) in Bangladesh. It became a program in 2003. Up to June 2010, F-IMCI has been implemented in 48 districts (343 upazilas). The NWT also has developed Community IMCI (C-IMCI) strategy and government has endorsed the document in 2004; up to June 2010 C-IMCI is being implementing in 63 upazilas.
Three training centers for IMCI were established in 2002. Another 7 (seven) training centers have been established over the past years. The Clinical Management Trainings (11-days CMT) are on-going and all service providers (doctors, paramedics) from selected expansion upazilas are being trained on a regular basis in all 10 (ten) training centers.
During 2004 pre-service training on IMCI was piloted in 6 (six) medical colleges and till date 15 public and 48 private Medical Colleges is being implementing pre-service education in IMCI from 3rd year to 5th year students. In 2010 IMCI has been included in under graduate medical curriculum and the process of inclusion is going on in Nursing Institutes and MATS;
While expansion of F-IMCI is reported to be progressing well, implementation of C-IMCI, especially with regard to the provision of community-based sick child care by basic health workers (BHW = HA, FWA and NGO workers) and informal village doctors, is reported to be slow. The BDHS 2007 indicates that only about 37% of sick children receive care from a trained provider, with girls and the poor having lower rates. Scaling this up will be important since the vast majority of rural and poor sick children do not seek care from the facilities that have implemented IMCI. IMCI will be further expanded, particularly at the community level, to cover the entire country with the IMCI approach effectively, guided by quarterly joint (by all implementing partners) review and monitoring, with emphasis on flexible programming for hard to reach areas. Tackling neonatal illness, pneumonia, diarrhea, malnutrition and drowning will be given priority. Activities to promote neonatal health have been described under 3.1.1. Scaling up of management of pneumonia at all levels, particularly in the CC will be a high priority. Injury prevention interventions will be promoted and implemented.

SCHOOL HEALTH

Bangladesh has 26 school health clinics, three of which are in rural areas. Each of these clinics has posts for two physicians. Utilization is poor and schools have to be included in the outreach program. The school health program will be strengthened to address reproductive health issues.

EPI

MDG indicator 4.3 measures the proportion of 1 year-old children immunized against measles. The MDG status of valid (by one year) measles vaccination by division as per CES-2009 was 75.4% for the least performing division (Sylhet) while the best performing two (Khulna and Barisal) recorded more than 85% coverage. The same data also shows geographical disparities in measles immunization coverage between urban slum areas and rest of the districts. For example, Dhaka City Corporation valid measles vaccination coverage was 79% whereas in Dhaka division rural areas it is 80%.

Notice needs to be taken of the fact that 16 districts are not on track to achieving the U5M targets by 2015 and around half of the districts are not on track to achieving the IMR target. This situation needs review and analysis and operational plans need to take this fact into cognizance.

Targets: As per Comprehensive Multi Year Plan (cMYP) 2011-2016, EPI set target of achieving FVC 90/85% as per cMYP 2011 to 2016, which means nationally coverage should be 90% or more, but individual district coverage should be >85%. The other targets are: (i) 95% measles coverage and reaching elimination status by 2016, (ii) TT5 coverage among women of child bearing age reached at least 80% at the national level and 75% at each district level, (iii) maintain poliomyelitis eradication status, (iv) maintain maternal and neonatal tetanus elimination validation status, (v) prevention of diseases protected by new and underused vaccines, (vi) ensure safe injection practices and waste disposal.

Table 3.1. MDG status of under-five and infant mortality by district, 2007.

< 5 MR (per 1,000 live births)	Number Districts	Comments	IMR (per 1,000 live births)	Number Districts	Comments
< 47 U5MR	24	Already achieved	< 31 IMR	20	Already achieved
48-72 (moderately high)	24	Achievable by 2015	32-45 (moderately high)	17	Achievable by 2015
Over 72 (very high)	16	Difficult to achieve	Over 45 (very high)	27	Difficult to achieve

Source: SVRS, BBS 2008.

Way forward: To build on the success already achieved, efforts will be strengthened for maintenance and increased coverage of the immunization program that (i) covers vaccines for greater number of diseases with (ii) especial focus on low performing areas, e.g., more effective communication and mobilization of partners. (iii) Integrated management of childhood illness will be further expanded, particularly at the community level, to cover the entire country with IMCI approach effectively – with a focus on newborns and pneumonia, (iv) increasing expenditure on children health. Finally the NSAPR II suggests fortification of food with vitamin A, iron and iodine for children, increase nutritional services for pregnant women for ensuring birth of healthy children and to strengthen interventions for exclusive breastfeeding. It advocates for strengthening of nutrition education and school nutrition program.

The National Strategy on Accelerated Poverty Reduction II suggests for increasing expenditure on children health and maintain strengthen and expand EPI and IMCI activities and health education and promotion and school health programs. The document advises for increasing access to health services by the disadvantaged children and development of strategies for prevention of accidents and injuries among children, increasing of awareness on accidents and injuries and reduction of injury related mortality and morbidity by 30% in general. It also suggests for increased sensitization of the stakeholders on the rights and privileges of the people with disability and asks for working towards reduction of stigma in this regard. NSAPR II suggests for fortification of food with vitamin A, iron and iodine for children, increase nutritional services for pregnant women for ensuring birth of healthy children and to strengthen interventions for exclusive breastfeeding. It warrants strengthening of nutrition education and school nutrition program. Spending on early childhood development programs is also advised. These will therefore be given emphasis to in program implementation;

Routine EPI will be further strengthened and introduction of IPV vaccine in a phase wise for maintaining poliomyelitis eradication status; measles second dose (MCV2) will be incorporated for measles elimination and neonatal tetanus elimination validation status will be sustained by increasing coverage of TT5 dose among child bearing age women (15-49 years) and introduction of Td vaccine for school going age children and introduction of birth dose of Hep. B vaccine in a phased-wise manner. To sustain eradication of poliomyelitis status, vaccination by OPV has to be discontinued, as per WHO recommendation in the year 1999.

A national immunization policy / strategy will be developed to formulate adequate policy directions in light of the ever increasing number of vaccines that are being added to EPI;
ARI and CDD program will not continue further as vertical interventions because they are already included in IMCI intervention. School health program will be strengthened to this end and to use the school health program as the launching pad for adolescent health and other interventions, Alternative strategies will be explored to train NGO and/or informal and semi/un-qualified providers.
Infant and Young Child Feeding including timely initiation of breastfeeding as stated above, exclusive breast feeding in the first 6 months of life and appropriate complementary feeding at six months of age along with continuation of breast feeding until 2 years of age will also be promoted. Growth promotion and monitoring with counseling on appropriate feeding practices will be ensured through training and orientation

Priority activities are

- Expand Facility IMCI (F-IMCI) and Community IMCI (C-IMCI) with a particular focus on essential and sick newborn care and the prevention and management of pneumonia.
- Develop and adopt a National Child Health Policy and initiate its implementation
- Promote and strengthen of services for orphans and disabled children.
- Improve availability of clean water

- Approve the National Immunization Policy.
- Strengthen and sustain routine immunization and surveillance activities AFP, NT, Measles.
- Conduct supplementary immunization activities (SIAs): Measles Campaign, MNT Campaign etc. Introduce new and under used vaccines: Td, Pneumococcal, Rotavirus, Cholera, MMR/MR etc. Improve cold chain warehouse capacity for EPI in preparation for the introduction of new vaccines.

- Reinforce the ongoing teachers training activities and screening of school students by MOs,

senior stuff nurses and teachers.

- Improve health and nutrition, providing comprehensive care to students, teachers and other staffs. Implement hand washing practices in schools.
- Scale up and promote activities for Infant and Young Child Feeding (IYCF).
- Promote a healthy school environment, including enough toilets and hand washing facilities for students and teachers.

3.1.3. Adolescent Health

One fourth of the people of Bangladesh are adolescents, i.e., between 10 and 19 years of age. Their health needs vary within the age category of adolescents; there is therefore wide disparity in opportunities and constraints facing adolescents. Early drop out from schools among girls and early joining of work among boys are some of the hallmarks of rural adolescents. A common problem with adolescents is the gender discrimination that the girls, in particular, have to face It needs to be appreciated that since their socio-economic and therefore physical, social and psychological conditions vary, designing any programs for them would have to consider these;

Early marriage and motherhood is very common in Bangladesh. Women in Bangladesh marry younger than women in any other Asian country. Two in three women marry before the legal age of marriage, which is 18 and one in three women start childbearing before age 20 (BDHS 2007). According to SVRS, the adolescent birth rate has declined by almost a quarter in the past eighteen years, from 77 per 1,000 women in 1991 to 60 in 2008.

Adolescent fertility is still high and a major social and health concern. Notwithstanding the above facts, 27% of young women aged 15-19 years have given birth and another 6% are pregnant with their first child. The median age at first birth has gradually increased from 17.6 years for older women aged 45-49 to 19 years for younger women aged 20-24 years. In spite of the minimum legal age of marriage, 11% of those in the 10-14 years of age and 46% of those between 15-19 years get married.

The adolescent health strategy stresses the 'life-skills education' (RH, Gender, FP). Adolescents (both males and females) will have access to correct information about their physical and psychological changes, so that they are better prepared to manage the challenges that are part of their age. Adolescent health services will be provided through partnerships with existing school health programs on a pilot basis. If successful, they will be scaled up through school and non-formal education initiatives. The School Health Programme Unit of DGHS, Bureau of Health Education / Information and Education / Motivation units of the DGHS and DGFP respectively will be responsible for these services.

Collaboration with NGO partners will be very important; as NGOs have developed a wealth of experience in providing adolescent-friendly services, something that public health providers often find challenging. Awareness building on the legal sanctions on marriage age for boys and girls, the deleterious effects of early marriage, early pregnancy and motherhood and legal prohibition of dowry will be key messages to convey to this age group and the community.

The adolescent health program has the following objectives:

1. Improvement of knowledge of adolescents on reproductive health (RH) and gender equality issues through activities of DGFP and DGHS and MOWCA,MOYS ,MOE and NGOs
2. Creation of a positive change in the behavior and attitude of the gate keepers of adolescents (parents, guardians, teachers, religious leaders, Pars etc.) towards adolescent RH issues.
3. Provision of easy access to all adolescents of adolescent friendly health services and other

related services, by opening up adolescent corners and training of service providers

4. Reduction of the early marriage and pregnancy among adolescents through health and family planning workers at the grass root tier at individual level, school health clinics, school based programs, Community Clinics ,strong social/community mobilization and through activities of DGHS and DGFP , MOWCA, MOYS ,MOE and NGOs.
5. Reduction of prevalence and incidence of STI, including HIV/ AIDS among adolescents through health and family planning workers, DGHS and clinicians and paramedics.
6. Creation of a favorable condition which discourage risk taking behavior among adolescents through health and family planning workers.
7. Implementation of Adolescent Health Strategy.
8. Targeted intervention for out of school adolescent boys and girls.

Interventions

Through implementation of adolescent health strategy and national standards, services will be provided with the required life-skills education and will have access to correct information about their physical and psychological changes, so that they are better prepared to manage their adolescence. These interventions will be taken up through strengthening and partnership with existing school health programs at scale though other school and non-formal education initiatives. School Health Program Unit of DGHS, Bureau of Health Education and Information, Education and Motivation units of DGHS and DGFP respectively will be responsible for these services.

Collaboration with NGO partners will be important; as NGOs have developed a wealth of experience of providing adolescent-friendly services, something that public health service providers often find challenging. Awareness building on the legal sanctions on marriage age for boys and girls, the deleterious effects of early marriage and early pregnancy and motherhood and legal prohibition on dowry will be key messages to convey.

3.2. Population and Family Planning

(DGFP/LD Field Services Delivery + DGFP/LD Clinical Contraception Service Delivery + DGFP/LD Maternal, Child and RH Service Delivery)

Bangladesh is now Asia's fifth and the world's eight most populous country with an estimated population of about 162 million. The growth rate of the population has fallen from 3% per annum at the first five year plan (1973-78) to about 1.7% p.a. now. The population is expected to grow by another 40% by mid century, to 222 million, and finally stabilize around 240 million several decades after that. The rural population, currently about 70% will cease growing at around 140 million by 2025, mainly due to rural to urban migration, but the urban population will continue to grow for another five decades. The urban population is currently made up of one third slums, and two-thirds non-slums, but the slums are growing at twice the rate (7% p.a.) than the overall urban growth rate (3.5% p.a.), meaning that the slums will account for a rapidly increasing proportion of urban dwellers.

The slowing of population growth is due to an impressive decline in fertility (Total Fertility Rate, TFR) from around 6.5 children per couple in the 1970s to 2.7 today. This decline has been almost entirely due to the widespread adoption of family planning – there has been very little change in other determinants of fertility, such as marriage patterns, or biological factors. While the MR program has played a significant role (possibly up to one in six pregnancies terminated at times), the use of modern contraception has been adopted right across the economic scale of the population, although geographic differences persist even today, with CPR levels in the eastern divisions about half the levels in the west, and fertility consequently higher in the east.

The Government has recognized that rapid population growth, and a massive population forms an obstacle to economic development, and they have developed a Population Policy which seeks to reduce fertility to replacement level (RF), originally by 2010, but now by 2015. This requires a further TFR decline of 0.5 children per couple. But even at replacement fertility, the country will be adding 2 million annually to the population, and many in the population field, feel that the decline needs to be greater, with a target of 1.0 below present fertility (i.e., to TFR 1.7), projected to have substantial benefits across many sectors. For example, every five year delay in achieving replacement fertility will add 100 million tones to food requirements between now and mid-century. Population growth is due to the difference between fertility (crude birth rate, CBR) and mortality (crude death rate, CDR). The CDR has fallen dramatically from a post WW2 level of 40 per 1,000 to a low of 7 or 8 today. It will not fall any lower, so all future population growth will be determined entirely by the fertility level.

3.2.1. Population

Population is a development issue, not just a health issue, and should be addressed accordingly. "...high rate of population growth and the resultant increase in population size impede the process of achieving the objectives in various sectors of the economy. Therefore, those ministries and agencies whose target population is affected by population growth should share the burden of responsibility of population control and family planning" (Government of Bangladesh, Population Policy, 2004).

3.2.2. Family Planning

The FP Program has built a nationwide community based FP service delivery system, relying primarily on non-clinical methods such as oral pills and condoms. The emphasis on short- and

long-acting clinical methods, which was relatively high in the 1980s, has faded. The current pattern of temporary contraceptive use, with oral pill users close to 30% of all married couples, is reaching saturation (only two other developing countries exceed this proportion), but other individual methods do not even account for 10% each. With persistent early marriage and low fertility, many women have completed their childbearing by the mid-late twenties, leaving them with two decades of reproductive life to avoid unwanted pregnancies. However, the proportions of couples relying on long-acting or permanent FP methods (IUD, implants, male or female sterilization) remains very low (less than 15%).

An indicator that demand for FP is present and strong is the unmet need of 17% reported in 2007, up from 11% in 2004 (BDHS). Unmet need is not always well understood. In the case of Bangladesh, the increase is a positive sign, as it is partly due to small declines in desired family size and in wanted fertility. However, it is also partly due to the drop in CPR (58.1% to 55.8%), due largely to stock outs of injectables in the two months before the 2007 DHS survey but recovered quickly according to the 2008 ESD survey).

Interventions

The following section considers possible interventions and modifications to the FP Program which will facilitate a further decline in fertility.

Promote increased use of FP before the first birth

The steep and dramatic fertility decline of the 1980s was triggered by a "tempo effect" where the rapid adoption of FP to space lower order births and raise average age of childbearing, from second born upwards, caused a dramatic fertility decline. Almost no FP method was used to delay first births, so when fertility declined and first births accounted for a higher proportion of all births, then the tempo effect was eliminated from the system. This resulted in the fertility plateau of the 1990s at around 3.3 births per couple. It is only in the current decade that fertility has resumed a slow but notable decline, to 2.7 at present. If efforts are made to increase FP use before the first birth, it is possible to trigger a second and smaller tempo effect, which could bring fertility down further. However, this will require a change in the long standing culture of social pressure on newly weds to quickly demonstrate their capacity to reproduce.

Provide better counseling on side effects

Within the current patterns of FP utilization, there are disturbing signs of low client satisfaction. The main method, oral pills, repeatedly shows a very high rate of around 50% discontinuation in the first year by new adopters. This is a very inefficient and wasteful way to increase contraceptive prevalence. However, if the discontinuation rate can be halved to 25%, then contraceptive prevalence could be doubled, with no additional effort in user recruitment. The interventions to reduce discontinuation may include better counseling on side effects, especially in the first six months of use. Some countries offer more than one type of oral with different hormonal contents. This allows potential for brand switching for women who experience side effects with their first brand choice.

Hire additional FWAs in Eastern divisions

Part of the discontinuation challenge may result from irregular service delivery, especially from outreach workers. When the FP started several decades ago, each FWA was expected to cover around 500 eligible couples. With population growth, they are now expected to cover 1000-1100 couples, a very substantial increase in workload. In the eastern part of the country, recruitment of additional FWAs is needed to bring the ratio of couples to workers back to a manageable level around 500. Users who currently depend on FWA or NGO worker household visits for supplies, may need support when Community Clinics take a greater role in static service provision.

Improve delivery of FP as part of post abortion care
One of the undesirable consequences of high discontinuation rates (other than for those who want to become pregnant) is unwanted pregnancy. This often results in resorting to MR or abortion, some of which result in post abortion health problems. Indeed 5 percent of maternal deaths are directly due to this. In the long run, meeting unmet need through improved FP services will reduce unwanted pregnancies, but in the meantime the provision of post abortion care (PAC) services will minimize the health burden on MR and abortion clients.

Use different service delivery approaches for different geographical regions
It is also time to consider a differential or segmented approach to FP service delivery across eastern and western Bangladesh, and also in hard-to-reach areas like the CHT and northern haor areas. CPR in Rajshahi in western Bangladesh is more than double (65.9%) that in economically better off Sylhet (31.5%). Maybe outreach services should continue in the eastern divisions, while static clinics may serve the more mobile populations of the western divisions. The role of the NGO and private sectors, especially pharmacies and Social Marketing Company, needs to be increasingly emphasized, in both rural and urban areas.

Segment target populations by specific characteristics
As in other public-private partnerships, these outlets can complement public services as long as care is taken that the poor are not priced out of the market. In addition to geographic segmentation, the FP Program can introduce segmentation of the market or targeting of couples with specific characteristics such as newly weds, most of whom are adolescents; high parity couples (2 or more children); urban slum dwellers; and to emphasise existing users of LAPM.

Promote and facilitate use of longer acting and permanent methods (LAPM)
With the clearly demonstrable need for a shift from short-term methods like oral pills to long acting and permanent methods (LAPM), the public sector will continue to play a major role in ensuring free or low cost provision of quality clinical services.

Increase Behaviour Change Communication (BCC)
The important issue of Behaviour Change and Communication (BCC) for LAPM has been seriously neglected for many years. Now there are new developments in hormone impregnated IUDs which may reduce blood loss and consequent anemia, also in single or double rod implants, which are much simpler to insert than Norplant. Non scalpel vasectomy has many advantages, but is not being sufficiently promoted, nor are adequate numbers of staff being trained. It is notable that to gain a CPR increase of one percentage point in this large population requires over 300,000 new acceptors, so a few thousand male or female sterilizations do not make a detectable impact on the CPR. The scale must be increased substantially.

Maintain focus on commodity security
It is worth noting here that security in commodity supply is essential, if LAPM methods are to play a greater role in the FP Program. Simplification of routine procurement procedures, as practiced in other country programs, is urgently needed.

Hire, train, update staff
A parallel concern of lack of additional trained staff is the upcoming loss through retirements of existing staff, like Family Welfare Visitors who are responsible for IUD insertion and other LAPMs, as well as many FWAs who provide the grass-roots level outreach services. There is an urgent need for (i) replacement of staff who will retire, and (ii) training to upgrade the skills of

community level workers, especially once the Community Clinics are going to reach their full potential, as indicated in the Government's election pledge (number 11).

Revisit incentive schemes

It is well known that incentives for FP clients and providers were tried in the 1980s, and stopped due to concerns about coercion. It may be time to again consider various positive and negative incentives for adoption of FP, as have been implemented successfully in other countries. While the Government has recently increased the levels of compensation for lost wages and time to adopters of LAPM, strictly this is not an 'incentive'. Other countries have used rewards, such as meeting the head of state for long term users (in Indonesia, users for 10 years or more are known as "KB Lestari" or 'eternal users'), entry in lotteries for motorcycles (Thailand for vasectomy acceptors), various other types of non-financial gifts. Some countries have used negative incentives such as restricting access to Government schools for third and high parity children, but this is undesirable where universal education is a goal of the Bangladesh Government. As the DSF voucher scheme for safe motherhood is showing signs of increasing facility deliveries, it would be logical to include FP services into the postpartum care package for these clients. The postpartum period is known universally to be a time when couples are highly receptive to considering spacing and limiting childbearing. If Bangladesh is serious about attaining a fertility level below replacement a substantial number of couples will need to stop at one child. There are signs that son preference is declining, but that a desire for a balance of boy and girl children remains the norm. Without explicit incentives (which must not be coercive), it may be difficult to achieve this low level of fertility

Address early marriage

While adoption of FP between marriage and first birth will eventually reduce the powerful effect of population momentum on fertility, also delaying early marriage can play a similar role. According to the regular DHS surveys (five since 1993), average age at marriage for women has barely changed, and at 16.4 years (BDHS 2007 for married women 20-24) remains well below the legal minimum permitted age of 18 years. This issue illustrates the importance of enforcing policies, rather than simply putting policies on the books. Enforcement of this marriage policy requires a good knowledge of women's ages, and penalties for marriage registrars, who knowingly falsify age on marriage certificates. It will require special interventions to increase community awareness of the hazards of early marriage.

Provide employment opportunities for young women

At a broader level, further effort is needed on social and economic interventions which can be expected (according to global experience and demographic theory) to bring about later female marriage. The most significant intervention known is mass female education, and Bangladesh has been making great strides in producing universal enrolment in primary education for girls and impressive gains in enrolment of young women in secondary school. Many millions of young women, especially from poor families, have directly benefited from several secondary school stipend schemes. However, while enrolment rates are encouraging, the completion rates are far less than optimal, with up to 80% dropping out before high school graduation.

As so many of these young women are dropping out of high school in their early teens, virtually without employment opportunities for them in the rural areas, they tend to get married, either by choice or through family pressure. A small proportion of young rural women make the decision to migrate to the cities to seek employment as domestic workers, or in formal sector employment, in particular in the garment industry, the biggest employer of such women. However, the garment sector grew rapidly in the late 1980s and 1990s, but is no longer absorbing substantial numbers of female workers.

If there is any prospect of delaying marriage among the large cohort of young women entering the reproductive ages, there must be efforts to generate employment opportunities in the rural areas, where young unmarried high school graduates can seek safe, secure and economically productive alternative opportunities to marriage and early motherhood. The Government has the option of cross-sectoral actions such as encouraging recruitment of young female school teachers, but much of this employment will need to come from the NGO and private sector. The influential micro-finance sector has focused mainly on married women in rural areas, although there have been pilot projects with unmarried women. These must be encouraged to expand their reach, possibly linked to delayed marriage, ideally without dowry.

In an era of widespread electronic communications, there is an urgent need for mass media campaigns to encourage families to delay pushing their under-age daughters into marriage and early childbearing. These campaigns should focus on both the negative effects on the health of individual women and their babies, but also on the negative demographic and economic consequences for the nation.

Remaining issues and questions

Finally, there are still many questions relating to the issues raised above. How can families be convinced of the need and benefits of delayed marriage for their daughters? How important are economic considerations in this decision? Are fears about insecurity of the daughters playing a major role in driving early marriage? What are the underlying barriers to adoption of long acting and permanent methods of contraception – are there safety or service quality concerns, or primarily misunderstandings about side effects? Are there effective ways to convince families that newly wedded couples should wait before having their first child, especially if the bride is young? How can small and medium scale employment opportunities for young women be generated in rural areas, so that marriage does not have to follow so closely on school drop-out? Indeed, how can high school drop-out rates be reduced – are new stipend schemes needed? Are high costs or lost opportunity costs playing a role in high female drop-out rates? What kind of services can be designed to more effectively educate unmarried adolescents on reproduction, and alternative options to early marriage? How can a social movement to eliminate dowry be encouraged and supported? Are new policies or policy changes needed to facilitate reduction of family size to fewer than two children, on average? Research is needed to better understand these remaining challenges.

The Family Planning Program is being implemented through three separate Operational Plans, managed by three Line Directors under the Director General of DGFP. The overall targets for the three OPs are the same. The overall objective of the three OPs is to retain replacement level by 2016, corresponding to a TFR of 2.0-2.1 and a CPR of 75% (up from the 56% in 2007).

3.3. Nutrition Service Program (NSP) and Food Safety

3.3.1. Nutrition Service Program (NSP)
(DGHS/LD NSP + DGFP/LD NSP)

In Bangladesh both chronic and acute malnutrition levels are higher than the WHO's thresholds for public health emergencies. Percentage of children underweight for age was 47.5% in 2004, 46.3% in 2007 and 37.4% in 2009[4]; percentage of children underweight for height (wasting) increased from 14% in 2004 to 17% in 2007 and was only slightly below WHO critical emergency level at 13.5% in 2009 HFSNA; and percentage of children short for age (stunting) was found to have increased from 43% in 2007 to 48.6% in 2009. More than half the mothers abandon exclusive breastfeeding at about 2 months (e.g. BDHS, 2007 median EBF 1.8 months) as compared to the recommended duration of six months. Most mothers report that they did not know what foods and how much a child should eat for adequate growth from 6 to 24 months and how to teach infants and children to eat sufficient food. Only one in four infants of 6-12 months receives adequate complementary feeding as per WHO indicators. Less than half the children in the richest families are feeding infants adequately. Appropriate feeding practices for children also remains very low, with only 42% of children of age 6-23 months fed appropriately according to recommended Infant and Young Child Feeding (IYCF) practices4.

The prevalence of iron deficiency anemia among pregnant women - which is significantly associated with maternal mortality and morbidity - and among pre-school children, is 51% and 48% respectively. Maternal under-nutrition also increases the probability of low birth weight, which in turn increases the probability of neonatal deaths. However, there has been considerable progress in reducing malnutrition and micro nutrient deficiencies. Percentage of children of age 9-59 months receiving vitamin-A supplements in the last six months has increased from 82% in 2004 to 88 in 2007 (BDHS 2007). The rate of night blindness among children of age 18-59 months is 0.04 in 2005, well below the WHO Public Health threshold (0.5%), though the prevalence of night blindness among pregnant women is 2.7% and 2.4% in lactating women. While iodine is crucial for the cognitive development of a growing foetus, more than one third of pregnant women, and 34% of children of age 6-12 years are iodine deficient[5]. However, in spite of efforts taken by the government, high rates of malnutrition and micronutrient deficiencies along with gender discrimination remain common. Under nutrition in foetal and early life is also associated with greater risk of non-communicable diseases in adulthood. Recent evidence indicates that over the period 1986–2006, mortality in rural Bangladesh, due to cardiovascular and cerebrovascular diseases increased by 3,527% and malignant neoplasm by a massive 495%!

In short, Bangladesh is off track for MDG 1[6]. To accelerate progress in reducing under nutrition through concerted efforts, implementation of proven direct nutrition interventions is critical, in particular during the period from pregnancy till the first 2 years. Essential nutrition interventions should follow a 'life-cycle approach', being a 'package' that should be provided to the clients (mother and baby / child) changes with their development over time. A summary of what services should be provided, both at community AND at facility level for each phase in the life-cycle (Pregnancy and ANC, Delivery, Post Natal Care (PNC), Family Planning, EPI and IMCI is provided in Annex 7.6 (Nutrition as part of the human life-cycle).

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[4] HFSNA 2009; MOHFW, IPHN, UNWFP and UNICEF,
[5] Child and Maternal Nutrition in Bangladesh: Key statistics
[6] MDG Progress Report 2008

The approach for delivery of essential nutrition interventions involves home visits by trained community volunteers to pregnant women and mothers of infants. Action support groups should ensure that family members particularly fathers and grandmothers create an enabling environment for adequate nutrition. A number of stakeholders have developed community-based approaches for reaching mothers and children from pregnancy to at least 12 months and ideally two years. These provide a rich source of experience in developing the new nationwide program. The number and skill mix of personnel at community level, both in clinics and those who reside in communities will be strengthened through on the job training to ensure essential nutrition actions are implemented at sufficient scale. They in turn will need ongoing support and monitoring, such as monthly meetings, supervision and observation, allocation of manageable numbers of household visits (for pregnant women and infants), recognition of good performance, job aid, regular feedback from monitoring data.
Six-monthly vitamin A supplementation and food fortification will continue. Adolescent girls will be reached with a package of weekly iron supplementation, six monthly deworming and nutrition education through schools in collaboration with educational institutions in each area.

One of the important targets proposed by WHO (1998) is "the percentage of children under five years who are stunted should be less than 20% in all countries and in all specific sub-groups within the countries by the year 2020". Stunting is a better indicator of long standing and almost unchanging status of malnutrition, since underweight status is changeable. Stunting also is an indicator of a permanent missed opportunity towards acquiring intelligence, better health and height. Recent evidence initiated interventions focused on the "window of opportunity" from conception to 24 months, i.e., from pregnancy to two years old babies, for high impact in reducing death and disease and avoiding irreversible harm. The main focus will be improving maternal nutrition and breastfeeding and complementary feeding practices, and micronutrient interventions. This should be the main age-oriented strategy for an effective outcome of nutritional interventions.

The institutional home for nutrition within the MOHFW is currently being defined. A policy decision has been taken to mainstream nutrition within MOHFW. As part of this restructuring, NSP will be strengthened by transferring existing manpower and logistics from NNP and IPHN into DGHS and DGFP (see details in the Action Plan for mainstreaming Nutrition, Annex 7.5). Existing development staff (51) of NNP will continue their job in NSP. In addition, NSP will become part of other national plans of action, notably the National Food Policy Plan of Action (2008 -2015). One of the medical officers of the UHC will be designated as medical officer (public health and nutrition) and will be assigned the responsibility of coordinating NSP activities at upazila level and below, while the nutrition officer (under DGHS) will be responsible for the technical management of nutrition activities.

The Institute of Public Health Nutrition (IPHN) is expected to manage (i) facility based services, (ii) training of staff in nutrition and (iii) the development of relevant manuals, micronutrient-related activities, research and surveillance. Responsibilities of the IPHN will be expanded and capacity will be developed accordingly. It will coordinate its activities with the Child Nutrition Unit. Capacities of UHC and district hospitals will be strengthened to adequately manage severely malnourished cases (SAM). Effective nutrition surveillance will be developed as part of the existing surveillance system.

As under nutrition also remains a major problem for the urban population, especially for the poor living in informal settlements or urban slums, MOHFW could collaborate with MOLGRDC in providing nutrition services under the urban health care program.

Bangladesh is regularly faced with natural calamities like cyclones and floods. Therefore, MOHFW should have an efficient system in place to lead the nutrition response in emergencies to promote optimum infant and young child feeding practices in difficult circumstances and to treat the severely malnourished women and children. Overall, macro and micro-nutrient issues should be addressed with adequate focus.

Micronutrients

Of the various micronutrient deficiencies, vitamin A, iodine deficiency disorders, iron deficiency anemia and others like Calcium and Zinc are of major concern, as they effect cognitive development in children and threatening life to pregnant women.

NSAPR II recommends 90% coverage of iodized salt and increase the consumption of oil among children. The document expects to (i) reduce of the prevalence of iodine deficiency of all school children, (ii) maintain the prevalence of night blindness among children aged 12-59 months below to 0.5%, (iii) reduce the night blindness rate among pregnant women to less than 1% and (iv) reduce the prevalence of anemia in < 5 years old children and adolescents in line with the National Strategy for Prevention and Control of Iron-deficiency anemia (weekly iron/ micronutrient supplements with six-monthly deworming for adolescents). It calls in particular for involving other sectors, working in nutrition at the primary health care level (as part of UHS).

Multi-sectoral interventions are necessary, but these have to be managed in collaboration with other ministries and communities, where Community Clinics (CC) will be ideal centers for taking up coordinated HPN sector activities. The challenge of improving nutrition will require coordinated, multi-sectoral interventions on a sustained basis. Stronger coordination of food security, agriculture, health and safety net programs has been suggested by the UN agencies. This has drawn attention to the importance of nutrition and to the "food safety and security". The linkages with other sectors need to be institutionalised, as highlighted in the recent Food Security Investment Forum and the National Food Policy. Other sectors of particular importance are:

- Agriculture (improved production of high nutritious value food, training of extension agents to include nutrition);
- Food security (establishing referral systems from community nutrition programs to safety net programs. This will facilitate access to safety net resources for households with malnourished children and pregnant women;
- Water and sanitation related activities (WATSAN).
- Education (health and nutrition education in schools).
- Food Safety and Communication / behavioral change including the use of various media.

To accelerate multisectoral and intra-ministerial collaboration on a sustained basis, a high level committee needs to be in place with the proper mandate. The Bangladesh National Nutrition Council (BNNC) under the leadership of the Prime Minister - if revitalized and strengthened with adequate human resources and capacity - can play a crucial role in multisectoral collaboration.

Interventions

Under-nutrition in pregnant women is likely to contribute to Low Birth Weight, which increases risk of neonatal death, poor development in childhood, even with consequences for later life. The problem will be addressed in adolescents and pregnant women. Improving dietary intakes and iron supplementation of adolescent girls and pregnant women and assuring breastfeeding in the neonatal, early infancy and beyond plus complementary feeding from 6-24 months are the central interventions without which child nutrition cannot be expected to improve. Most mothers and family members follow inappropriate feeding practices leading to the vast majority of even middle and high income quintiles feeding children inadequately. Dealing with mis-perceptions

about insufficient milk and poor appetite need to be addressed through community-based counseling and action support groups. The use of locally available and affordable foods for adolescents, pregnant women and complementary feeding; skills and techniques of assuring breast milk supply for 6 months; making up gaps through vitamin A and iron supplementation and fortification are central to the BFSSP nutrition component. There is good evidence in Bangladesh to support this approach.

In addition to child underweight, stunting and wasting that require IYCF interventions, mothers and children in Bangladesh are at risk of micronutrient deficiencies. Post partum Vitamin A distribution to improve vitamin A status of neonates through breast milk will be reviewed in the light of recent evidence suggesting that it has little positive effect. Vitamin A supplementation should be started from the age of 6 months. Monitoring of universal iodization of salt will be strengthened. Zinc for treatment of diarrhea will be promoted. With the coverage of IMCI, zinc tablets are expected to be provided free to children with diarrhea.

The existing CNOs and CNPs will be tasked with the same services which they are currently providing. The number of CNCs might be reduced to those of the actual number of CCs for more efficiency and effective service provision. It is expected that if regularly good quality supplementation is provided, people will attend CCs. Scaling up will be done in the remaining upazilas, with particular priority given to remote and poorer areas

All health workers will be appropriately trained in nutrition education, so that nutrition services can be mainstreamed at community and facility levels within the new sector program. For strengthening community based interventions, CNPs, CNOs, HAs, FWA and community volunteers will be given training on family planning, nutrition and common health issues. In addition, to achieve adequate coverage, community volunteers and counselors/home visitors will be engaged through community mobilization and action groups to ensure monthly home visits in periods of greatest risk of malnutrition that coincides with exclusive breastfeeding and complementary feeding in under two's. Effective nutrition surveillance will be reinstituted with leadership by IPHN. The existing CNOs and CNPs will be responsible to identify, support and monitor community-based volunteers (e.g. members of mothers support groups and other individuals), tasked with revised services such as monthly home visits that focus on the windows of opportunity and essential nutrition actions. The status of women in the family will be given attention to reduce malnutrition and through the dissemination of proper information and skills about nutrition. Communities will be mobilized around this. Kitchen gardening will be promoted with involvement of NGO and CBO workers.
Detailed objectives and targets for both the nutrition and the various supplementation and fortifications programs have been included in the OP of the PIP. They are not repeated here.

Changes in nutrition status can only take place through poverty reduction, income generation and improved decision making by women in the home. Unless concrete steps are taken to materialize this vision (this unequivocally means that nutrition must be made a top priority for the next sector program), these target will, of course, remain unattained. MOHFW's role in addressing decisions like this underlines the importance of leadership and prioritization in the design and implementation of the next sector program.

3.3.2. Food Safety

Food security has three pillars which include: increased availability of food, access to food and utilization of food (nutrition). The third pillar refers to the intake of safe and quality food, in which the health sector is the key player to ensure basic health service. Unsafe food represents a

major threat to public health in Bangladesh and failure to adequately control food safety significantly impacts on food security. Each year millions of citizens suffer bouts of illness following the consumption of unsafe food. Aside from acute effects arising from food contaminated by microbial pathogens, long term health impacts may result from consumption of food tainted by chemical substances and toxins. Access to safe food is a basic human right. By minimizing consumer's exposure to unhygienic, contaminated and adulterated food it is possible to significantly reduce the morbidity and mortality associated with unsafe food.

Interventions

In order to reduce the impact of unsafe food on citizens, a number of measures need to be adopted. A national food safety policy and action plan will assist in steering the direction of efforts to improve food safety. The implementation of modern food laws, standards and regulations will serve as a benchmark for evaluating and maintaining food safety, and will provide enforcement officers with the capability to target and reduce unsafe practices and unscrupulous food producers, processors and vendors. These efforts need to be supported by strengthened food inspection services and enhanced laboratory analytical capability.

Aside from measures that improve the national food control system, there is a need to develop awareness of food hygiene and safety among food producers and processors, food handlers and the general public. Measures which raise awareness of food safety will lead to reductions in food contamination and reduce the burden of food borne illness.

During the period of this plan, there is a need to build upon successes of the Food Safety Project and complement existing arrangements for controlling food safety in Bangladesh. There are various Ministries that oversee sectors of the food supply chain, and it is important they continue to work together to eliminate gaps in food control, as well as duplication of effort. The creation of a Food Safety Authority needs to be seriously explored, as a single autonomous entity will result in a strengthened and focused food safety framework, and result in improved public health and nutrition. Measures also need to be taken to support enforcement of food safety laws throughout Bangladesh. The national food policy and its plan of action clearly specify activities in the agricultural sector that can contribute to improve nutrition. Stronger coordination at community level is needed to promote high nutrient value, food production, and increasing agriculture extension workers' knowledge on nutrition and their contribution at community level.

Further enhancement of the roles and responsibilities of the DG, DGHS is essential so it takes a strategic role in managing food safety in collaboration with the city corporations and municipal authorities. The development of, and improvements to, the IPH laboratory must be supported as well. IPH should be given adequate funding for training and research in this regard.

The Bureau of Health Education will be given funds for popularizing the food safety acts/laws/ ordinances and public rights and for promoting good food handling and hygiene among consumers. The Consumer Association of Bangladesh will also partner in this program. The experience gained from the Healthy Marketplace initiatives being piloted in the country needs to be evaluated ahead of a more comprehensive roll-out.

3.4. Disease Control (DGHS)

Responsibility for Disease Control in the country is with the Directorate General of Health Services (DGHS). In order to perform his tasks there are 17 Line Directors (LD) in the DGHS, each responsible for preparing and implementing a specific Operational Plan (with budget).

3.4.1. Communicable Diseases
(DGHS/LD CDC)

Tuberculosis (DGHS/LD TB and Leprosy)
TB control is a successful public health program to be maintained. Estimated mortality is 45/100,000 population. TB prevalence rate (all forms) fell from 630 per 100,000 population in 1990 to 223 in 2007, TB incidence (all forms) reduced from 264 per 100,000 population in 1990 to 223 per 100,000 population in 2007, and the TB incidence (new smear positive cases) reduced from 119 per 100,000 population in 1990 to 100 per 100,000 population in 2007. (Global TB Control WHO Report 2009) -The quality of DOTS will be strengthened as well as laboratory diagnosis, case identification and case holding. MDR TB will be reduced from 3.6% to 2.0%. Laboratories at some of the relevant levels may have to be strengthened and utilization of some existing laboratories may be co-opted to serve the TB program. There have been difficulties in assuring the quality of sputum smear microscopy (SSM). Capacity and commitment at microscopy centers (MCs) needs to be strengthened. As TB is a poverty-related disease, any contribution in the area of improving overall living conditions, increasing household income, improving nutrition, etc. has also an impact on reducing the burden of TB.

The strategy to halve the prevalence and mortality and begin to reduce the incidence includes, as per National Strategic Plan to Control TB (2011-2015): (i) Pursue high quality DOTS expansion and enhancement; (ii) Establish interventions to address HIV-associated TB and drug-resistant TB; (iii) Contribute to health system strengthening; (iv) Forge partnerships to ensure equitable access to an Essential Standard of Care to all TB Patients; (v) Engage people with TB, and affected communities; (vi) promote operational research. In addition more emphasis will be given to diagnose smear negative pulmonary TB, Extra pulmonary TB and Childhood TB. Practical approaches of Lung Diseases and measures of infection control are planned in the TB control strategic plan 2011-2015 that will be implemented in phases.

The new sector program will fully support this strategy as a priority. Supportive supervision has to be meticulous to ensure that DOTS is implemented with commitment and referral is followed up effectively to preclude development of MDR, XDR-TB. ACSM will be enhanced to improve compliance. Existing private practitioners will be mobilized in a more organized and sustained way. One of the reasons of spread of TB and MDR-TB is the low nutritional status of the patients, most of whom are poor. The TB control program will liaise with the nutrition program to facilitate nutrition services for these patients. This will be monitored on a regular basis. TB targets have been set as follows: case finding rate to be > 75%; treatment success rate to be > 95%, which therefore would allow minimum (< 5%) unfavorable outcome rate. Measures will be taken for sustainability of the successes achieved through supervision, monitoring and strengthening of MIS system.

Leprosy was practically eliminated (prevalence of less than 1 per 10,000 population) nationally in 1998. However, it was still over, 1/10,000 in 5 districts and 5,238 new cases of leprosy

detected in 2009. Training of health care staff, awareness programme among the population, active detection in pocket areas of high leprosy prevalence and treatment of the patients and assistance to cure but deformed patient will be continued. The Leprosy elimination target of < 1/100,000 population is to be reached in every district during the intervention period of HPNSSP.

HIV/AIDS and STD

(DGHS/LD AIDS/STD – Safe Blood Transfusion).

Since the first detection of HIV in Bangladesh in 1989, the rate of infection has not increased in comparison to the neighboring countries. Bangladesh is still fortunate to be low prevalent country in the region with prevalence < 1% among most at risk population groups (7^{th} and 8^{th} surveillance round). MDG Indicator 6.1: prevalence among population aged 15-24 years data shows that the prevalence of HIVAIDS in Bangladesh currently is less than 0.1%.

The mission of NASP/ HIV is to improve the quality of life of the members of high risk and vulnerable groups and general population of Bangladesh by preventing spread of HIV infection and reducing the impact of AIDS, as set out in the National Strategic Plan for HIV/AIDS 2004-2010. The overall prevalence of HIV and active syphilis among 12,786 samples accessed in the 8^{th} round (2007) is 0.7% and 3.3% respectively. The surveillance has shown HIV prevalence among female sex workers in different setting was < 1% except those from Hili where four samples tested positive out of 150 samples (2.7%).

The capacity of the national AIDS/STD program (NASP) will be strengthened, both management and technical aspects. Permanent provision structures will be established in the revenue budget. A new comprehensive national strategic plan for HIV/AIDS prevention and control will be developed. HIV is closely linked with poverty and gender discrimination. Without addressing gender inequity and poverty, efforts to prevent HIV/AIDS will not be achieved.

MDG indicator 6.2: Condom use rate at last high-risk sex show that the rate among married couples was low at 4.5% in 2007 and is unlikely to scale up significantly by 2015. Condom use rate among different sub-groups of Most at Risk Populations (MARPs) has increased but is still lower than required for an escalation of HIV coverage.

There is increasing evidence emerging in the country of an epidemic among the IDUs and spreading into other population sub groups. High Hepatitis C viruses (HCV) levels in many cities among IDU confirm high injection sharing behavior. However, a consistent decline in HCV is being documented in five cities including Dhaka.

The National Strategic Plan (2004-2010) that was prepared by Government in consultation with other stakeholders provided the framework for the national response by defining strategies and priorities for HIV/AIDS prevention and control in accordance with the National Policy on AIDS. NSP prioritized five program objectives: (i) provide support and services for priority groups; (ii) prevent vulnerability to HIV infection; (iii) promote safe practices in the health care system; (iv) provide care and treatment services to people living with HIV; and (v) minimize the impact of the HIV/AIDS epidemic. Review of NSP 2004-2010 is underway to develop a new NSP 2011-2015;

Syphilis

The overall prevalence active syphilis among 12,786 samples accessed in the 8^{th} round (2007) is 3.3%y. Active syphilis rates varied among female sex workers in different venues and cities and in five cities the prevalence rate was more than 5%. As in the previous year, active syphilis rate was highest among the street based female sex workers from Chittagong (10.9%).

Priority will be given to:

- The reduction of needle sharing through more effective needle exchange programmes.
- Enhancing condom utilization rate by commercial sex workers.
- Increasing knowledge about HIV/ AIDS and STD among women in particular.
- The diagnosis and management of STDs.

Malaria control (DGHS/LD CDC).
About 12 million people in 13 districts of the north-eastern border belt, including Chittagong Hill Tracts, live in malaria high-risk areas. Many of them live in highly impoverished communities with low literacy rates comprising different communities and settlers with varying cultural backgrounds. Bangladesh endorsed the Revised Malaria Control Strategy (RMCS) and has reinforced efforts to control malaria in the high-risk areas. Out of the 64 districts in the country 13 are endemic for malaria with four seriously affected. About 98% of malaria cases are reported from these 13 districts. The GOB target is to reduce malaria morbidity and mortality by 60% by 2015 compared to baseline in 2008. Encouragingly, the mortality rate has reduced from 4.6 per 100,000 in 2005 to 0.4 per 100,000 people in 2009, Bangladesh received GFATM grants in Round-6 and Round-9 and program is being managed by GoB in collaboration with BRAC led 21-Member NGO Consortium.
Diagnosis needs to be strengthened through provision of microscopy, RDT and training staff. QA assurance of diagnosis will be conducted by IEDCR (for all vector borne diseases).

The malaria control program is expected to achieve the following targets by 2015:
- 90% of cases to be identified and treated in the 13 highly endemic districts.
- Promotion of ITN/LLIN (2 nets/ households) in 100% households in Khagrachori, Bandorban, and Rangamati, and in 40% households in the remaining 10 districts.
- Replacement of LLINs each 3-5 years.
- Treatment and re-treatment of all available community nets with insecticides to cover the remaining 40% households and selective IRS for outbreak control.

3.4.2. Neglected Tropical Diseases (NTD)
(DGHS/LD CDC)

Interventions to control NTDs, such as filariasis, kala-azar etc., will be given priority. Cooperation with the private sector will be explored. Strategies for controlling and eliminating these diseases will be revisited and updated if necessary with support from WHO. Appropriate budget provision will be allocated on a priority basis, keeping Government's international commitment in this regard.

Filariasis. Filariasis is endemic in 34 districts, with a population of approximately 70 million people. It is estimated that approximately 10 million people of some form of deformity due to filariasis, with another 10 million infected.

The World Health Assembly adopted resolution 50.29 calling for elimination of filariasis as a global public health problem. During the course of 1999 and 2000 WHO launched the Global Program to Eliminate Lymphatic Filariasis by 2020. The disease can be eliminated by a yearly single dose of tablet diethylcarbamazine and tablet albendazole through Mass Drug Administration for 4-6 years successively, as per WHO guidelines, although in some of the districts of Bangladesh no effect was recorded after 9 rounds. Elimination is being defined as a micro-filariaemia rate of less than 1% among people at risk.

The Filariasis control program covers almost all the prevalent areas in the northern part of the country, with the target of elimination of filariasis from Bangladesh by 2015. More attention will be given in future to door to door administration of the mass dose by health and family planning workers and volunteers including boy scouts and girl guides. Drugs will also be administered in schools, masjids, mandirs, churches, cinema halls, clubs, shopping and marketing areas, bus stations etc. Extensive community mobilization will be undertaken before each yearly event. Staff will be trained to implement community-based services for disability prevention and morbidity reduction.

Kala-azar. In Bangladesh, 51.2 million people live in areas with active transmission of visceral Leishmaniasis (Kala-azar). The disease occurs in about half of the country, with a higher prevalence in 10 districts (one single district accounting for more than half of total cases in the country). Both Active and Passive case detection and treatment, and disease and vector surveillance will be strengthened. Elimination is defined as a prevalence of less than 1 case per 10,000 population in an upazila. Elimination will be the goal of the next sector program.
Standard clinical case definition and treatment guidelines for kala-azar and post kala-azar dermal Leishmaniasis will have to be introduced and practiced meticulously. A DOTS approach should also be followed for kala-azar treatment.

Soil-transmitted helminthes (STH): STH is the main cause of disease burden and ranked highest in DALYs lost in children 5-14 years of age in developing countries. A national de-worming program for school children (6-12 years) has been started in November 2008 as a synergistic program of the filariasis elimination program with an aim to de-worm 75%-100% of school children by 2010 (advocated by WHO in 2001)

All targeted children will be reached for twice a year de-worming regimen, to attain the WHO Assembly target of 75%-100% of the school aged children by the year 2010. Health and hygiene education will be given to school children on STH control. Use of water and sealed latrines should be promoted for all the family members.

A focal person will be identified in the CDC program who will be trained on STH control. A work plan is necessary for STH control and regular administration of albendazole/ mebendazole tablet should be ensured among school children aged 6-12 years in the first week of May and November every year, through National De-worming Day. In the November round this may be combined with tablet DEC given for LF elimination. Use of tablets albendazole 400 mg among pregnant women in 2nd and 3rd trimester in all MCH/ ANC clinics/ hospitals will be considered.

Rabies: Rabies is very common neglected disease in both urban and rural community with 100% mortality. The disease is 100% preventable, if early and proper intervention is taken. A total of more than 300 patients with animal bite attend at OPD of Infectious Disease Hospital (IDH) in Dhaka daily, which indicates the alarming situation of disease burden in the country with reported cases of more than 2000 per year. In absence of separate program in DGHS, there is no documented mortality and morbidity record in the country.
A national guideline for rabies control was prepared and approved at National Steering Committee on 11 August 2010. Tissue culture vaccine (TCV) as already started from 11 June 2010 through a new ID schedule and will now be gradually expanded to all divisional levels followed by district and upazila level hospitals. Animal vaccination, animal reduction through birth control and culling of stray animals should be done by concerned department

MOHFW will strengthen its linkage with MOLGRDC and other relevant ministries to improve facilities for safe drinking water and sanitary latrines and facilitating a supportive environment

with a view to combating relevant communicable diseases. Collaboration with the public health engineering department is necessary to prevent STH and some other vector borne diseases. Environmental management, as an integral part of vector management has been used successfully in high-risk areas of many countries. Environmental management should also include improved housing, drainage and sewage disposal. Health education needs to be conducted to encourage people to practice these healthy and hygienic habits.

The capacity of the National Filariasis Control Programme, Kala-azar Control Programme etc. will be strengthened, through effective training and programme management support. The effectiveness and efficiency of the Institute of Public Health and National Institute of Preventive and Social Medicine will be improved by providing effective technical support to facilitate their contribution to the mitigation of the mentioned diseases.

Other communicable diseases, like Avian flu, Swine flu, Nipah virus, Anthrax, Gagrasak poisoning, Mass psychogenic illness and Dengue Hemorrhagic Fever Toxoplasmosis, Zoonotic Diseases, Hepatitis etc. are various emerging and re-emerging diseases to be addressed as separate programs.

3.4.3. Non-Communicable Diseases (NCD)

(DGHS/LD PH interventions and NCD)

The NCD program is geared up to address the following areas, each with its specific diseases.

1. Conventional Non-Communicable Diseases

There is irrefutable evidence of the increasing burden of non-communicable diseases[7]. Reduction of morbidity and premature mortality due to the 'conventional' non-communicable diseases (NCDs) will require appropriate actions at all levels from primary prevention to treatment and rehabilitation in an integrated manner. The government will, in partnership with local government bodies and the private sector, create greater awareness of, and provide services for the control of unhealthy diet and lifestyle related major NCDs, such as cardio-vascular diseases, cancer and diabetes, COPD etc. together with the assistance of Bureau of Health Education. Existing preventive and curative measures with respect to all NCDs will further be expanded and strengthened to increase access to these services. The capacity at all stages, to implement NCD programs will be further strengthened through providing effective number of personnel, training, logistics and funding.

Arsenicosis

It was in 1993 that the department of Public Health Engineering found for first time arsenic in 4 tube wells in Chapainobabgonj. 8 patients with Arsenicosis were identified by the experts of NIPSOM. But increasingly water in many districts has become contaminated. A national policy for arsenic mitigation was approved in 2004 and an implementation plan for arsenic mitigation was formulated in the same year. Now arsenic contamination exceeds by far the Bangladesh drinking water standard of 50 microgram per liter. The GOB together with the stakeholders has undertaken a wide range of arsenic mitigation strategies guided by the national Policy for Arsenic Mitigation issued in 2004, and the Implementation Plan for Arsenic Mitigation. However as of 2009, despite massive efforts to provide safe water supplies in arsenic affected areas, a water quality survey in 2009 has found that 12.6% of drinking water samples collected from 13,423

[7] DRAFT Bangladesh Health Sector Profile, version 2. Section 2.2.5 HLSP, World Bank, MoHFW. April 2010.

households around the country do not meet the arsenic standard for drinking water. This is equivalent to approximately 20 million people still being exposed to excessive quantities of Arsenic. Patients are gradually increasing and in 2008-2009 the number of patients identified was 38,320, now being around 46,000. Recent knowledge of health threats posed by arsenic indicates that it gives rise to cancer, Diabetes Mellitus and cardiovascular disease. Knowledge of penetration of Arsenic in the food chain makes urgent action absolutely essential. At present, DGHS is conducting awareness programs, training of health care service providers and patient screening programs. DPHE conducts water screening for arsenic. But due to lack of manpower of DPHE at field level, these interventions have become weaker. As DGHS has enough manpower, it can run programs to strengthen water screening at community level.

Cardio-Vascular Disease

Remarkably increasing incidence of Ischemic Heart Disease (IHD) has reached 10% due to modern life style, resulting in increased premature mortality and morbidity. Prevalence of rheumatic fever (RF) and rheumatic heart disease (RHD) in the 1990s was 3.8 / thousand children aged 5 to 15 years (Ahmed et al, 2005). A recent study shows that RF and RHD further declined to 1.2 per thousand children aged 5 to 22 years (unpublished data, WHO, 2005). This was supported by a declining trend observed in hospitals (Zaman et al, 2001). This decline could be further accentuated by applying the cost effective secondary prophylactic measures (WHO Expert Committee 2004). Metabolic syndrome, a precursor of IHD was found to be fairly common (2.9 %) in rural woman (Zaman et al, 2006). This can be reduced by interventions starting from community level.

Stroke constitutes 8.9% of the hospital admission among those aged 30 or above (Zaman et al 2007). A Community Clinic based study found prevalence of hypertension in 2009 of 20%. The rate of hypertension could be further reduced by applying the cost effective secondary prophylactic measure.

Cancers

Every year about 150,000 people are diagnosed with cancer (Cancer Society of Bangladesh). Among women the most common being those of the reproductive organs, e.g., the breast, uterus and cervix. A recent WHO study estimated that there are 49,000 oral cancer, 71,000 laryngeal cancer and 196,000 lung cancer cases in Bangladesh among those aged 30 years or above (Zaman et al, 2007). Estimated prevalence of oral cancer is 0.2%, Lung cancer 0.7% and Laryngeal cancer is 0.02% (WHO, 2007). Tobacco consumption is the leading case of lung cancer in Bangladesh. Tobacco control program needs to be intensified for prevention of lung cancer. Oral, laryngeal and lung cancers constitute 37.4% of all cancers irrespective of sexes. These are diagnosed passively and there is no intervention program for prevention of these diseases.

Diabetes

Population data indicate an increasing trend in diabetes prevalence especially in urban areas. In rural adults the prevalence is about 5% (Sayeed et al 2002, Zaman et al, 2001) while in urban areas the prevalence is just double (10.5% in urban Dhaka) (WHO, 2007). This could reflect the effect of unplanned urbanization that lacks the environment for physical activity, consumption of junk food and exposure to stressful life in cities. It is possible to reduce the prevalence of diabetes in urban areas by developing awareness and changing the life style.

Chronic Obstructive Pulmonary Disease (COPD)

The national Institute of Disease of Chest and Hospital (NIDCH), the only tertiary referral hospital for chest disease in Bangladesh, admits about 4500 patients annually in the department of respiratory Medicine, out of which 19% suffers from COPD (Dr. Mostafizur Rahman, personal

communication). Smoking and indoor air pollution (3.6% was the burden of disease due to indoor air pollution related to solid fuel for 2002) are thought to be the two most important causes of COPD in Bangladesh. Awareness development by anti-smoking campaign, introducing smokeless chulli (Burner) and a dust free industrial environment, could play an important role for the reduction of COPD in Bangladesh.

Mental Health

The National survey on mental health in Bangladesh showed that 16.1% of the adult population of the country suffers from some form of mental disorder, requiring immediate treatment. In an urban survey the prevalence of mental disorders including mood, sleep, anxiety and substance related disorders was found to be 28%. Among the hospitalized cases, schizophrenia is the main disorder. A WHO sponsored community survey showed prevalence of child mental disorders of 18.35%, epilepsy 2.02%, mental retardation 3.81% and substance abuse 0.78%. (See OP of the PIP for details)

Given the emerging size of the mental health problems amid changing life styles and in pursuance of government's strong commitment for adequately addressing the counseling and treatment of mental health, partnerships with the media and NGOs will be developed to raise public awareness about appropriate attitude towards and behaviour with mental patients.

Three types of service providers/ volunteers may be helpful for mental health related services at the community level: public sector workers, NGO/ CBO workers and school and religious teachers, who could be trained to identify and counsel substance abuse and mental and emotional cases, provide and follow up simple treatment as per feasibility, provide life skill training and refer serious cases to an appropriate facility. The Mental Health Act, now in draft form, will be given a legal form.

Hearing Disability (Deafness)

About 13 million people are suffering from variable degree of hearing loss (HL) in Bangladesh of which 3 million are suffering from severe to profound HL leading to disability. Deafness and hearing impairment are major but neglected causes of disability. They produce substantial social and economic costs, because of their effects on child health development and education.

Early detection of impaired hearing and proper management could prevent permanent hearing disability. Early detection at the primary level could be achieved with the Community Clinics being established throughout the country. However, for the management of these cases, strengthening of services at the secondary and tertiary level is also required. The present ear care services are exclusively hospital based, where the preventive aspect is neglected;

A strategic plan has already been developed for control of hearing disability (Deafness), which hopefully will play an important role for implementation next sector program.

Oral Health

Most of the oral diseases including dental disease can be minimized by maintaining proper hygiene of oral cavity. Control of chlorine in drinking water is important to combat dental diseases. Similarly adoption of proper cleaning procedure of the oral cavity and bringing strict restrictions in bad habits could reduce most of the common and complicated oral diseases. Lack of knowledge and awareness regarding oral hygiene are the main issues which cause oral diseases to be a public health problem.

2. Non-conventional Non-Communicable Diseases

Road Safety and Injury Prevention

The Bangladesh Health and Injury Survey 2005 showed that an estimated 30,000 children die

each year due to injury. This represents 38% of all deaths among children 1-17 years of age. In total approximately 70,000 deaths occur each year due to injury (burning, drowning, acid and accidents at work). Some 40 to 45% of injuries are due to road traffic accidents in urban areas and 54% of them are pedestrians.

The NCD strategy (2007-2010) will be the guiding principle to implement NCD related programs, e.g., dialogue with the Ministry of Communication and Transportation for safety policies and regulation, enhance skills of MOHFW service providers to handle injury patients, build up awareness of the people on pedestrian safety measures, dialogue with Ministries of Industries and Commerce to prevent/ protect from hazards and injuries from industrial products, imported products and wastes etc. A separate strategy document will be developed by the line director, NCD for prevention, control and management of injuries.

To reduce this burden, regular dialogue will be held with the traffic department and transport workers, especially drivers will be oriented to road safety measures and practices, e.g., using walkways, over-bridges, using belts, helmets etc. Community mobilization will be done in collaboration with urban NGOs and city corporation authorities to keep walkway free of any hindrance which discourage people from using walkways.

Violence against Women

Violence against women and girls is a problem of pandemic proportions. At least one out of every three women around the world has been beaten, coerced into sex, or otherwise abused in her lifetime, with the abuser usually someone known to her. This is perhaps the most pervasive human rights violation that we know today, as it devastates lives, fractures communities, and stalls development. A population study done by ICDDR, B confirms the high levels of domestic violence and also confirms that it remains a major public health problem in Bangladesh. Since husbands are the greatest perpetrators of violence against women, effective interventions would need to target them. High levels of domestic violence in Bangladesh imply that a large proportion of the women accessing health services are victims of violence. GOB interventions to provide health care support to women victimized by violence is highly needed.

3. Emergency Preparedness and Response; post disaster health management

The geographical location and the topographical features of the country make Bangladesh vulnerable to natural disasters. The EP&R Program of the DGHS is responsible for the health response to natural and man-made disasters/emergencies, in close co-operation and partnership with other agencies.

The main strategies mentioned in the OP of the PIP aim to increase the level of readiness at all tiers of the health system and improve the capacity of the sector for coordinated post-disaster management. Standard national guidelines for mass casualty management as well as manual for local level health response will be issued and necessary training will be conducted.

Standardization of emergency health supplies and their stockpiling will be part of the readiness program for flood, cyclone, tornado and earthquake. A TA supported strategic study will be commissioned.

EP&R activities will be strengthened. Trainings will be arranged for health and family planning staff in collaboration with Civil Defense Department and Red Crescent Society on risk/ vulnerability assessment, vulnerability reduction, disaster mitigation, review of emergency preparedness and humanitarian assistance. Guidelines, protocols and standard operating procedures (SOP) will be developed.

A standing committee with Director, Disease Control, who is also the line director of disaster

management, as the co-chair may be formed with Director, IEDCR; Director, IPHN; Director, Hospitals and Clinics and Director, IPH as members. Its permanent chair however, has to be the Director General of Health Services for better coordination and effect.

4. Occupational health and safety

Globally the issue of health and safety of industrial workers has evolved into Occupational Health and Safety. But the Occupational Health and Safety Services in Bangladesh is still in the developmental stage. It refers only to some extent to the needs of workers in the industries (both formal and informal) or in some manufacturing process, which and is poor in terms of both quality and quantity. Moreover it does not cover all recognized occupations of the country, e.g. construction, transport and agricultural workers are not covered under the present legislation.

There is a little scope for DGHS to undertake activities related to occupational health and safety such as to identify occupational health hazards, prevalence of occupational diseases and injuries, and preventive measures. The existing occupational health unit of DGHS is not empowered to look into the occupational health and safety status and occupation related diseases in the relevant sectors. Over the years no occupational diseases have been reported to the Inspectorate of Factories and Establishments, even those declared as to be notifiable by the law. However, with the rapid industrialization, the unsafe use of chemicals, number of industrial accidents, fire, etc, there is an increasing need to establish occupational related health care services, as well as hospitals near industrial areas. A major portion of the workers from the informal sectors is at risk of developing acute and chronic toxicity, due to exposure to many toxic pesticides, chemicals and fertilizers, occurrence of occupational diseases and injuries.

The current rules and regulation should be modified to empower the occupational health unit, so that they can work with more authority to oversee the occupational health and safety status and to employ occupational health graduates and experts in the industries and relevant sectors.

At the central level an autonomous institute for 'Environmental and Occupational Safety and Health' manned by relevant multidisciplinary personnel should be established. Environmental health and Occupational health are cross-disciplinary areas, concerned not only with protecting the safety, health and welfare of people engaged in work or employment, but also with the environment and the community. Nowadays, issues of environmental degradation, climate change and environmental pollutions are resultant effect of anthropogenic activities being domestic or occupational. Rapid industrialization with lack of best practices on industrial hygiene is now taking its toll. The goal of all environmental / occupational health and safety programs is to foster a safe environment everywhere. It also protects co-workers, family members, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the environment and the workplace. It may involve interactions among many subject areas, including occupational medicine, occupational (or industrial) hygiene, public health, safety engineering, chemistry, health physics, ergonomics, toxicology, epidemiology, environmental health, industrial relations, public policy, industrial sociology, medical sociology, social law, labour law and occupational health psychology. Unfortunately, we are yet to produce these experts in our country. To produce more experts on environmental and occupational health, this institute should be established. It will have two distinct divisions: Environmental Health and Occupational Health and Safety, but they will work in collaboration with each other. It will carry out academic courses and research work, as well as monitoring many environmental and occupational health issues such as climate change and occupational diseases. It will also develop preventive intervention and control measures, which will be cost-effective, available and acceptable locally.

5. Climate change, Environmental Health and air pollution, Water & Sanitation

The health concerns and vulnerabilities due to natural disaster and climate change are increasing respiratory diseases, heat strokes and cardio-vascular illness; more exposure to vector-borne diseases like malaria, dengue, etc.; increased risk of water-borne diseases such as cholera; and increased malnutrition due to reduced food production. All people will be affected by natural disaster and a changing climate, but the initial health risks will be on the groups bearing most of the resulting disease burden, i.e., poor children, women and elderly people. Creating a well coordinated approach for protecting health from climate change remains a great challenge for the government. Effective surveillance system needs to be developed and institutional capacity to manage these problems including of health professionals. Bangladesh in recent years has experienced some severe effects of climate change. To build capacity and strengthen health systems to combat the health impact of climate change, the MOHFW has formed a Climate Change and Health Promotion Unit (CCHPU, see section 3.6 under IEC / BBC)

The water supply coverage in Bangladesh stands at approximately 97 %. However, the safety of water for human consumption is often suspected: a recent WHO/SEARO study concluded that no SEARO country has an adequate national program of drinking water quality and surveillance. In recent years the problem of arsenic contamination of ground water has further caused large sections of the population to risk exposure due to the absence of alternative safe water supply solutions. Also, large differences in quality occur between rural, peri-urban and urban areas, causing risk of substitution with sources of poor quality. Sanitation coverage in the country is estimated at around 40%, with wide differences between rural and urban areas.

Effective water supply and sanitation coverage in Bangladesh is significantly lower than the estimates. Especially, the rapidly growing urban centers need support aimed at developing sustainable water and sanitation systems.

Substantial further investment in water supply and sanitation infrastructure, and greater sector efficiency, are needed to achieve the Millennium Development Goals (MDG) for water supply and sanitation and other closely related MDGs for child mortality. Attention needs to be given to improve understanding of the contribution of poor water supply, sanitation and hygiene to the national burden of disease. School health needs strengthening as a vital point of intervention for life-skills education for sanitation and hygiene, and for helminthes control and nutrition.

The Government of Bangladesh has initiated a multi-year program on total sanitation starting in October 2003. Water quality surveillance in some 120 towns re-started. Together with continued laboratory strengthening, an overall surveillance system, covering bacteriological and chemical parameters needs to be developed. With frequent natural disasters, collaboration between water supply, health and disaster preparedness sectors should lead to a greater response capacity.

6. Tobacco Control and Substance Abuse

According to Global Adult Tobacco Survey (2009), 58.9% of the male adult surveyed use tobacco and 28.7% of the females use tobacco. Of the adult population 60% smoke and 27% consume smokeless tobacco. Smoking is more pervasive among the poor (70%) and among those who have no education (73%) (NIPORT, 2009). There are over 1.2 million cases of tobacco related illnesses in Bangladesh each year and around 9% of all deaths in a year (57,000 deaths) in the country are result of tobacco use (WHO, 2008). MOHFW has formed a National Tobacco Control Cell (NTCC) to streamline tobacco control activities as Bangladesh has ratified WHO FCTC. NTCC has to be strengthened for full compliance of tobacco control activities.

Substance abuse and drug dependence have shown significant increase in Bangladesh. In an urban survey, the prevalence of mental disorders including mood, sleep, anxiety and substance related disorders was found to be 28%. A WHO sponsored community survey showed prevalence of substance abuse 0.78%. (See OP in the PIP for details). Capacity building, advocacy and awareness campaigns, innovative community-based management programmes, development of training material, support for research on issues related to substance abuse are needed.

LD, NCD may take the lead to mobilize the school text book board to include topics on harmful effects of tobacco e.g. effects on heart and chest and substance abuse in school curriculum. BHE will be supported in mounting anti-tobacco and anti-substance use messages. A policy may be adopted to increase tax on hard drinks and tobacco. All tobacco products need to be packaged in such a manner that pictures and worded warnings may be printed as per the Tobacco Control Law 11 of 2005. The law itself also needs some modification to include public parks as smoking prohibited areas and increase the fine (now Taka 100) if the law is contravened. National anti tobacco campaigns should be started.

Two separate strategic plans were developed for control of NCD & Tobacco which hopefully will play an important role in the implementation of the next sector program.

DGHS will coordinate all sort of activities under the NCD and will provide stewardship of activities, now done independently by IEDCR, BIRDEM, IDCH, Mental Health Institute, NICVD, Cancer Institute and Hospital, NITOR, NIO, Institute of ENT, NIPSOM, ARI of BUET, BSMMU, Medical Colleges and all those health care facilities which manage emergency patients (for injuries and other non-communicable diseases) to establish an effective NCD surveillance system. Sufficient fund will be allocated for equipment, soft ware and training to these institutes for data generation, analyses and reporting, which will be coordinated by InfoBase and Ban Net centre of NCD. Line director, NCD with the technical support of Line Director MIS will collect & disseminate all sorts of data and program interventions.

MOHFW will prepare an Environmental Management Plan (EMP) which will update the Environmental Action Plan of 2004, prepared under HNPSP, to document the achievements, improvements and lessons learned, identifying gaps and how the gaps may be bridged.

Priority activities for the NCDs will include

- Strengthen diagnosis, management and rehabilitation of arsenicosis patients. Expand regular testing of tube wells at health facilities for prevention of arsenicosis.
- Screen for early detection of cancer (cervix, uterus, breast, oral, larynx, and lung).
- Develop a strategic plan on mental health and implement it.
- Implement the newly developed strategic action plan on deafness
- Strengthen and expand Emergency Medical Services.
- Implement the newly developed strategic action plan on injury prevention through BCC. Raise awareness on the prevention of drowning and road traffic accidents.
- Develop a National Occupational Health Strategy.
- Establish an Institute of Environmental and Occupational Health
- Strengthen CCHPU to combat the health impact of climate change. Update the guidelines for health protection from adverse effect of climate change and pre and post disaster situation
- Implement the newly developed strategic action plan on NCD and Tobacco. Develop capacity of health providers in all tiers of health facilities down to community levels.
- Improve coordination between MOHFW and NGOs.

3.4.4. Disease Surveillance

(DGHS/LD HIS, e-Health and MBT)

A functional disease surveillance system is necessary for priority setting, planning, resource mobilization and allocation, prediction and early detection of epidemics and monitoring and evaluation. The capacity of IEDCR will be strengthened to carry out Epidemiological surveillance's of communicable diseases with laboratory support integrated with non-communicable diseases to make IEDCR to be the apex Institute for epidemiological surveillance in the country.

At the Upazila (sub-district) and district level, weekly and monthly reporting systems exists which is supposed to be maintained in UHC's monthly disease profile. These reports are sent to the district level at weekly and monthly intervals. However, these reports are not properly validated. The DGHS control room is responsible to collect reports from the districts, while the Civil Surgeons (C/S) control room in the district is responsible for the reports from the Upazilas. However, these are only operational during disease outbreaks. Therefore there is a need to improve the regular functioning of the control rooms, so that it can provide relevant information during important times.

Objectives/ targets under disease surveillance are (i) Strengthening the upazila and district laboratories to assist in surveillance; (ii) Develop epidemiological reporting system for the most common 10 endemic diseases; (iii) institute biyearly surveillance on nutritional status of under five children, pregnant and lactating women (iv) Conduct TB, leprosy, HIV, malaria, kala-azar and filarial surveillance; (v) Conduct prevalence and risk factor studies of non communicable diseases; (vi) Assist BSTI to conduct surveillance of food safety and food quality.
Sentinel posts will be set up for improving existing reporting system. During the first year, 20% of the districts (12) of the country will be taken up, followed by 20% of the district each year, which will strengthen nation-wide disease surveillance. The sentinel posts will be selected from the 2-3 districts of each division and will include all the upazilas of the selected district.

Integration of NCD and communicable diseases surveillance has been endorsed in the Strategic Plan of Surveillance and Prevention of Non-Communicable Diseases in Bangladesh 2007-2010 by the DGHS, developed with technical support of WHO in 2007. It was also approved by MOHFW. The strategy envisages “all surveillance activities in the country as a common public service that carries many functions using similar structures, processes and personnel”. The surveillance activities that are well developed in one area may become driving forces for strengthening other surveillance activities, offering possible synergies and common resources.

The strategy document advises that data will be sent to MIS, DGHS and finally for analysis to the “National Disease Surveillance Centre” at IEDCR. Forms and formats developed and used by the management of different programs need to be reviewed to make them more user friendly at data generation and data user ends. A study will assist MIS and IEDCR in this regard.
Health Information Systems (HIS) and Epidemiological Information System (EIS) will produce annual publication of reports through national or international seminars, where results obtained in sector efforts will be discussed and analyzed. If necessary, recommendations will be made for further data collection to evaluate program implementation, outcome etc.

Capacity has to be developed at district and upazila hospitals for assisting in disease surveillance and diagnosis. Teachers of primary schools, NGO workers and community volunteers will be trained to identify the clinical features of the most common endemic diseases, as these are the

ones which assume epidemic proportions at times. Partnering with all types of private health care providers for better surveillance, reporting, referral and case management will be established. Maps of all major diseases, on the basis of their incidence and prevalence, will be constructed for each district and Upazila.

3.4.5. National Eye Care

(DGHS/LD National Eye Care)

Studies have shown that 4% to 11% of the Bangladeshis suffer from permanent disability. The Bangladesh National Blindness and Low Vision Survey 2000 showed that the age standardized blindness prevalence rate is 1.53% and thus there are 750,000 blind adults above the age of 30 years in the country. 80% of the bilateral blindness is due to cataract. Experience of collaboration between the government facilities at district level and local & international NGOs and collaboration of Sightsavers with Dhaka City Corporation and community based organisations working in Dhaka city are experiences that the eye care program of MOHFW could benefit from. To facilitate prevention, case identification, referral, management, treatment and rehabilitation, the relevant activities need to be integrated with primary health care (PHC) especially through the services of the community clinics. In this way a primary eye care model at the upazila level can be established throughout the country. School Sight testing will be included in primary schools and the past emphasis on successful vitamin A administration will be continued with more attention given on post natal vitamin A administration through CC staff in collaboration with school teachers and senior students where relevant.

A Vision 2020 national advisory committee has been formed earlier and district vision 2020 committees in 24 districts are functioning well. The program trained so far 70 ophthalmologists, 100 nurses and 3000 primary health care workers. NGOs are supporting the program at district level, equipment was provided to district and tertiary level hospitals for enhancing eye care. So far more than 100 ophthalmologists have been posted at the Upazila level.

The Objectives of the program are (i) to develop/ improve eye care infrastructure emphasizing on secondary and primary care levels (ii) To increase country cataract surgery rates through improving skill of ophthalmologists and mid level paramedics (iii) To strengthen coordination among GoB-NGO and private eye care providers (iv) To control childhood blindness (v) To introduce vouchering scheme to increase affordability of poor, elderly women and children suffering from cataract blindness to eye care services (vi) To generate eye disease burden data (vii) To increase awareness of mass population on eye care.

As a priority activity the National Eye Care Plan will be upgraded and implemented in the sector programme during 2011 – 2016. All the activities and indicators of the program have been summarized in the relevant OP.

3.5. Alternative Medical Care (AMC)

(DGHS/LD Alternative Medical Care)

After the Drug Control Act of 1982 Bangladesh Government has taken different steps for the development of alternative medical care – Unani, Ayurvedic and homeopathic system of medicine. Government Unani and Ayurvedic Degree College was established in 1990 and Homeopathic Degree College established separately in the same year. Bachelor degrees are given in the three disciplines along with some expertise in surgery after five years of study. After graduation, a one year internship is compulsory in the 100 bed hospital established for the AMC. In addition to the degree course there are 11 Unani diploma institutes (10 of 11 in private sector), 7 Ayurvedic diploma institutes and 38 homeopathic diploma institutes in Bangladesh. These diplomas are given after four years of study and 6 months of internship. The Board of Unani & Ayurvedic Systems of Medicine and Homeopathic Medicine controls offering of the diploma certificates, bachelor and master degrees in any of these three disciplines are given by the University. Unani, Ayuverdic & Homeopathic medical services were extended to district & upazila health complex. Now 576 staff (45 MO, 64 compounder & 467 herbal assistants) are working outdoor departments at 45 government district hospitals (15 Unani, 15 Ayurvedic and 15 Unani, Ayuverdic, homeopathic) in the 1998-2003 period under HPSP and continue to HNPSP. Homeopathic graduates as medical officers were sent to these centres on contract basis for delivering quality Homeopathic services under the supervision of district and upazila health authorities so that patients of these district hospitals would get quality homeopathic services. At present according to approved standard organogramme, at each 50, 100 and 250 bed hospitals there will be one post of medical officer in AMC.

The problem with the AMC is the lack of standards of the system, poor job opportunity, little proper educational system, teaching methodology, research, publication, information and awareness about AMC. Besides there is paucity of data in Bangladesh to substantiate effectiveness, efficiency and safety of the medicines given through the systems. Managers in the public sector hospitals are all trained in allopathic systems of medicine. They do not have strong faith in the system to provide unflinching support to the AMC systems in their vicinities. The Homeopathic, Unani and Ayurvedic Board of medicine is weak and has limited clout.

Strategies: For a successful implementation of the future programs and activities of AMC, support is important to those who themselves are in allopathic system of medicine. It is necessary to get support from the directors of hospitals and clinics. There is a need to form a team of experts with clear cut terms of reference to prepare national AMC policy, an AMC user's manual, formulate standards, prepare post-graduate curricula, and organize training / seminars and fellowship for AMC doctors to study AMC efficacy and safety. Introduce licensing or registration systems by the existing BMDC Board, which will require strengthening the educational system, research, production and publication, workshop and training.

3.6. Information, Education and Communication (IEC) and BCC

(DGHS/LD - BHE + DGFP/LD IEC/FP)

DGHS: The Bureau of Health Education (BHE) under DGHS conducts communication and health education and promotion activities through existing national, divisional and district offices with audio-visual capacity and district hospital based staff for imparting health education to the patients, their relatives and attendants. Preparation of a variety of communication materials are being drafted, tested and distributed. Laudable interventions being implemented throughout Bangladesh, such as (i) School Health Education (ii) Hospital Health Education (iii) Occupational and Industrial Health Education (iv) Environmental Health Education (v) Community Health Education for selected and vulnerable groups (vi) Prevention and control of communicable and non-communicable diseases (vii) Prevention and control of emerging and re-emerging diseases (viii) Adolescent and Reproductive Health Education (ix) Nutrition Education (x) Prevention and control of STD/ AIDS and MDR-TB.

DGFP: The IEM Unit of DGFP conducts IEC/BCC activities through existing national, divisional, district and upazila family planning offices. There is no different cadre of official at the district level for IEM activities. IEM Unit Prepares communication materials, e.g. posters, fliers, handbills, folders, billboards etc. Features films have been developed and short TV serials, short films, drama, spots, advertisement and radio jingles produced. Research is conducted and other communications interventions are implemented at the community level. Strategy documents have been developed. The Information, Education and Communication (IEC) by IEM Unit on population, health, family planning and nutrition issues have been the key interventions for more than three decades. Despite adverse socio-economic situation the IEC activities have resulted in awareness building and have contributed to a greater use of key health, family planning and nutrition services. This program is intended to bring about behavioral changes among the people towards one child family norms, promoting family welfare and facilitating increase in CPR and decrease in TFR, IMR, MMR etc through special emphasis on interpersonal communication (FWA, FWV), electronic media (Radio, TV serial, TV drama, TV Talk show, TV spot) and print media (advertising through news paper). Media, messages and contents for both are inter-related and wide ranging covering all sectors of economy.

Climate Change and Health Promotion Unit (CCHPU), MOHFW

Bangladesh in recent years has experienced some severe effects of climate change. To build capacity and strengthen health systems to combat the health impact of climate change and to protect human health from current and projected risks due to climate change, MOHFW has formed a Climate Change and Health Promotion Unit (CCHPU). As climate change and health are cross-cutting issues, the TOR of the unit are:

- Coordination of health promotional activities (IEC/BCC of DGHS, DGFP, NSP)
- Capacity building for the consequences on health of climate change
- Using e-Health and Telemedicine for effective networking in health systems throughout the country
- Research, Monitoring, Evaluation and Coordination of health sector activities to reduce health hazards during disasters and emergencies related with climate change.

All the programs face problems with the quality, effectiveness and efficiency of the products, as the enthusiasm of their production does not match with their utilization; National programs that cuts across many diverse audiences, require careful orchestration of activities in order to ensure

(i) the delivery of correct and consistent messages for each audience segment; (ii) the desired behavior change outcomes, and (iii) cost-effectiveness.

A National Health Education and Promotion strategy and national Communication Strategy for family planning, and reproductive health has been developed and accordingly IEC activities for MDG during the period of 2010-2015 have been considered. This will promote Health, Nutrition and MNCH based FP services, as well as provides need-based IEC support and will increase community participation in the FP program.

Objectives are to develop messages that relate to:

1. How the 10 most common infectious and five most common non-communicable diseases are transmitted and their reasons
2. About their right to health, family planning and nutrition
3. About hygienic living, e.g., hand washing, waste disposal, healthy housing
4. Location and service provider-wise availability of contraceptives and on nutrition services.
5. Effects of different contraceptives and ten most commonly used medicines and nutrient value of cereals, vegetables, fruits, legumes and nuts
6. Small family norm, increase use of FP methods, especially more effective long-term and permanent methods.
7. Danger signs of pregnancy, diarrhea, pneumonia, most common five types of malnutrition
8. Strengthen IEC and BCC activities to combat the health impact of climate change and to protect human health from current and projected risks due to climate change

Through IEC and BCC, the BHE will raise the awareness on safe motherhood, breast feeding, climate change, emerging and re-emerging diseases, food safety, vaccination, vitamin A administration, RTA, neonatal care and violence against women VAW).
Use of MIS generated information from DGHS, DGFP and others relevant directorates (and data sources) is important in order to know the priorities of information for communication, as well.

COMPONENT 1B: SERVICE PROVISION

3.7. Primary Health Care (PHC)

(DGHS/LD Essential Service Delivery)

3.7.1. The Bangladesh Upazila Health System (UHS)

In 1998, as part of the implementation of its Sector Wide Approach Programme, the GoB developed an Essential Services Package (ESP) as the means to prioritise delivery of cost effective services to the most vulnerable communities. The ESP, built on the commitment to a Primary Health Care approach already in place includes:

- PHC including safe motherhood, family planning, MR, post abortion care, and management of sexually transmitted infections
- Child health care
- Communicable diseases (including TB, Malaria, others) and emerging non-communicable diseases (Diabetes, Mental health Cardio-vascular diseases).
- Limited curative care
- Behaviour change communication (BCC).

Given the changes in the morbidity patterns in the country, it is advisable to revise / update the current ESP to take into the current BOD. This should be costed and if necessary prioritized to ensure coverage of the most cost effective interventions in the most equitable manner.

The intent was to move to a facility based service with the ESP being delivered by an integrated team of health and family planning personnel up to Upazila level, with the entry point at a community clinic (CC), serving populations of about 6,000. Over time, the door step or domiciliary service would be replaced by the fixed site services however where necessary, the mobile service will continue to ensure coverage of at risk populations. The community clinic, at the ward level, will represent the first entry and contact point to the health referral system. Patients would be referred to the Health and Family Welfare Clinics (HFWC) at Union level and the Upazila (or Thana) Health Complex (UHC) at the Upazila level. The UHC is the first inpatient facility in the network, and provides both primary and secondary level services. As such it serves as apex of the WHO recommended District or Upazila Health System (UHS).

The draft National Policy in 2009 has reinstated the policy directive about the integrated community clinic as the 'one stop shop' for first line access to health services from the public sector. Work has begun to restore already constructed community clinics and to construct them where needed. In addition, staff is being recruited for the positions of Health Assistant, Family Welfare Assistant and Community Health Care Provider. These three staff members will provide the various services in the CC and ensure the link to the community.

However, there is considerable evidence from within Bangladesh that unless Community Clinics are part of a functional health service, their performance is likely to be limited. This is understandable as CC will need supervision, drugs and supplies, referral possibilities and training of their staff. At the Upazila level, its management should be able to plan, budget, implement and monitor the day-to-day activities of service delivery for the people in their catchment area (averaging around 270,000 people). In short, such an Upazila Health System (UHS) consists of a three-tier system, being (i) a Hospital (= UHC with 31-50 beds), (ii) Health Centres (with or

without beds) and (iii) Community Clinics. Together these define the available service delivery facilities, each with a different staff mix (doctors, nurses and paramedics), most often of a multi-purpose or polyvalent nature. The District level (2-3 million people) will play a crucial role to oversee the work of the UHS and provide the financial support needed through the Local Level Planning, envisaged as part of the national decentralisation process.

Prerequisites for such an integrated Upazila Health System are:

- A management committee composed of all those responsible for the provision of the services and those responsible for the support needed by finance, monitoring, maintenance and other services at that level;
    - This committee is tasked to make annual plans with annual budgets and has the mandate to set their own priorities within the limits set by national policy. They are asked to wisely use the resources at their disposal according to the targets set in their annual plans;
    - The committee is also tasked to implement these plans and report quarterly or annually to the higher levels of authority on progress and constraints they have been facing in reaching their targets with the resources (personnel, equipment and money) put at their disposal;
- An update (and if possible costed) Package of Essential Services for Upazila level and below, e.g. maternal health, nutrition, family planning and treatment of common diseases;
- Establishment of linkages with the community including community health committees that take responsibility for developing and sustaining community ownership and active participation in health at the various levels;
- Agreement on management responsibilities to provide oversight and coordination between district, upazila, union and community levels.

The concepts underlying the re-vitalisation of the Community Clinics (CC) contain already these pre-requisite elements. For example, the community clinics are intended to extend static health services from the Union to the Ward level, thereby potentially increasing availability of care. The original concept of the CC had strong elements for promoting community ownership and active participation.

The existing health structure form District to Community Clinic level offers the opportunity to develop an integrated local level health system, backed by strong referral, performance management and CPD systems. At the local level it should consist of the Upazila Health Complex, the health facilities at Union levels and the Community Clinics at the level of the villages. Key support for (i) clinical leadership, (ii) performance management and (iii) referral of complex cases would come from the district level. In Bangladesh, with the political commitment of the new and democratically elected government to bring health to all its citizens, this PHC approach will become one of the pillars of the Health Policy of the MOHFW, as aptly described in the Election Manifesto of the Awami League 2008. See the drawing below for an adequate representation of the Upazila Health System (UHS), with management links to the district level.

Result

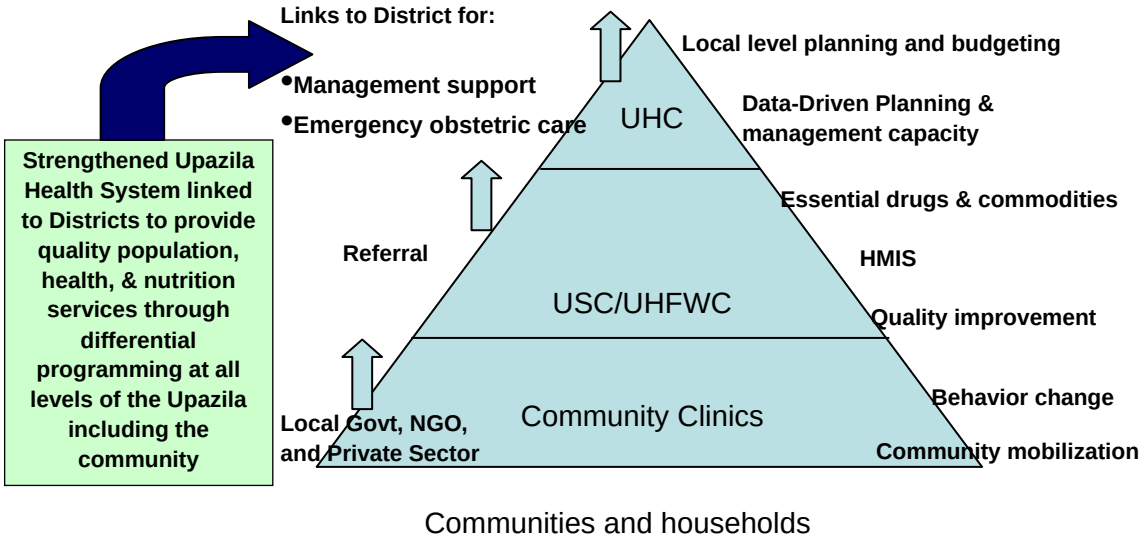

Figure 1. The Upazila Health System in Bangladesh.

When the expansion of Community Clinics will become part of the Upazila Health System, it will effectively integrate the former vertical services into one coordination structure within Primary Health Care (PHC). It will expand services to those that are most difficult to reach. Personnel-wise, some important gains could also be made to solve the HR crisis in the peripheral health facilities (transfer to the revenue budget).

Steps to be taken in the next sector program will be:

- Prepare for and define the composition and tasks/responsibilities of the Upazila Health Management Committee (UHMC) with tasks in planning, budgeting, priority setting, implementation, supervision and reporting.
- Develop a Capacity Building Programme that prepares the committee members for their future tasks and responsibilities in managing the various (support) services in the UHC, the Union-level facilities and the Community Clinics. It will be important to have the various management tools (planning format, budgeting format, M&E, supervision and reporting format) in place before the start of this capacity building.
- Define the referral and supervision linkages between the various levels of care (District, Upazila, Union and Community) and spell out the responsibilities among all actors and stakeholders in order to ensure the necessary 'unity of command'.
- Elaborate a three year annual rolling plan that allows for flexibility in the implementation and ensure that there is a reliable monitoring system in place to report regularly on performance, constraints and successes.
- Finally, in the first 2-3 years of this sector programme, MOHFW could decide to start small with just a limited number of selected Upazilas in each district (radius of two hours travel for the population), where the required staff (doctors, nurses) and equipment is available for caesarians and other surgical interventions.

3.7.2. Health Care at Union Levels

Union health and family welfare centers need to be made fully functional as pat of the UHS. Midwifery nurses may be deployed at union level facilities with a congenial atmosphere for them to stay in the area towards providing safe motherhood programs, including normal and assisted deliveries. Training will have to be arranged on priority basis for the cadres of staff, who will be or have already been posted at union level, like the skilled birth attendant.
Every union should have a facility with capacity and readiness to conduct normal delivery and refer complicated cases to facilitate reaching of MDG 5.

3.7.3. Community Health Care Services (CHCSD)

The first decision to establish a chain of community based, community oriented, close to people health care facilities was taken by the Government in 1997. This intention has been reinforced in the Awami League Manifesto 2008 and has since been put into implementation.

In addition to an extensive program to repair 10,723 community clinics (CCs) established earlier, another 2,876 are planned for construction, of which 700 in the coastal belt will be double storied so as to provide shelter in case of emergencies. In addition to the two service providers (HA and FWA), a new post of community health care provider (CHCP) has been created in each of 13,500 CCs, which will not only strengthen service delivery but also provide employment opportunities for rural women. The CHCPs to be recruited under the project will have to be included in the regular revenue set up of the government for sustainability of the activities.

With the re-vitalization of the CCs by the present government following their election manifesto, management groups, community participation in CCs will be ensured. CCs are also expected to be the hub and foundation of a strengthened, improved and effective upazila health system catering for the needs of the rural population. The CCs are the grass root level one stop PHC service facilities, catering to the day to day health needs of the vast majority rural population.

Interventions
A project is being implemented outside the HNPSP with a budget of more than 2,600 crores taka, 500 crore of which is expected from the development partners. The title of the project is *Revitalization of Community Health Care Initiative in Bangladesh* and is considered a flagship intervention of the Government. This program is headed by a Project Director (Additional Secretary) and will end in June 2014. After finishing the project, it will be merged into upazila health system. Within the interim period (July 2011 to June 2014) there will be one LD of CC.

The services to be provided at the CCs are: maternal, neonatal and child health care, reproductive and adolescent health care, IMCI, family planning, EPI, nutrition services, communication and counseling, identification and management and referral of common infectious/ endemic diseases, e.g., TB, malaria, pneumonia, filaria, kala-azar, STD, diarrhea, skin diseases, asthma, malnutrition, emergency and basic obstetric care, minor injuries, mental health, eye care, deafness, cancer, hypertension, diabetes, old age problems etc.;

The current commitment to spend at least 60 % of the total budgetary allocation at Upazila level and below will continue so as to improve the quality of, and access to PHC for rural people, who

still constitute more than 70% of the total population of the country[8]. The provision of the essential services package (ESP) delivery will be updated, strengthened and promoted.
The functioning of the upazila health complexes, union health and family welfare centers/sub-centers will be strengthened and further consolidated through the provision of the essential services package. This implies a variety of coordinated actions:

- Providing adequate human resources, drugs and equipment etc. through the Upazila Health System to the CC and the UHFWC.
- Upgrading of the 31 bed UHC to 50 bed facilities with, crucially, the HR to provide more specialist services will be undertaken.
- Upgrading of the union health and family welfare centers with a limited number of beds for maternal and emergency services.
- BCC activities, for which there are two organizations in the Ministry, will be strengthened.
- The involvement of local government institutions and NGOs will be ensured to support the CCs Management Group (CCMG) and the involvement of UP members in stimulating informed demand, quality services and appropriate utilization, particularly by the poor, women and elderly.
- CC Management Groups with the support from the CC salaried staff will be strengthened to improve provider accountability. They will also be utilized to promote maternal health, family planning and nutrition. Demand-side financial barriers will be alleviated though programs such as the maternal health voucher scheme.

CCs, as was planned originally, need to be capable of conducting normal deliveries through SBAs. Similarly union level facilities should also be able to conduct normal deliveries with the help of trained FWVs. This has been successfully piloted in the past. A policy decision will be made on deploying nurse midwives to union level facilities (with maternity beds) to facilitate normal delivery services close to mothers' homes. These strategies will be necessary for attaining the MDG goal 5 through reaching a target of 60% of child delivery in health institutions.
Other approaches which will help promote community participation are: transparency of the system, countering the relief mentality by instilling self respect and the concept of self-reliance and emphasizing the participation of women, and the poorest and ensuring curative care first.

Priority activities will include

- Develop standards for services, quality and logistics for each tier together with relevant clinical, managerial and procurement experts.
- Provide guidelines and training manuals/ modules. Train staff of different levels, as per their expected responsibility for a given level. Train health providers (HAs and FWAs) at the CC in a cascading manner under a subcontract, first on a pilot basis.
- The new post of community health care provider will strengthen voice and accountability through support to CC management groups.
- Strengthen CC management groups to ensure community participation in CC management. NGOs will be invited to assist in supporting this initiative.
- In the absence of human resources, provide service packages with support from NGOs/CBOs (sign MOUs) to be agreed between the local public health manager and the contracted party.
- Create a fund, managed by the CC management groups to pay for referrals and transportation of emergency cases and for treatment of the poor who cannot pay for their own services.

[8] NSAPR II

3.7.4. Difficult to reach populations

Specific populations: It is estimated that there are 2.5 million people in Bangladesh, who are members of 'ethnic populations'. Majority of them (42%) live in three hill districts of the Chittagong Hill Tracts (CHT), while others are scattered in northern hilly regions and some coastal districts. They belong to 45 different communities. They are culturally and economically distinctive and speak a number of different languages. These communities are particularly poorly served by health facilities. Literacy levels and nutritional status tend to be very low. As they live in remote areas, it is difficult to attract health workers to stay in the area. These communities have specific needs in their cultural settings which necessitates special measures and adjustment in delivery mechanisms. Collaboration with MOCHT and UNDP in the CHT should be strengthened as they are providing support to the health sector, but – unfortunately – with little coordination.

People with disabilities (PWD): Poverty and disability are very closely linked. Surveys on disability and injury estimate that there were 6% of children below 18 years with disability and 14% of the population aged 18 years and above (Bangladesh Health and Injury Survey, 2005). Many of these disabilities are preventable, such as through actions on low birth-weight, malnutrition, iodine deficiency, eye care, injury prevention and skilled management of complications. Disabled girls face multifaceted problems, e.g., sexual abuse, unwanted pregnancies, marginalization in the family and society. They have to be dependent on others for survival, as they are unable to work. They have limited access to health services due to physical, psychological, social and economic barriers. Both infrastructure and services will need to adequately address their needs such as accessibility and human resources development that addresses issues of attitudes and behaviour of service providers towards them. Advocacy on the specific health needs of this particular group is ongoing and piloting of services such as water and sanitation has been done. Intersectoral coordination is important in this area, as various other government ministries are also involved, such as the Ministry of Social Welfare. Research, testing and provision of various aids e.g. to mobility, hearing, etc by both research centres, NGOs and government will need to be promoted

Elderly: People > 60 years of age constitute 8% of the total population of Bangladesh. They are a relatively neglected group in terms of health services planning and are likely to increase the numbers as life expectancy increases. Widowhood and poverty affect the elderly women more socially and economically and Bangladesh will probably soon be following international trends of longer life expectancy for women. The main aim for geriatric care is to promote health, well being and independence of the elderly. The specific program objectives are to: (i) create awareness for geriatric care management (ii) train the geriatric caregivers specially nurses in hospices and hospitals (iii) increase service facilities for elderly at all levels (iv) encourage families to take care for their older members; and (v) enhance intersectoral / public-private collaboration. Attitudinal changes will also need to be encouraged so that older people are seen as valuable, active and productive members of society and therefore entitled to quality care and services.
The Ministry of Social Welfare has introduced a Hospital Social Service Program in both government and non-government hospitals, where the needs of elderly patients are emphasized. This program needs to be reviewed and scaled up. There are also a small number of private initiatives in this area, which could be encouraged.

Geographically excluded populations: Various regions of the country, because of their geographic location and difficulties in access, are isolated from the mainstream government services. These include the chars in the Jamuna, Padma, the haor areas and the some of the remote coastal areas. Particularly in the rainy season, access to these areas is difficult for government staff and access to government facilities is difficult for inhabitant of these areas.

While government initiatives in infrastructural development are improving access, this is still insufficient. Alternative methods of increasing access should be further explored and expanded.

Professionally marginalized groups: Various groups are socially marginalized and excluded because of their professions. These include sweepers and sex workers who are also impoverished. This marginalization leads to limitations in accessing to various government services, whether it be education, health or other benefits. However their professions are related to various health and security risks. They are often unaware of the health consequences of their professional activities, unable to take the necessary preventive or curative measures and are unable to switch occupations due to various social constraints. The health services providers are often unwilling to treat or advise such patients and also not always capable of dealing with their specific needs. In order to ensure equity in access for all, both the clients and the service providers have to be motivated to use the health services available and to enable these groups to access these services with dignity and respect.

Socially excluded groups: There are a number of groups who are marginalized and excluded, due to a combination of factors such as caste, religion and occupation. The Dalits and Rishis are examples of such groups. The AL Manifesto has specifically mentioned the need to address the rights of the Adhivasis and the Dalits. In their case too, their social exclusion is aggravated by economic exclusion and poverty. This marginalization leads to limitations in accessing various government services, whether it being education, health or other benefits. Again the health services providers are often unwilling to treat or advise such patients and also not always capable of dealing with their specific needs. In order to ensure equity in access for all, both the clients and the service providers have to be motivated to use the health services available and to enable these groups to access these services with dignity and respect.

3.8. Hospital Management

(DGHS/LD Improved Hospital Service Management IHSM))

3.8.1. Secondary and Tertiary Hospital Care at District - National levels

Functionally, public sector hospital services are divided into three levels: primary, secondary and tertiary levels:
The primary level consists of Upazila Health Complexes (UHC) and has some 30 beds. Many of them are being upgraded to 50-80 bed hospitals.
The secondary level district hospitals range in size from 100 beds to 250 beds and provide specialized care in addition to primary care. Presently, up-grading of district hospitals from 100 beds to 150/200/250 beds is almost completed.
At the regional and central level, Regional Hospitals, Medical College Hospitals and Specialized Hospitals (250-1700 beds) provide specialized and super-specialized services. Some of them also function as teaching hospitals. The secondary and tertiary level hospitals are linked with other hospitals as referral centers, particularly with regard to the provision of Comprehensive Emergency Obstetric Care.
Hospital services in the public sector are the most visible area of clinical service delivery. Quality of care is among the most vulnerable & sensitive issue / challenges of health services in the present time.

A flourishing non-public sector is growing very fast, mostly located at district and above. There is widespread public perception about the low quality of health service delivery, be it provided by government, private or other non-state actors. Unfortunately, accident and trauma patients as well as those needing emergency attention are least served by the private clinics and hospitals, and it is only the public hospitals which provide services for them.
Complaints about the weak governance in the public sector relate to unavailability of designated health personnel, pilferage of drugs and other essential supplies, mistreatment and negligence of the clients, unauthorized and illegal payments at public health premises, etc. The weak governance in health sector makes the poor and the vulnerable members in society to suffer the most in terms of both costs and deficient service delivery.

Access to hospital care is influenced by gender and poverty as was shown by a BIDS/ HEU study in 2003. Only between 20-49 years of age do women use out patient facilities in any numbers in public sector health facilities, with a similar trend for in patient services. Between 15-19 years attendance rates are higher. Women's use of public services decreases as one goes up through the levels of care from HFWC to UHC to district hospital. This is most obvious in case of young infants. The study showed that utilization of inpatient facilities was 62% for males compared to 38% for females, with the chance that the younger the child the higher the disparity. The same scenario emerges at an age of 65 years and above. The study also found that only 12% of the outpatients and 1% of the inpatients received a full course of medicine from the hospitals. On the other hand, 36% of the outpatients and 34% of the inpatients did not receive any medicine at all from the hospitals. Therefore, quality of public hospital services has scope for improvement.

The quality of HNP services will be improved by continued investments in clinical, technical & managerial skills through continuous education, training and by improved clinical quality audits. The volume and coverage of HNP services will be increased by expanding the provision of government services, taking into account comparative

advantage and through partnerships with private and NGO providers, particularly to expand the volume of others supportive services. At the same time effort will be made to increase the volume of services being delivered from existing government facilities, primarily by making them more attractive and user friendly (improving provider attitudes) and by improving of management of these services. It is important to improve the monitoring mechanism of hospital services to ensure quality services.

Interventions

Types of services to be offered by secondary and tertiary hospitals depending on bed capacity will be standardized along with manpower needs and table of equipments linked to the services. Progress achieved so far in this aspect will be further strengthened and expanded. Appropriate manpower development and management structure will be developed for running day to day functioning of the existing hospitals. New branches of sub-specialization will be gradually created in all medical college hospitals, so that patients' rush to the capital city can be minimized. It is the intention that all medical college and tertiary hospitals will only accept referred patients. A network of well-worked out referral system will be developed so that patients are assured of receiving treatment from health facilities and that patient load at the higher levels is not needlessly burdened by those who can be treated at the local level. Referral linkages will be developed between the specialized, tertiary and secondary hospitals effectively and given due profile. A separate deputy program manager, suitably empowered, will be appointed to take this activity forward in a strategic manner.

Priority activities are:

- Strengthen the performance of primary, secondary and tertiary level hospital services by introducing clinical protocols and the total quality management concept and define referral linkages.
- Establish hospital accreditation and QA in the primary, secondary & tertiary level public and private hospital services.
- Provide autonomy for the big public hospitals. Pilot autonomous hospital management in 6 tertiary (4 medical colleges and 2 specialized hospitals) and 6 district level hospitals;
- Strengthen of DGHS to monitor all private hospitals and diagnostic centre licensing &QA activities"
- Develop and initiate a performance based system of all service providers in tertiary and district level hospitals
- Equip primary, secondary and tertiary level hospitals with the required range of modern materials and diagnostic facilities.
- Establish an effective waste management system (WMS) in all the tertiary and district level public and private hospitals
- Transform the existing hospitals into women friendly hospitals; improve the quality of existing EmOC activities.
- Strengthen emergency services in public hospitals and make them available in all non-public hospitals as mandatory.
- Ensure provision of safe blood in the public and private hospitals.
- Revitalise, strengthen NEMEW and TEMO to ensure adequate maintenance services
- Introduce evidence-based practice (EVP) and risk management practices.

Hospital Autonomy

Administrative and financial autonomy will be ensured for better management of the existing public sector hospitals. Management Committees at hospitals will be strengthened for better and effective service delivery including ensuring utilization by the poor and women. Provision of

technical assistance will be explored to make the management committees effective. The principle to be adopted will center on maximum delegation of financial power and administrative authority without compromising accountability.

Hospital autonomy will be introduced initially for the tertiary level specialized hospitals and gradually extended to medical college and district hospitals. Management Committees at hospitals will be strengthened for better monitoring its jurisdiction will be expanded.
Accountability will be ensured through public review of the hospital performance – for coverage and quality on a quarterly basis, to be participated by departmental heads and patients and to be chaired by the director of the hospital and by the principal of the medical college
A draft concept paper on "Hospital Accreditation" & action plan has already been placed in MOHFW. Once approved actions will be taken immediately with the collaboration of Bangladesh Accreditation Body that has already been formed by the ministry of industry. DGHS is currently examining the 1982 private practice and clinic ordinance to update it and make it more effective.

Licensing and accreditation
DGHS licenses private sector hospitals and diagnostic centers based on certain criteria of space, bed number, equipment, departments etc. These private sector hospitals and diagnostic centers are supposed to be visited by teams of experts enlisted by the directorate yearly and the approval status is continued for another year. The directorate does not have enough logistics, e.g., vehicles and does not get enough funds for managing its licensing functions.

An accreditation tool, developed in the past by the MOHFW will be updated and be applied periodically for the private sector hospitals and diagnostic centers. "Provisional License" for a period of one year (not extendable) could be provided for temporary starting a new private hospitals or diagnostic centers. On fulfillment of government set requisite criteria "Operating license" should be given with a provision for operating not more then one financial year. No private sector hospitals/ diagnostic centers could be operated on "Applied for license" basis. The operating license should be renewed every year after visits by the competent authority. The existing license fee should be restructured depending upon bed capacity and type of diagnostic facility. Medical waste management system should be implemented and should be mandatory for private sector hospitals and diagnostic centers. To ensure a transparent system in this regard an independent regulatory body should be formed with representation of the public and the private sector hospitals and diagnostic centers and relevant experts. Additional personnel, vehicle and logistics will need to be seconded to the Director, Hospitals and Clinics, for supporting the latter in this function.

Quality of hospital services
Improvement of the quality of hospital services will be mediated through establishment and functioning of quality assurance teams in hospitals. Quality will be ensured and death audits will be introduced, starting as 'appreciative enquiry audits', developing into "near miss" audits (i.e. why did things nearly go wrong?) to full death audits (why did she die?) as part of the QA initiative. Quality depends on productivity, i.e., improvement of efficiency, measured by timeliness, maintenance, orderliness, standardization, observance of rules, disposal of waste appropriately, staff opinion, mistake proofing and team work etc. All these aspects need to be taken care of for establishing and improving quality. The most fundamental problem however, is the lack of HR. Sufficient HR should be made available to the vacant post at primary, secondary and tertiary level hospitals.

After selection of districts for piloting the Total Quality Management in hospital services, TQM, Committee formation, development of tool kit, an action plan will be finalized before piloting.

After successful piloting, TQM will be rolled out gradually country wide. DPs already show keen interest in this area regarding financial & technical assistance.

Clinical management protocol for the major illness will be developed and introduced as a part of Quality management. There will also be selection & finalization of clinical indicators for different levels. In primary, secondary and tertiary hospitals, depending on bed capacity, services will be standardized along with human resource needs, skill mix and table of equipment (TOE) linked to the level and degree of services. This standardization will require a consultancy. Appropriate human resources and management structure will be needed for existing hospitals. Specialised services will be established in all medical college hospitals, so that patients do not need to rush to the capital city. Government will establish new specialized hospitals under the private public partnership initiative;

Structured referral activities will be strengthened, as introduced by LD/IHSM, with different registers, referral slips, diseases codes. Local monitoring systems for implementation of the referral system will be strengthened. A separate deputy program manager will be appointed to make the referral system effective.

Gender and special care

The design of the health facilities needs to be more gender sensitive, i.e. have space for crèche, child corner, breastfeeding corner for the service seekers and for changing and washing of duty nurses. Female patients or nurses must have homely environment, to feel comfortable in the work place and the hotel aspect of a hospital. It is necessary that the patients and the service providers look tidy and feel at home. There should be facilities for washing and drying clothes. Feeding environment for patients, as well as service providers, in the present design, is not friendly. A cafeteria in each hospital would provide modern amenities and comfort to the patients as well as to the different categories of staff. Similarly, special facilities for disabled people need to be given specific attention (access for wheel chairs etc.). While consideration is given to creation of a congenial atmosphere particular attention should be given to that for women, particularly for work at district and lower levels, which might include hardship allowances or other benefits as per the recommendation in the Gender Equity Strategy that the Ministry approved in 2001.

3.8.2. Medical Waste Management (MWM)

(DGHS/LD IHSM)

An environmental assessment has been carried out earlier to identify the critical environmental issues associated with the program. Relevant issues include hospital infection control and medical waste management (solid and liquid); concern on clean water supply and sanitation provisions at health facilities and issues associated with use of hazardous insecticides/pesticides and preservatives. Medical Waste Management (MWM) is the most critical environmental issue in the sector that is within the remit of the health sector. The environmental issues with regard to MWM range from increasing the risk of spreading infections to increasing exposure to toxic emissions from poor treatment, e.g., burning of plastics which emits dioxin and disposal practices which may cause cuts and injuries from sharp and piercing disposable wastes.

Steps will be taken to improve the capacity of DGHS for strengthening, inspection and monitoring of medical waste management by the office of the LD. As in-house management of medical waste is the MOHFW responsibility and out-house management will be done by Ministry of Local Government and Rural development (Inter-ministerial decision), communication should be established with MOLGRD. Cleanliness of public and private health facilities will be checked by using a formal tool. Steps should be taken for implementation of “MWM Rules”.

Based on the recommendations of the MWM review study, a MWS strategy and action plan was developed. Key elements of the strategy for improving MWM are the following:

- Building awareness and capacity at all levels.
- Developing appropriate guidelines and manuals.
- Create accountability through appropriate legal/regulatory framework.
- Create appropriate institutional framework to facilitate implementation of MWM on a sustainable basis.
- Making targeted and phased investments.
- Creating the enabling framework for private sector participation in centralized facilities.
- More accountability of the MOLGRD in capacity development and out-house management.

3.8.3. Blood transfusion services

(DGHS/LD IHSM)

To promote and ensure blood safety, Government has established 98 Safe Blood Transfusion Centers throughout the country for screening blood for HIV, Syphilis, Malaria, Hepatitis B and C in 2001 with the implementation of Safe Blood Transfusion programme (SBTP). Safe Blood Transfusion Law was enacted in 2004, which paved for formation of National Safe Blood Council for policy development. The legislation gives emphasis to the implementation of regulatory systems for blood transfusion centers and application of good manufacturing practice. To oversee the programme activities, quality of blood transfusion service, the honorable Health Minster is given the stewardship role through the constitution of National Safe Blood Council and the National expert committee in the Health Service. Legislation for safe blood transfusion is in place but its implementation countrywide is a challenge, as most of the blood screening centers and private health institutions need to be fully equipped with modem facilities to screen blood. There is considerable improvement now in the area of ensuring safety of blood. Blood transfusion services in last decades, tickled by the strategy of HIV/AIDS, have to be readdressed and restructured in accordance to National Blood Policy and international standard of Global Blood Safety in the next five years strategic plan. The overall implementation of activities should be coordinated by the National Blood Programme in the National Blood Transfusion Centre for ensuring quality services accessible to all. Priority should also be given to restructure the current uncoordinated collection of blood that poses considerable risk to the general population. At the clinical interface, peripheral centres need to be reinforced by the development of separate regional blood transfusion centres as blood collecting sites responsible for coordinated need based supply point of blood and blood products for the hospitals in the areas

Under HNPSP a total of 100 new centers were developed at the upazila health complexes in addition to previously established 99 centers. After capacity building till date, blood screening has started in 146 centers for HIV, hepatitis B and C, Syphilis and Malaria. The rest out of new 100 the centers would be made functional by the end of this year. The number of tests done and positive results for the last one decade is shown in the OP of this LD.

Objectives / targets for the coming years are:

1. Number of Blood Transfusion center- 56;
2. Voluntary blood donors-50%
3. Units of blood screened- 5 lacs;
4. Blood component Facilities centers- 20
5. Number of New Regional center for blood collection- 14+
6. Guidelines for rational use of blood available.

3.9. Urban health

Bangladesh is going through significant social and demographic changes, including rapid urbanisation (at an estimated rate of 6%), expanding industrialisation, rising incomes and increase in non-communicable diseases. At present about 27% people of Bangladesh (about 38 million) lives in urban areas. Population growth in urban areas is 2.5% whereas the national population growth rate is less than 1.4%. It is anticipated that rural: urban population ratio may be 50:50 by 2040. The biggest city, Dhaka alone accounts for 40% urban population. The other five city divisional cities account for 29%, while 309 municipality towns have 31% urban population.

The urban areas provide a contrasting picture of availability of different facilities and services for secondary and tertiary level health care, while primary health care facilities and services for the urban population at large and the urban poor in particular are inadequate. Rapid influx of migrants and increased numbers of people living in urban slums in large cities are creating continuous pressure on urban health care service delivery. Since the launching of two urban primary health care projects since 1998 (UPHC), services have been delivered by the city corporations and municipalities through contracted NGOs under MOLGRDC in the project's area, funded by the Asian Development Bank (ADB), DFID, Sida, UNFPA and ORBIS International. The project provides free services to 22% (as per household survey 2007) of the total population of the project areas. It provides services through 161 PHCC, 24 CRHCC, 63 DOTS centers, 644 satellite clinics, 24 VCT centers and 24 primary eye care centers.
Non-project urban areas are being covered by the health facilities of MOHFW. In total, there are around 4000 satellite centers to reach the urban poor. Moreover, 35 urban dispensaries under the DGHS are providing outdoor patient services including EPI and maternal and child health (MCH) to the urban population. USAID funds various NGOs to provide essential services as well some special services (52 HIV/AIDS clinics) through 158 PHC centers, 34 comprehensive centers, 56 DOTs center, 47 VCTs, centers.
In conclusion, the various urban primary health care services are largely inadequate in view of the needs of the fast growing urban population

A survey of ICDDR'B found that 72% of female street dwellers had a current illness, of which only half sought treatment (often simply visiting drug sellers). The same survey found that 100% of under-five children living in streets presented symptoms of acute respiratory infection, while 35% were suffering from diarrhoea. Street dwellers are not being on the list of the local health care service providers, as they do not have any address and are not traceable. Far from their families and villages, there is no social safety-net to protect them against diseases. The existing health services do not address their special needs.

Urban health services are the responsibility of the Ministry of Local Government, Rural Development & Cooperatives (MOLGRD&C). The Municipal Administration Ordinance of 1960, the Pourashova Ordinance of 1977, the City Corporation Ordinance of 1983 and the Local Government (Pourashova) Act 2009, clearly assigned the provision of preventive health and of limited curative care as a responsibility of the city corporations and municipalities. But due to their limited resources and manpower, public-sector health services have not kept up with needs. Private health care providers are the main source for delivery of curative care, including tertiary and specialized services to the urban people, but private providers seldom provide preventive and promotive health services. The MOHFW is tasked with setting technical standards, packaging services, strategies and policies of the health sector. In short, MOHFW plays a stewardship role, while governance in providing public health care in urban areas remains the responsibility of MOLGRDC. Inter-ministerial collaboration for coordination of the urban health projects is

currently through the National Urban Health Coordinating Committee and the National Urban Health Steering Committee. However there is need for a more permanent governance structure.

At present the MOLGRDC provides services in a state of vacuum, i.e., it does not have a policy, strategy, plan or permanent infrastructure to sustain the initiated programs. What will happen once the UPHCP winds up or donor support ceases has not been envisioned yet. There is need to establish a permanent coordination structure between the two Ministries to take up the mutual mandated responsibility on a sustained and effective basis. MOHFW will join in tackling this challenge through a consultative process with MOLGRDC, city corporations and concerned stakeholders to jointly assess, map, project and plan HPN services in urban areas. This will be a big task, both institutionally and in terms of scale. Specific roles and responsibilities will be defined and coordinated interventions will be designed to serve urban populations. The emphasis on urban health will be a new (and very different) element compared to HPSP and HNPSP. It will involve MOHFW working in new ways with its partners, notably MOLGRDC, NGOs and others.

Interventions

Since by law the responsibility of providing public health care including water and sanitation are the responsibility of the MOLGRDC, a permanent governance structure would be necessary. MOHFW would assist MOLGRDC in establishing such a structure, which would then liaise with both the Ministries at all levels, i.e., city corporations and municipalities, with a view to establishing a sustained urban health care service for the fast growing urban Bangladesh. This will also help in ensuring the inclusion of HPN priorities by other local government bodies, upazila and union parishads, as set out in other Acts and Ordinances.

UPHC, MOLGRDC and contracted NGOs have a wealth of experience in providing urban primary health care (UPHC) services through contracted NGOs. There have been impressive successes in terms of coverage, monitored quality of services and monitored exemption schemes for the poorest. These will continue, but side by side MOHFW will seek to extend the coverage of PHC services in urban areas not covered by the UPHC project.

Services in the urban dispensaries under the DGHS will be improved by introducing a ‘Quality Culture’ in the facilities, so that the population will receive better services.

MOHFW also provides health services through secondary and tertiary hospitals that will continue to be strengthened in terms of coverage, quality and equity of service delivery in response to demand. The MIS of urban Health care will be customized and will be linked with the central Data Management System (DMIS) of the MEU.

While the essential services package (ESP) was directed towards rural areas as most poverty is found there, this left major gaps in coverage of urban areas, particularly at the level of municipalities. Urban poverty and health status remain a major concern. In future health services will emphasize increasing access and utilization of the ESP by urban dwellers, street people, and garments workers. Physical, psychological and emotional support will be given to the female factory workers through sensitization of the management of the factories and also direct briefing of the workers on their present and future health. NGOs’ experience will be drawn upon and they will be contracted in this regard. Effective referral systems will be developed though formal agreements between the referrer and referred health facilities. Tools for information transfer for referral (and back referral) will be developed. Many agencies are providing especially curative care without much coordination or quality assurance. NSAPR II rightly recommends that an urban health strategy should be developed with emphasis on the access of the poorest to health care in urban areas.

Priority activities will include:

- In collaboration with MOLGRDC, develop an urban health strategy and urban health development plan. The focal person for urban health in MOHFW will take the initiative.
- Establish a permanent governance structure incorporating all ministries, agencies and institutions with responsibility for urban health, to stimulate demand for the provision of urban services, especially for the poorest and most marginalized populations.
- Commission a study as how best the two Ministries can jointly assess, map, coordinate, plan and work together to provide quality health care services for the urban population.
- Expand urban dispensaries for effective and quality PHC services (including services for nutrition, reproductive health and health education).
- Define an adequate referral system between the various urban dispensaries and the second and third level hospitals.
- Develop a HIS system and promote supervision systems that include urban health care.
- Build capacity of the various service providers under MOHFW and MOLGRD.
- Determine the role and accountability of different NGOs and the private sector in the delivery of urban health. Formalise relationships through PPPs and through diversification of health service delivery strategies.
- Create a unit in both the Local Government division and MOHFW to look after the urban health and family planning services.
- Strengthen / reorganise the health department of the City Corporations and Pourashavas.

COMPONENT 2: SYSTEMS TO SUPPORT SERVICE DELIVERY

4.1. Health Sector Planning and Budgeting
(MOHFW/JC Planning + DGHS/LD SWP + DGFP/LD SWP)

4.1.1. Sector Wide Planning and Management (MOHFW)
(MOHFW/LD Joint Chief Planning)

The Planning Wing (PW) of the MOHFW oversees to a certain extent the complex planning and budgeting process of the whole ministry and as such fulfills an essential role in the systems that support timely and adequately submitting of the OPs and their budgets. However, its role in coordinating the planning and budgeting process is crucial, as it has to prepare sectoral plan and oversee budget and continuously liaison with concerned line agencies/directors to translate these plans into Operational Plan or Project within overall resource ceiling of Mid-term Budgetary Framework (MTBF). Matching sectoral budget with OP and Project wise budget and dividing/adjusting budgets among the OPs/projects still remains a challenge.

The PW of the MOHFW is essentially involved in the activities relate to (i) SW policy, strategy and planning/budgeting, (ii) SW coordination/collaboration, (iii) Program and project processing and (iv) Program and project M&E.

A. Programme Planning and budgeting
The PW of the MOHFW has been entrusted with the development of the medium (3-year, 5-year) and long term plan and development budget of the ministry, the Program Implementation Plan or PIP on the basis of the medium term budget framework (MTBF). Based on the PIP, Operational Plans are to be developed for all the components by their respective LDs.
The PW will initiate a revision of the standardised format of the OPs and provide guidance in the development of their Operational Plans. OPs will be made for 3 years with reflection of 5years budget (terminal 2years budget will be kept as block allocation) by the Line Directors, responsive to the overall planning cycle of GOB and taking into account (i) the results of the earlier year's activities, (ii) changing needs and budget provision as stipulated in the PIP (iii) Local level planning (LLP) inputs collected through LLP tool kits. Introduce three-year OPs as part of the overall plan of MOHFW (PIP) for the whole period to be approved by MOHFW. It is expected that a Mid-Term Review will take place at the middle of the PIP implementation. These OPs can then be further revised after MTR.

Special approval and revision guidelines will be formulated for the next sector programme in consultation with the LDs and relevant Ministries and will be placed for the approval of the Planning Commission. This will allow more flexibility and authority in terms of Operational Plan revision and approval by the Steering Committee of MOHFW.

The Development and the Non-development budgets of the MOHFW are currently being prepared under MTBF resource envelop. As both the Development and Non-Development budgets are prepared separately and presented in two separate documents, it is difficult for decision makers and managers to take a holistic view on the allocation of resource. In the absence of any effective co-ordination such compartmentalized budgeting system always has the risk of duplication and under- allocation of resources in priority areas.

Development budget is prepared on the basis of multi-year plans (OPs). But there is hardly any planning input in the preparation of the non-development budget. Allocations in non-development budgets are made mostly on incremental basis. As a result a planned and efficient allocation of resources with linkage to policy objectives and priority cannot be obtained. Allocations in the development budget, on the other hand are often made without making any field level need assessment on an annual basis. Cost centers at field level virtually have no participation in the preparation of the budget. The mismatch in allocation is frequently a cause for under-utilization of the ADP.

Many activities of both the budgets are complementary to each other and a particular activity of one budget is dependent on the implementation progress of an activity of the other budget. Coordinated monitoring is therefore necessary for attaining the budget targets, which is currently missing. Some key activities/items in the MOHFW are commonly funded from both the budgets. There is no coordination in the planning and budgeting for those activities, leaving scope for duplication as well as under-allocation of resources. As a consequence of the implementation of certain activities under the development budget, sometimes an additional resource demand is created in the non- development budget to sustain those activities.

Interventions

The MOHFW wide Single Work Plan will be formulated every year by the end of September / October so that both the annual budgets and ADP for the next financial year can be prepared on the basis of such a work plan. The work plan will propose allocation for the upcoming financial year and will also make projections for the next two years. The proposed Single Work Plan will be a useful tool for budget preparation. It can also provide valuable input to the preparation of the next sector wide programme. The formulation of a Single Work Plan will help deepen the MTBF process in the MOHFW and will also facilitate the ongoing initiatives for local level planning at district and upazila levels.

The Single Work Plan will not replace any of the budgetary or planning documents prepared under the existing procedure. It will only complement those documents and will facilitate their preparation. The introduction of the Single Work Plan will bring the much desired coordination between two budgets and will enable the MOHFW to readily implement the integration of two budgets when government wide budget unification takes place. The introduction of a Single Work Plan will also bring in a significant improvement in planning, budgeting and financial management at the field level as well as in the ministry wide management of resources. The LLP and single work plan will be prepared taking inputs from each other.

Priority activities will include

- Introduce joint review of non-development and development expenditure in the Ministry as well as in the Directorates.
- Enhance the engagement of field level cost centers like District and Upazila Hospitals in the preparation and management of development budget, similar to their current involvement in the preparation of non-development budget.
- Establish a new Coordination section (which may be located in the Financial Management and Development Wing of the Ministry) in the MOHFW and at the Directorate level to facilitate single wide work plan.
- Conduct a study to explore the possibility of financing the commonly funded items from a particular budget, non-development or development.
- Review periodically for making further improvements in work plan formats and procedures.
- Link the Single Work Plan with LLP.

B. Monitoring
The PW manages the monitoring and evaluation unit (MEU) and the data management information system (DMIS) of the MOHFW. The M&E Unit assists the Planning Wing in carrying out review and evaluation of the implementation of the PIP in terms of achieving physical and financial targets and goals on a regular and yearly basis. MEU is being connected with the MIS units of DGHS and DGFP. It will compile information from these units to review the progress in implementing the PIP by filling up the IMED formats for monthly ADP progress review meeting and the sector program through annual program reviews (APR) for developing policies and strategies.

PW should eventually become a technical wing, providing expert support to LDs, guiding them to appropriately design standardized plans and budgets, strengthen their management and implementation mechanism, provide quality and representative data, analyze those data and produce reports relevant to OPs, especially with respect to the achievements in their respective Results Framework (RFW).

C. Coordination and collaboration:
The Planning Wing has established coordination and collaboration with other relevant sectors to ensure financial and performance reporting, such as the urban health project with its permanent urban health unit, managed by MoLGRDC and the services provided in the CHT through MOCHTA. The reports of LD-SWM also accounts for the parallel funding in the sector. However, due to limited understanding of the implications of the SWAp for a coordinated approach to sector planning and budgeting within MOHFW, the Directorates and among the DPs, SWAp implementation under the previous two sector programmes has been limited to pooled funding, but has not yet achieved a truly coordinated effort among all the stakeholders in the sector. Various interventions are undertaken in the health sector, but outside the realm of the ministry, such as the urban health programme, the health services provided by a multitude of big and small NGOs and the unregulated work done by the private sector. Similarly, various projects funded directly by several DPs are implemented outside the realm of the ministry. Even within the MoHFW some vertical projects mostly with GoB financing are being implemented. Coordination with other ministries (MOLGRDC, MOCHTA and others) or with large NGO sector in the country has not yet been formally established.

4.1.2. Planning, Monitoring and Research (DGHS)
(DGHS/LD SWPM and DGHS/LD Research and Development)

A. Planning and Monitoring
The LD Planning has various important functions, one is the development of LLPs (based on available tools developed under TFIPP[9]), the other is monitoring, reviewing and evaluating the implementation of the OP plan of the DGHS and leading the Research and Development Unit (RDU). The LD also provides secretarial assistance and coordination between the LDs of DGHS and DGFP in the area of planning and monitoring.
The PIP mentions amongst others the following objectives of this OP: Organize yearly LLP in all Upazilas and districts ensure that LLPs are fed into the annual plans of the LDs and organize regular program implementing and expenditure review meetings.

[9] A useful description of the way the TFIPP was developed and how it contributed to LLP is given in the PIP under this OP (DGHS/LD SWPM).

B. Research and Development (R&D)

Currently research funds and agendas often remain spread out in different OPs and sometimes outside the public sector. Coordinating research and having it more aligned to program needs can strengthen the usefulness of research. Currently, HEU of MOHFW, Director of "Planning, Research & Development" of DGHS, Bangladesh Medical Research Council and NIPORT are the principal bodies to conduct and coordinate research and survey functions. NIPSOM, IEDCR and ICDDR,B also carry out a lot of operational research.

According to the PIP/OP R&D, the research and development Unit of DGHS has made significant progress in the financial years of 2003-2010. For example it has contributed to 300 research proposals and funding of 267 research projects. It also has conducted three large research programs of which two are disseminated. A National Health Research Strategy has been developed (January 2009) and approved by MOHFW. It will be the guiding principle in determining study areas and their funding.

The objectives of the OP include: coordination of research sector-wide, strengthening research cells in medical colleges and development of a critical number of human resources skilled in health research, funding of at least 200 small and eight bigger budget research projects, disseminate at least five big budget and 20 small scale research findings and create a data base for preserving research findings.

Research is also required, apart from routine reporting, for management or clinical decision making. At present, while HIS is the responsibility of the Director DGHS/MIS, there is another LD for Research and Development (see section 4.1.2 and 4.3.5). Next to R&D, this LD/Planning is also responsible for the overall planning and reviewing the implementation of the DGHS programs. Obviously, these two functions are very broad in scope and responsibility and therefore separation of these two functions might be considered. Since research is a tool to generate information, the proper institutional home for R&D would be in the two Directorates of MIS (DGHS and DGFP).

The M&E unit of the MOHFW will play a stewardship role for ensuring effective coordination and facilitation to disseminate the important results of the research being carried out by various agencies and organizations. The M&E unit will involve itself in direct implementation of research and surveys only in limited cases. Its broader role will be to mobilize capacities of the agencies within the MOHFW to promote a culture of capacity building and gathering evidence from data, research and surveys. The agencies, in turn, will steer the same role over the sub-ordinate or sister institutions and organizations. The M&E unit will also facilitate several important population surveys through the respective agencies in collaboration with the DPs. These include: (i) Maternal Mortality Survey, (ii) Utilization of the Essential Service Delivery Survey; Bangladesh Demographic and Health Survey; and the (iii) Health Facility Surveys (HFS). The respective agency may implement the surveys through outsourcing. Appropriate measures will be taken to link research and survey findings with the HIS of the respective agencies.

From a technical point of view, the Bangladesh Medical Research Council (BMRC) is the focal point for health research and is responsible for strengthening functional capacity in research. Its prime objective is promotion and coordination of health research throughout the country. The Medical teaching/training institutions carry out large number of research and surveys. Such activities will be promoted through the BMRC. The National Health Research Strategy, approved in January 2009 will be the guiding principle in determining study areas and their funding. The cardinal aim will be: improvement of the quality and the capacity of conducting research, focusing on equity as a priority, translating research findings into decision and policy tools,

facilitation of inter-sectoral collaboration and involvement of the private sector and NGOs, funding of researchers to present original findings in international forums, supporting researchers in pursuing PhD etc. The strategy document suggests that at least 2% of the sector budget is dedicated to research and that at least 5% of UN agency support is committed for research.

4.1.3. Planning, Program Monitoring and evaluation (DGFP)

(DGFP/LD SWPM & LLP)

The respective LD is responsible (i) to facilitate the planning and budgeting process of DGFP, participate in the formulation of different plans and promote functional co-ordination within the sub-sector, (ii) Conduct regular review/ monitoring of activities and financial expenditures of this population subsector in the MOHFW; (iii) Develop yearly local level plans (iv) Incorporate the budget and activities of the LLP into the operational plans (OP) of the relevant line LDs.

If LLP will be given priority in this new sector program, the OP will need appropriate and adequate amounts of funds against the budget developed through local level planning. In addition, technical support needs consideration, as was given in the successful Thana Functional Improvement Pilot Project during pre-HPSP period. Indicators mentioned in this OP relate mainly to the implementation of the LLP.

Local Level Planning and coordination

With proper central guidance, the LLP process will be revitalized as part of the drive for decentralised (financial) management at the District, Upazila and Community Clinic levels. In selected districts, a limited number of Upazilas (with their Clinics) will initiate activity based planning and budgeting under respective LD. Details of the preparations and interventions to be undertaken have been described in the section on Primary Health Care (3.6).

Funds will be released to district and upazila officials to implement development and revenue activities, geared to the achievement of national targets and goals. This will help to bring the revenue and the development budgets closer together and improve fiduciary arrangements.

The planning process for the LLP will be coordinated by the Joint Chief Planning, the DGHS/LD SWP and the DGFP/LD SWP. Its results in terms of improvements in the relevant indicators will be monitored jointly by DGHS/LD MIS, DGFP/LD MIS and the M&E Unit.

Since LDs play such a key role in program planning, budgeting, procurement, implementation and monitoring, their capacity to effectively respond to all these functions will be strengthened through specific short term management training, additional support staff, improved logistics (vehicles and per diems), and technical assistance (if required).

4.2. Health Information Systems (HIS), M&E and Research
(MOHFW/Joint Chief, Planning + M&E Unit under Planning Wing; DGHS/LD of HIS, e-Health & Medical Biotechnology; DGFP/LD of MIS); Task group.

MOHFW promotes the culture of evidence based decision making for an efficient and citizen-centric health system. The National ICT Policy 2009 and proposed National Health Policy 2010 have also directives for development of proper and effective monitoring and evaluation mechanism and HIS. However, activities are fragmented between MOHFW and the various Directorates, un-coordinated, and in different stages of development. Compiled information or data is not available in one place. It is therefore difficult to take decision centrally for planning and monitoring purpose. There are duplications of the same tasks by different agencies. Therefore, the existing health information system needs much strengthening to guaranty availability of a complete set of timely, reliable and representative data on core health indicators. Gaps in information are mainly in the secondary and tertiary hospitals, in the quality of the services, whereas very limited information is coming from the NGOs or the private sector.

The domain of the health information system (HIS) of the MOHFW in the sector program will represent a broader view to capture, according to definition of Health Metrics Network (HMN):

> Definition of a Health Information System (HIS)
> All the data and records about the population's health, which uses recording of births, deaths and causes of death, and other vital events (marriage, divorce, adoption, legitimating, recognition of parenthood, annulment of marriage, etc.) censuses and surveys, individual medical records, service records, and financial and resource tracking information as the data sources.
> Health Metrics Network (HMN), WHO.

All the agencies of the ministry, viz. DGHS, DGFP, DGDA, DGHED, DNS, NIPORT, etc. will maintain their own health information system, however, under a common framework of inter-operability and data sharing, where such needs apply. The major components of the HIS will include: (i) Service based HIS; (ii) Human resource based HIS; (iii) Institute based HIS covering also logistics and financial HIS; and (iv) Program based HIS. In addition, the work on creating a population based HIS by the DGHS will be continued, completed and strengthened.

The Planning Wing (PW) of the ministry has established a Monitoring and Evaluation Unit (MEU) in 2006 with the assistance from development partners. However, it can not function well without permanency and adequate staff and proper institutionalization. The PW will also maintain a HIS unit under the OP "Sector-wide management and project monitoring and evaluation" to gather data from the HIS departments of the above mentioned agencies, as well as, from UPHCP and other relevant sources, such as, Nutrition Service Program (NSP). In general, the respective HIS departments will capture related data from all institutions, organizations, programs, and subsystems, both from the public as well as non-public sectors and gender disaggregated. DGHS and DGFP will have separate OPs to perform the functions of HIS. Other agencies (and special program like NSP) of the ministry will carry out the HIS functions under existing revenue setup for HIS or through support provided under the OP of the respective agency. A general principle of the HIS functions of all agencies will be: (i) gathering useful data to contribute to evidence based decision making; (ii) developing a system capable of gathering, summarizing and delivering data quickly on a sustainable basis; (iii) building on the existing systems; (iv) effective

coordination: (v) inter-operability of data and data sharing; and (iv) avoidance of duplication. In addition to the HIS function, the PW will also carry out monitoring, evaluation and research functions. The PIP and respective OPs describe in detail the current situation, objectives, strategies, targets and indicators.

A key objective is to strengthen organizational capacity to conduct effective M&E and systems development and conduct needs assessment to identify gaps, duplications and areas for improvement and streamlining, and advance the learning agenda through in-depth analysis on specific policy relevant topics (e.g., testing hypothesis, population projections and implications, etc.) , and advocacy, communication and dissemination - timely and real-time.

4.2.1 HIS, M&E and Research functions (MOHFW)

(MOHFW/LD SWP Management, including M&E Unit).

A. Health Information Systems (HIS)

This OP deals with monitoring and evaluation functions of the HPNSP, coordination and integration of the HIS functions between different agencies under the MOHFW and the monitoring and evaluation function of the next sector programme. The OP functions will also included coordination of the research and carrying out limited research and survey activities. The M&E unit under the Planning Wing will liaise with LDs under the DGHS and DGFP through the Planning Wings of the respective agencies (DGHS, DGFP) and with the LDs of other agencies to gather and compile information and prepare reports, like Annual Program Implementation Reports (APIRs). The M&E unit, as a setup of the Ministry, is now establishing the Data Management and Information System (DMIS) to enable it to gather data from all agencies of the MOHFW with a view to support policy decisions and planning of HNP program. In this connection, the MEU developed a data warehouse through the project called Data Management Information System (DMIS), which integrates data from the various HIS and Programs, viz. MOHFW, DGHS, DGFP, nutrition program and UPHCP II. The automated calculation and presentation of indicators is part of the data warehouse. Policy and decision makers have access to the data warehouse and receive the most up to date information. The DMIS is currently working with the above agencies to collect data by using a software called DHIS2 (District Health Information System version via a web based interface). In this way, the scope of work of the existing Monitoring and Evaluation Unit (MEU) has been broadened and strengthened. It is important to institutionalize a permanent structure, such as the Monitoring and Evaluation Unit, under the direct responsibility of the MOHFW with adequate skilled staff and system.

B. Monitoring and Evaluation

NSAPR II has clearly stated the importance of monitoring and has advised for strengthening of monitoring systems and functions. It categorically says to “Strengthen capacity of ministries and divisions to monitor and evaluate progress of development projects.”

The capacity of MOHFW to monitor the status and progress of the entire health sector including urban health also needs to be strengthened to enable it providing expert support to the LDs, guiding them to appropriately design registers and data maintenance system, collect in-depth OP related quality and representative data where there is a gap or inadequacy of routine data, analyze those data and produce reports relevant to OPs - especially with respect to results framework -, and conduct APIR and other reviews. The financial analysis with respect to OP allocation, expenditure, result, etc. will also be a crucial area. The M&E unit will focus attention to areas of sector program, where there is lack of expertise. A coordination committee will be framed to institutionalize the HIS coordination functions between different bodies. The Joint Chief, Planning or Additional Secretary of the MOHFW may be made the chairman of this coordination committee. The coordination of the vertical programs will be done by the HIS of the respective

agency. The coordination committee will also establish a coordination mechanism with the MOLGRD in relation to birth and death registration, and with Bangladesh Bureau of Statistics (BBS) in relation to decennial census, Sample Vital Registration System (SVRS), Multiple Indicators Cluster Survey (MICS), Health Economics Unit, NIPORT etc. Developing an M&E system for the Health, Population and Nutrition Sector Programme is essential to provide convenient and timely information to policymakers as they track the performance of the HPNSSP in order to make necessary adjustments over its course. The M&E unit will develop and review the Results Framework for Monitoring and Evaluation of HPNSSP, and also develop the input, output, outcome and impact indicators for the Result Framework and for planning and performance reviews (definitions, periodicity, sources of information), gather the reports of various research and surveys to be carried out within the sector program and outside by various ministries, bodies, and organizations, national or international and will use the results as the tools for evaluation of the outputs or outcomes of the sector program. The M&E unit will also develop and implement monitoring mechanism to oversee whether the OPs are being implemented as they are described in the documents and whether expected benefits are being gained. Where applicable, the M&E unit will make recommendations for taking appropriate measures for correction, improvement or facilitation. The roles of M&E unit will further support providing data to the various APR/MTR missions.

The above activities will focus on informing policy makers, managers and other stakeholders about key activities and components, performance, achievement, and lessons learned. This sort of information is not only important to the HPNSSP, but represents a national and even global public good. This will contribute to dialogue and debate towards crafting more informed policy in the sector.

4.2.2. Health Information System (HIS) (DGHS)
(DGHS/LD HIS, e-Health and MBT (Medical Biotechnology)

The HIS functions of DGHS will be accomplished under the name: “HIS, e-Health and MBT”. E-health and Medical Biotechnology (MBT) are two components of Support Service Delivery given utmost importance by the present government. Owing to much interlink between these three services as all heavily use ICT and/or medical informatics and bioinformatics, responsibility for implementation has been entrusted upon the same department of DGHS which is responsible for carrying out the HIS functions. Therefore, the OP and the LD will be named accordingly. The topics “e-Health” and “Medical Biotechnology” are described below (4.2.5/6).

In continuation to the considerable recent progress made by MIS of DGHS, the entire system design for the HIS of DGHS will take a holistic approach to generate data from programs, institutions and households. This will be accomplished to include developing an organizational framework for collecting, reporting and collating indicators, producing performance reviews, and developing a routine HIS that is functional, responsive, timely and complete by strengthening service statistics, personnel, financial and logistics MIS, rebuilding epidemiological information system, and expanded use of IT for data collection and use at the field level in an integrated web-based framework. There will be a focus on building skills and capabilities necessary for conducting monitoring and evaluation; and infrastructure development for universal coverage of all field workers and health facilities will be given first priority. Simultaneous to these activities, training and capacity building of existing human resources will be emphasized. As rapid deployment of ICT would require competent personnel, which may not be feasible to get from within government service and also may not be possible immediately through creating new posts and new recruitment, outsourcing will be chosen as a short term measure. New tools will be used for monitoring and evaluation that include routine nationally representative survey data

collections: annual service utilization and intervention coverage surveys for essential services, and a database of program coverage and features that exploits GIS technology.

The current plan for development of population health registry through Geographical Reconnaissance (GR) will be materialized. Community clinics, union health facilities, union parishads and upazila health system will be linked with the population based information system. Data will be disaggregated by poverty indicators and gender as recommended by the MTR 2008. To institutionalize the health facility-based information system, computers and connectivity will be ensured in every place of the public health sector where data are generated. In each facility, one focal point, selected from the local staffs, will be assigned to take leadership responsibility for health information system. The larger hospitals (medical college hospitals, postgraduate institute hospitals) will be assisted to initiate ICT cells to provide trouble shooting support. To ensure sustainability, appropriate PPP model will tried to be applied. To gather data from the non-state sector, policy bindings (e.g., submission of regular data on specific format for renewal of license) will be imposed. Facility based logistics information system will be created keeping an easy tracking system. Number of academic institutions/training facilities and number of departments, courses, teachers, students, classes, examinations, results, grades, training aids, researches, etc., both in the public as well as in the private sector, will be gradually brought under HIS database.

For human resource related data, existing online personal datasheet system will be made further effective through introducing a mandatory mechanism so that the staff remains bonded to regularly update the PDS. “Centralized database software” will be developed and placed in central office of HIS of DGHS. Any human resource related office orders, viz. placement, transfer, joining, salary increase/decrease, promotion, demotion, training, education, reward, retirement, pension, suspension, termination, death, etc. must be handled through the database. All the vertical health programs will have to design its health information system in close coordination with the LD/HIS, e-Health and MBT. The EPI information system, or epidemiological surveillance system, or any other program-based information system will follow same policy guidelines. The current effort of gathering the information on emergency obstetric care will be further consolidated to improve it to full maternal, new born and emergency obstetric care information system. Likewise, the current effort of gathering the information on IMCI will be improved and continued.

4.2.3. e-Health

e-Health is the combined use of electronic communication and information technology in the health sector. Two branches of e-Health are telemedicine and mobile health (m-Health). Telemedicine is the use of telecommunication equipment and information technology to provide clinical care to individuals at distant sites and the transmission of medical and surgical information and images needed to provide that care. m-Health stands for mobile health and is a term used for the practice of medical and public health, supported by mobile communication devices, such as, mobile phones and PDAs, for health services and information. The e-Health is one of the most focused development agendas of the current government under its Digital Bangladesh Vision 2021 to be implemented by the MOHFW. The e-Health vision of ministry will be implemented under the OP “HIS, e-Health and Medical Biotechnology”.

The most remarkable achievement in e-Health in the country is the establishment of Internet connectivity across all health points down to upazila level (~800 places) by DGHS under HNPSP 2003-11. In each of these places, there is a computer with Internet availability round the clock. Computers have also been provided to some union level facilities, urban dispensaries, school

health clinics, etc. This is a unique example of rapid ICT deployment in the entire government system of Bangladesh. Attempts are undergoing to expand the network to all government health facilities as low as the community clinic level. The greatest contribution of this network is the ease and speed of data communication which is benefiting management and health information systems. In each of the district health managers' offices (CS offices) and in each upazila hospital, there is a web camera, which can be used for video conferencing. Fifteen hundred web cameras have been collected from the National Election Commission of Bangladesh to distribute to all MOHFW's hospitals and teaching/training institutions. The e-Health plan includes promotion of digital aids in medical teaching and training of the country. The LD will also have to provide stewardship role to facilitate e-Health development in the country involving public, private and NGO sectors.

All necessary arrangements for introducing telemedicine service in eight hospitals (two tertiary hospitals, three district hospitals and three upazila hospitals) with high quality video conferencing equipment have been completed. To further expand the telemedicine service in all hospitals, web cameras were also distributed amongst all upazila hospitals. The telemedicine dream is to expand the service up to community clinics. For this purpose, it is planned to provide mini laptops to community clinics, where health workers will use those to help patients consult upazila hospital doctors by video conferencing. The laptops in the community clinics will be used for multiple purposes, viz. telemedicine, updating community health data, health education of people, training of health staffs, communication, and Internet browsing. Attempts will be made to add telemedicine gadgets, such as, tele-ECG, tele-stethoscope, tele-ear scope, tele-ophthalmoscope, etc. to enhance the range of telemedicine services.

As component of m-Health, the SMS-based pregnancy advice, launched in March 2010, is expected to emerge as one of the pioneering programs of DGHS. On registration via cell-phone SMS, pregnant mothers would receive appropriate periodic antenatal, safe delivery and postnatal care advices through SMS. Currently the mobile operator TeleTalk has developed the service. GrameenPhone is also working to introduce the service. There is plan to use the large number of health workers under the DGHS to undertake promotional activity for this service. The SMS advice for safe pregnancy will contribute to the MDGs 4 and 5. The innovative bulk SMS system introduced in 2009 remained as an effective solution even as of now to broadcast quick and urgent messages to health staffs. The use of bulk SMS was frequent and demand driven. A number of SMS based services are in plan to introduce gradually. These are Web/SMS box for receiving citizens' complaints/suggestions, Queue management in hospital OPD or doctor's chamber, Rapid health survey, Query-based delivery of health statistics, etc. Work is ongoing with University of Oslo to develop a system to collect public health data from the rural setting through using mobile phone by the health workers. Mobile based health call centers are being considered. Currently DGHS maintains website and disseminates information through this channel to public. However, there is more room to enrich the information content for making it citizen-centric. There is also scope for using this as a portal of health knowledge management or specialist-oriented information provision, e.g., an overview of latest medical journals, best practice guidelines or epidemiological tracking, etc. Web caste, Pod caste, mobile based information dissemination, etc. can be various other creative services.

Interventions

The e-Health strategy will evolve according to the provisions made in the National ICT Policy 2009, National Health Policy 2010, guidelines of the National Digital Bangladesh Taskforce and other authorities of the Government of Bangladesh which have coordination functions assigned by the Government. Three principles of e-Health, viz., reaching the citizens with services, improving health systems efficiency, and bridging urban-rural digital divide will be the common

ground for e-Health development. The LD, HIS, e-Health and MBT will be responsible on behalf of MOHFW to develop the e-Health programs and services. An environment of gradually engaging policy makers, administrators, health managers and staffs to adopt video conferencing techniques to discuss with subordinates, colleagues, supervisors or supervisees and hold meetings and conferences online and reducing use of land or mobile phones for exchanging views will be created. Mobile phone health service will be rolled out to union health centers and community clinics. Telemedicine service will be gradually rolled out to community clinics. Various type mobile device based services based on SMS, data, voice and MMS will be explored to introduce. Existing services will be strengthened. Mobile device-based services will be particularly used for contributing to the achievement of MDGs 4 and 5. Use of GIS to prepare Service Availability Mapping (SAM), disease surveillance and aid health service delivery will be encouraged. Use of ICT in medical teaching and training will be promoted. To sustain the e-Health initiatives already started and to further build on it, a robust ICT network covering all the health facilities with adequate numbers of computers, laptops, other devices, Internet bandwidth and human resources will be ensured. The directive in the National ICT Policy 2009 to invest 5% of ADP and 2% of the revenue budget will be materialized. Participation of the private and NGO sector, PPP and innovation will be encouraged.

4.2.4. Medical Bio-Technology (MBT)

Biotechnology is a technology that uses living (biological) agents to produce goods and services, e.g., production of yogurt from milk. However, modern biotechnology uses more advanced procedure at the molecular level, more specifically at the genetic level of living cells. Medical biotechnology is the biotechnology that deals with medical biotechnology products and services. The global experience suggests that the potential of medical biotechnology (MBT), in terms of revenue generation, far exceeds the total of all other biotechnology fields. The Government of Bangladesh has recognized the importance of biotechnology and adopted a National Biotechnology Policy in 2006, which was updated in 2010. There is a National Task Force on Biotechnology of Bangladesh (NTBB) with the Honorable Prime Minister as the chair. The Honorable Minister for Health and Family Welfare is an important members of the NTBB.

There are five national technical committees in the line ministries and National Technical Committee on Medical Biotechnology (NTCMB) is one of them. To explore and engage the potentials of medical biotechnology a “National Guidelines on Medical Biotechnology” has also been formulated, which was revised and gazette in 2010. The National Guidelines also set some deliverables to be achieved by the MOHFW in short, medium and long term specific action plans. Medical biotechnology has been greatly linked with medical bio-informatics and ICT, therefore, the OP “HIS, e-Health and Medical Biotechnology” is the ideal home for it. Therefore, the medical biotechnology vision of the government will be implemented under the said OP.

Interventions during the sector programme

The directives given in the National Biotechnology Policy, National Guidelines on Medical Biotechnology and by the National Executive Committee on Biotechnology will be the strategic guidelines for medical biotechnology implementation in the country. The short and medium term deliverables mentioned in the National Guidelines will be special focus to achieve in the next sector plan, as far as possible, in the way as they are suggested in the National Guidelines. In the next sector plan, efforts will also be made to create conditions in the country so that foundations for achieving the long term deliverables of the National Guidelines are created.

4.2.5. Health Information Systems (HIS) (DGFP)

(DGFP/LD MIS services). Specific objectives, strategies, activities and indicators are included in the OP of DGFP/MIS.

The objectives and targets of the DGFP/MIS is to improve and strengthen national capability to plan, monitor and evaluate the progress of DGFP services in a systematic and effective recording and reporting, data management, analysis, report preparation and dissemination activities.
The HIS functions of the DGFP will deal with managing the family planning related information system and will be implemented under the OP named "Management Information System (MIS)" and the Line Director will be named LD, MIS. Under the Department of MIS of DGFP, the service statistics and the logistics management information are in operation for a long time. These two are the primary source of information of MIS-FP. The documentation system is the FWA register has become a unique longitudinal recording keeping document at the community level. Data extraction policy from the community level and the facilities are good and reporting forms are filled up and passed up through the ranks of different levels. There is a regular compilation, analysis and dissemination of the routine service data as well as logistics data.

4.2.6. HIS functions of other agencies and programs

Currently there are separate HIS functions of National Nutrition Program (NNP). In the sector program for period 2011-2016, there will be an attempt to mainstream nutrition service program and the OP will be renamed accordingly as "Nutrition Service Program (NSP)". The HIS functions of NSP will be further strengthened and linked with appropriate agency HIS system or with the HIS of the ministry, whichever is more appropriate. Other agencies of the ministry, viz. DGDA, DGHED, DNS, NIPORT, TEMO, NEMEW, will strengthen and further institutionalize the respective HIS functions. The HIS functions of these agencies will be well coordinated and integrated as per the general principle and guidelines of the sector program.

For the sake of avoidance of duplication, effective HIS systems for managing human resource (HR-MIS), logistics (L-MIS) and financial tracking (F-MIS) and procurement will be developed and/or improved preferably based on the existing HIS of the respective agencies, jointly developed, implemented, maintained, executed and updated based on agreed terms of conditions.

4.3. Human Resources for Health (HRH), Training and Nursing Services

(MOHFW/JS Administration) (Task Group)
(DGHS/LD Administration and HRM and DGFP/LD Administration and HRM;
NIPORT/LD Training research & Development; DNS).

A total of 52,453 physicians have been registered so far up until April 2010 with the Bangladesh Medical and Dental Council, but of these 43,537 are available to serve the people (Fact Sheet MoHFW, 2010). This means a ratio of physician / population of 1: 3675 or 0.27 physicians per 1,000 population. There are 0.11 nurses per 1,000 population in Bangladesh compared to 0.94 in India and 1.03 in Sri Lanka. Out of the total number of physicians 35% are working for the MoHFW, 3% in other ministries and 52% in the private sector. These numbers do not include the 4,011 dental surgeons who have been registered by the BMDC.

The World Health Statistics 2010 gives existent figures of 0.3 physicians and 0.3 nursing and midwifery personnel per 1,000 population in Bangladesh. The total of 0.6 is far lower than WHO standard recommendation of 2.3 per 1,000 population. There are 14,806 paramedics working in the public sector. The number of medical assistants in the public sector is 7,365. In addition there are 60,324 field staff and supervisors working under the DGHS and DGFP in the country. In general, Bangladesh has more physicians than nurses and staggering figures would be required if that balance is to be reversed. The recent move to recruit 4,000 physicians by creating new ad hoc posts against filling up of 2,700 vacant posts for nurses will further deteriorate the present ratio between physicians and nurses. The yearly turn out of physicians, which is 5,000, also tips the balance in favor of physicians.

In short there is a huge shortage of qualified practitioners and para-professionals in the country's formal system of health care providers. However, a large group of unqualified allopath providers and homeopaths provide services at the drugstores as the first point of contact for the patients, but these are not formally recognized.

4.3.1. Human Resources for Health (HRH)

The Government has recognized the need for a comprehensive review of HRH issues with a view to maximizing the utilization of the human resources in health and family planning within the limits of affordability. To this end, the MOHFW adopted in August 2009 its "**Bangladesh Health Workforce Strategy (2008) (BHW Strategy)**" and started implementation from FY 2010/11.
The document implies an ongoing re-organization of the Bangladesh Civil Service Health Cadre and Family Planning Cadre. The BHW strategy will be implemented in phases through the DGFP, the DGHS, the Directorate of Nursing Services, LD-MIS, LD-IST, LD-PSE, NIPORT and various training institutions.

> The definition of Bangladesh Health Workforce includes all personnel, staff and individuals directly involved in services for any or other of the health, family planning, nursing, drug administration, nutrition, construction, alternative medicine, occupational medicine or allied fields both in public and private sector of Bangladesh.

The aim of the BHW Strategy of the MOHFW is to ensure that a properly motivated, appropriately skilled workforce is available in adequate numbers where and when it is needed across the health sector with adequate competencies for the management and delivery of services

in both the public and private sector. MOHFW has identified the following strategic objectives, each with a set of practical activities that will be addressed in the next sector programme

Health Workforce Planning

1. Review available reports on situation analysis/projection of future needs of health workforce in all categories keeping all issues and challenges in mind;
2. Hold consultations to develop a long term draft Comprehensive Human Resource Master Plan with provisions for immediate, mid and long term interventions taking both public, private and NGO health sectors of the country as well as global scenario in perspective;
3. Build consensus on the draft Health Workforce Master Plan and finalize the draft;
4. Get endorsement of the Master Plan by the MOHFW for implementation.

Meeting the shortage of the Health Workforce

1. Adopt/develop a guideline for definition and classification of health workforce and set standards for specific health workforce: population ratio nationally (whole country) and locally (community, facility, specific area within facility, etc.) with a view to attain the standard in a specified time period in phases;
2. Scale-up production of the critical health workforce to minimize the immediate gaps as well as ensure service of such personnel who are educated through the public exchequer;
3. Assess factors, specific for each type of health workforce, that can positively influence their stay in remote, rural and hard to reach areas, and accordingly introduce specific incentives packages;
4. Strengthen the MIS (health), MIS (FP) and MIS (NNP) to substantially improve national health workforce database systems, incorporating all categories of staffs both in public and private sectors;
5. Establish similar MIS for nursing and drug administration;
6. Undertake periodic comprehensive assessment of health workforce availability, requirements and gaps in all sub-systems; measure geographic, skill mix and gender inequalities; and gather data on national and international migration, and accordingly balance production and deployment of required health workforce in all places.

Improve the quality of the health workforce in the public and private sector

1. Improve capacity of all academic and training institutes in all required areas (quality teachers, laboratory, teaching facilities, ICT, library facilities, etc.);
2. Carry out effective quality assurance scheme for medical education and training programs;
3. Provide reasonable institutional autonomy to the respective academic/training institutions;
4. Facilitate the teaching / training institutions to shift from a knowledge-based to skill-competency-program-based teaching/training approach;
5. Facilitate and expand the relevant institutions to boost production of nurses, midwifes, health technologists, medical assistants, community paramedics, family welfare visitors, Junior Midwives, Community Skilled Birth Attendants(CSBAs) and AMC practitioners for minimizing their acute shortage; Enhance the training program of Family Welfare Assistants and Health assistants, Community Health Care providers (CHCPs)
6. Support the public health institutions for production of multi-disciplinary public health workforce and other relevant institutions for strengthening education of alternative medical care;
7. Enhance effort for establishment of National Academy of Health Management;
8. Review in-service training (home & abroad), on-job the training and continuing education programs for more community oriented and need based training/education through appropriate restructuring, redesigning, improved coordination and to create opportunities for all categories of health workforce;

9. Carry out workforce related research to generate evidence for health workforce planning; In fact it should be part of the whole issue of health policy under a research and policy institute to be created for the purpose.
10. Review and modify existing teaching/training curricula, methods and assessment process of different HRH categories, both for undergraduate and postgraduate levels, as and when necessary, to match the changing needs determined by evidence and national, regional and global standards;
11. Develop a collaborative network amongst all relevant institutions / organizations for sharing experiences, technical know-how and resources with regard to maintaining common standard and practices**.**

Stewardship function for human resources
1. Develop framework for standardized and transparent accreditation system and enforcement thereof, inclusive of human resources, both for public, private and NGO sector medical education and health care institutions/facilities;
2. Enhance capacity of the formal state regulatory bodies (viz., BMDC, BNC, BPC, SMF, etc.) in terms of regulations, licensing system, workforce competence and logistics to oversee that the country produce and maintain a technically competent and ethically sound health workforce; establish council for alternative medical care;
3. Remodel the health workforce personnel departments to take wider roles so that common staff issues like payment of salary, allowances, increment, incentive, pension, sanction of leave, promotion, transfer, etc. become staff-friendly and justified by set guidelines, encouraging them concentrate on their work rather than on personal issues; Keep provision of strict treatment for deviant staffs through appropriate punitive measures, like punishment transfer, down-grading to lower position, suspension, termination, holding up salary, increment or allowances, etc. Also introduce reward system for staffs with good overall performance.

Recruitment, career development and retention
1. Constitute a Regulatory Commission to immediately review, amongst others, the existing Recruitment Rules and Procedures, reports and proposed revisions thereof for the health and family planning cadres of the Government, and formalize new Recruitment Rules, Cadre composition and Procedures through enactment and enforcement as quickly as possible;
2. Keep proportionate opportunities of promotion for health workforce in each health line and discipline subject to fulfillment of required time and qualifications;
3. Create a national health workforce career plan that clearly describes staff development paths, promotion and deployment prospects for all types of health personnel and staffs;
4. Develop a mechanism to constantly monitor the percentage of staffs migrating from their ongoing job along with identification of the multiple factors causing the migration and to address the factors through appropriate measures.
5. Develop and implement mechanisms to retain the workforce in rural and hard to reach areas.

Performance management processes
1. Strengthen the personnel wings in the executing authorities of MOHFW and respective DG offices to introduce individual and organizational performance management system (IPMS and OPMS) guided by clarified roles and responsibilities for each type of health workforce and organization;
2. Identify areas of functions that can be delegated either from MOHFW to DG offices or from DG offices to further lower levels up to the lowest tiers and implement such delegation of authorities to speed up and improve the accountability and performance management systems;
3. Explore opportunities for more income generating options by each individual health institution / organization, particularly in the public sector, keeping options for retaining whole or part of the

income locally with a view to use this additional income for performance-based staff incentives and institutional development so that all staffs better concentrate to their primary job.
4. Work out mechanisms to roll out indigenous solutions like the Chowgachha example as mentioned in the report.
5. Work out mechanism to scale up Individual Performance Management System (IPMS) to cover more and more health institutions / facilities; broaden concept of IPMS to transform it into an Organizational Performance Management System (OPMS).

Leadership and coordination of HR functions
Develop a mechanism so that MOHFW and its allied implementing authorities (DGHS, DGFP, Directorate of Nursing, NIPORT, NSP, Drug Administration, Line Directors, etc.) render the best leadership and coordination of HRH function and provide the best HR advice and administrative support for developing, deploying and retaining a well motivated, well trained, and responsive workforce.

Public-private partnership
1. Develop a proper guiding strategy and implement it for effective collaborative arrangements among public, private and NGO sectors to balance production and deployment of health workforce to serve the overall existing and future needs.
2. Start consultations with stakeholders on ways and means to achieve greater investment in health human resource development.

Health workforce financing
1. Work out a compensation package for health workforce, especially in the public sector to enhance motivation towards remaining in public service;
2. Initiate new and innovative alternative financing structures in public health organizations to cover additional performance-based staff incentives and support institutional development through local effort;
3. Provide more allocation from national level for research, training and further education to facilitate professional knowledge and skill development of health workforce.

Human Resource Management Information System (HR-MIS)
1. Strengthen the Human Resource Management Information System (HR-MIS) to cover all categories of staffs through the best use of Information and Communication Technology (ICT) in all departments of MOHFW and the private sector in collaboration with HIS units of the respective agencies of the ministry;
2. Make arrangements to keep updated private sector health workforce data in the HR-MIS;
3. Establish a human resource database coordination committee in the MOHFW.
Note: Please refer to Section 4.2. Health Information System, Monitoring & Evaluation and Research for further information about the HR information system.

Capacity development particularly in the areas of planning, budgeting, monitoring, procurement and financial management is extremely crucial for improving implementation capacity of the sector program. All the officials in key positions like line directors, program managers and deputy program managers will be trained in above areas with follow-up support on the job. Trained people in key positions need to be retained to get the benefit of investment. In this regard, MOHFW will engage with other ministries like establishment, planning and finance for compliance of retention of trained human resources in key positions.

DGFP has more than fifty two thousand officials of different levels under both the revenue & development budget. Almost all the development staff has already been transferred to revenue budget. The remaining about 2%, are under process to be transferred into revenue budget, which was delayed due to some information gap; The two main issues that plague the directorate are: (i) filling up of a large number of vacant posts and (ii) the development of a wider system of encadrement.

Interventions
BHW will play a key role in relation to two aspects of cross cutting agendas: from the staffing point of view (including equal opportunities for recruitment, access to training; facilities such as toilets for women) and a service delivery perspective (ensuring client-centred services through appropriately trained staff). Cross-cutting issues will be integrated across HRM.

- A HR Master Plan (2011-2030) will be prepared, which will be comprehensive workforce plan to develop Demand & Supply of different categories health workforces in future.
- The HR-MIS will be linked to the overall HIS to make a comprehensive HR database for proper planning and decision making procedure.
- Related personnel management procedures will be reviewed and updated as required.
- Individual Performance Management (IPM) (supervision and annual performance evaluations) has successfully been piloted in 53 Upazillas of 6 Districts. This IPM will be expanded to other areas.
- Recruitment for vacant posts in underserved areas is a priority from government. This is a prime need to provide health, family planning and & MCH services as per need of the people.

4.3.2. Pre-Service Education

(DGHS/LD Pre-service education + NIPORT/LD Training, Research and Development)

A breakdown of the number of nursing, paramedical and medical institutes, medical colleges and specialized institutes with seat capacity, both in the public and private sector is given below;

Table 4.1. Number of training institutions with their capacity

Name of Institute	Public		Private		Total	
	No. of institute	Seat	No. of institute	Seat	No. of institute	Seat
Post graduate institute/ Specialized Institutes (08 Medical & 01 Dental college included)	22	2053	10	169	32	2222
Medical Colleges	18	2509	43	3350	61	5859
Dental College/ Unit	03	210	12	770	15	980
Institute of Health Technology (Diploma course)	03	1010	52	6706	55	7716
Institute of Health Technology (BSc course)	03	145	15	1275	18	1420
Masters in Health Technology	0	0	02	65	02	65
Medical Assistant Training School	07	650	25	1855	32	2505
Certificate Courses	01	10	02	70	03	80

The Bangladesh Medical and Dental Council (BM&DC) registers the private medical colleges and paramedic/ health technology institutes based on certain criteria, e.g., number and quality of faculty, number and size of the departments, standard list of equipment and number of beds etc. The registration is done initially for a period of three years, after visitation of the medical

colleges and paramedic institutes by a team of experts. The Council has a board formed by experts nominated by the Government and by the representatives of the private medical colleges and paramedic institutes. The Council in the present form does not have any punitive authority for aberrations to the standards after approval and registration and is often heavily influenced by business considerations of the owners of private medical colleges and paramedic institutes. The same standards are not practiced on public sector medical colleges and paramedic institutes. However, the same regulatory conditions should apply to all types of similar institutes, irrespective of whether these are owned publicly or privately;

Medical and paramedic education addresses the shortage of health workforce in the facilities. Given the general shortage of qualified staff, the institutions for medical and paramedic education will be expanded, covering both public and private sector. MOHFW will re-examine the current licensing arrangements for pre-service and in-service educational institutions of both public and non-public health professionals. A professional accreditation system will soon be developed, beside the present regulating bodies, for those which have already been licensed on fulfilling the basic requirements;

The role of the Director Medical Education and Health Manpower is the most crucial in developing human resources in the health sector under DGHS. The office controls and regulates directly and indirectly the quality and the number of human resources produced in the public as well as in the private sector, either as a member, member secretary or chairman of different committees and boards of the State Medical Faculty, Bangladesh Medical and Dental Council, Pharmacy Council and Nursing Council. Given its many duties and responsibilities, the Office of the Director Medical Education and Health Manpower needs to be strengthened

Objectives, specific activities and indicators are included in the OP of Pre-Service Education.

4.3.3. In-Service Training (IST)
(DGHS/LD In-Service Training)

There is a Technical Training Unit (TTU) for assisting the Line Director IST in need assessment, curriculum development, support in identifying training institutes and facilities, contracting out training (local & abroad) and assigning different focal points for specific activities under the OP of IST-DGHS and its evaluation.

At present In-Service Training (IST), TTU, DGHS is playing the vital role and responsibility to develop the capacity of the service providers at public and private Medical College Hospitals, District hospitals, Upazila health complexes, Rural Dispensaries, Community clinics, Health & Family Welfare Centers (Union Level), Community Clinic (Ward Level), etc. TTU also took a major role and leadership in institutionalizing and implementing. In-Service Training is decentralised from the national level down to the district and upazila level. Training of service providers were largely conducted by experienced supervisors who had "training of trainers" (TOT) courses by Lead Training Organizations.

In-Service Training under DGHS will be a one bundle under the umbrella of LD-IST. All the programs will be need-based, as per requirements of the different sectors at home and abroad. Training facilities at division, district and upazila levels will be strengthened for conducting effective training programs or on-the-job routine training. An action plan on how the required number of different categories of service providers may be trained will be worked out by the line director, IST.

The National Academy for Health Management and Research is being established in light of the need of the training of the health service providers and managers on the different aspects of management for e.g. (i) Personal Management (ii) Project Cycle Management (iii) Financial Management issues (iv) Logistics Management etc. In-Service Training (IST), TTU will support their training, need assessment, instructional material development, mentoring for quality training, supervision, monitoring and impact evaluation.

The National Institute of Preventive & Social Medicine (NIPSOM), established in 1974 is the only public health institute in the public sector was entrusted with the responsibility of developing a public health workforce at the post graduate level, conducting research in the public health arena and providing advisory and consultancy services in order to support Primary Health Care (PHC) and the health system in Bangladesh. Since inception the institute has been conducting postgraduate MPH courses in 8 specialty areas of public health and one M.Phil course in Preventive & Social Medicine. NIPSOM is collaborating with a number of national and international public health institutions. In the long journey since its inception, NIPSOM's need for strengthening was never fulfilled. It is felt that in the changing global and national scenarios, this institution could have contributed more in producing qualified public health work-force, if its needs had been appropriately addressed.

Training of Physicians, Nurses, midwives, FWVs, FWAs, HAs, CSBAs, MAs, Medical Technologists, and other health personnel were conducted by LD/IST with technical support of TTU under DGHS. About 200 different types of training courses were identified by TTU as relevant for in-service training, of which 121 were implemented, training 89,387 trainees during HNPSP (from July 2003 until June 2010).

LD/IST with the technical support of TTU conducted 21 days basic ESP training for all field service providers (HA, AHI, HI, FWA, FPI etc) at Upazila level and 21 days basic management training for newly recruited doctors at district level. Operational and preventive maintenance training of computer were completed for 6,000 health personnel at Upazilas, districts and national level related to IT activities.

As a routine training program, field service providers were being trained on 6 days refresher training by LD/IST, using DTCC and DUTT. Field level / community based workers in the public sectors (DGHS) were trained-up on basic ESP and as routine training program. 6 days refresher training on ESP was conducted, according to operational plan of LD/IST under HNPSP.

TTU had an important role in institutionalizing and implementing the OP of the LD/IST from the national level down to the district and upazila level. Training of service providers was largely conducted by supervisors who had benefitted from a "training-of-trainers" (TOT) course provided by lead training institutions, such as the Centre for Medical Education (CME) that offers a certificate course on Teaching Methodology, Curriculum Development, Material Development, Assessment & Evaluation, Research Methodology, Biostatistics, Instructor Evaluation, Program Evaluation, Problem Based Learning (PBL), Health Ethics etc. TTU needs to be further strengthened by adding subject specialists on ad-hoc basis and to review all the manuals and modules developed during last five years by the various LDs for in service training.

Training of medical officers, nurses and midwives, laboratory technicians, FWVs, female HAs and FWAs on comprehensive and basic EOC will continue at a faster pace and more training sites will be identified, strengthened and used. NGO service providers will also be trained under conditions of providing services to those who cannot afford free of cost.

Criteria for registration and accreditation of training institutions, medical, Nursing & Midwives and health technology and other institutes will be revisited and updated, to be vetted by the regulating Council members.

Since almost all the LDs have training component, it is necessary that the various LDs (LD/HRM, LD/QA, LD/HIS, e-Health and Medical Bio Technology and LD/IST) form an inter-LD coordination committee to arrange and plan in-service training to suit the purpose of all.

Priority Activities will include

- Develop/ adapt comprehensive training curriculum and module(s) with the technical assistance from CME for training of trainers, basic and advanced, i.e., program/need based training on various relevant subjects and topics
- Establish medico-legal and forensic medical services in the remaining district hospitals by providing training to the recruited staff
- Ensure quality of training in the public and private medical, nursing, dental and health technology institutes through support to regulating bodies
- Establish a Health Management Institute/ National Academy of Health Management and Research center
- IST will conduct training need assessment for all important categories of relevant staffs, review & update different courses curriculum & instructional IEC and BCC material development.

4.3.4. Nurse / Midwifery Services and Training

(Directorate of Nursing & Midwifery Education and Services + MOHFW/JS Hospital and Nursing).

The Bangladesh Nursing Council (BNC) has registered 25,732 Registered Nurse Midwives (RNM), junior midwives, assistant nurses, family welfare visitors (FWV) and skilled birth attendants (SBA) up till mid 2010. Out of them 15,023 nurses are available for providing services in the public as well as in the private sector as nurse midwives. But demand for the midwives which is lacking in the country. There are 17,406 posts in the nursing services, out of which 2,785 posts are vacant. In the whole Directorate of Nursing Services, there are only 165 class one and 465 class two posts. There is therefore an urgent need to take immediate action to create midwifery posts in the facilities at all levels.

Nursing services is perhaps the most highly centralized service in the public sector of Bangladesh. Even leave applications of the nurses serving in the most peripheral posts have to be sanctioned at the directorate in Dhaka. Neither Directorate of Nursing, nor the BNC has any internet services. These organizations also suffer from the absence of an effective MIS. It seems that the nursing profession has little political clout.

Training institutions for nurses and midwives

There are 45 nursing institutes in the public sector with 1820 seats. One more is being established; the armed forces also possess one nursing institute with 30 seats. There are 24 nursing institutes in the private sector with 850 seats combined.

There are four nursing colleges, each with 100 seats in the public sector and four post basic nursing colleges, each with 125 seats. While one is working in Dhaka, the other three are yet to start functioning. There are 8 nursing colleges in the private sector with 280 seats. Need to create post for the Midwifery course at the entry level of the Nursing colleges in the public sector.

Nurse and midwifery training

Nursing services aim at strengthening public sector nursing and midwifery by creating adequate posts and filling-up the same, so that the existing mismatch of physicians: nurses, nurses: patients, nurses: bed and nurses: population and midwife :population ratios can be improved. A standard ratio of nurse to bed may be 1:4 in general hospitals (for surgical services it may be 1:3) and 1:2 in specialized hospitals. In Bangladesh the doctor: nurse ratio of 1:2 may be the standard and like a ratio of 1:3 for doctor / paramedics (all disciplines). The required number of nurses or paramedics in the future is not known and no clear plan for future nursing education is available to address the very insufficient number of nurses in the country.

Midwifery training

Several types of courses are run in the country for nurses, e.g., 6 months and 4 months EOC training for nurses; 6 month skilled birth attendant (SBA) for FWA and Female HA, one and half year long junior midwife (JNM) training course (for private sector), three year long diploma registered nurse-midwife course (RNM) and four year long bachelor course (degree).

Besides these courses recently a 6-month certified midwifery course curriculum has been developed following ICM (International Confederation of the Midwife) and international standard of competencies, skills and knowledge and scope of practice. ToT has been completed and the course will be started on October 2010. Initiative has also been taken to start the three years midwifery course at the entry level, following the strategic direction paper approved by the MOHFW. Policy for Midwifery regulation has been drafted and waits approval.

Master degrees in nursing are still not conferred in Bangladesh, although there are about 200 masters degree holders in the country, most have been educated in Bangladesh, India, England and Thailand. Many of them are posted in the nursing institutes and colleges.

At present there are on average just 2 to 3 full-time teaching staff per nursing institute. External resource persons are paid only taka 200 per class (30% of the teachers at present are guest teachers, usually medical graduates). Most of these teachers cannot effectively follow the curriculum due to lacking of teaching learning materials and laboratory/ demonstration facilities.

Given the high maternal mortality rates in the country, the structure and competencies of midwifery training is currently being reviewed.

There are no dedicated midwifery posts in hospitals. All trained nurses have midwifery training, but most lose those skills since they are deployed in general or other specialised fields. Midwifery services are grossly overburdened at tertiary and most district hospitals and virtually absent at Upazila level. Midwifery skills are not available 24 hours, 7 days a week, resulting in extremely poor quality for those women who do seek care in the public sector.

Diploma nurses trained during the past few years have not been absorbed in the public sector and are believed to have enhanced the private sector. Revamped nurse-midwifery training has been restarted with an expected annual production of 5,000. This is output will be not merely midwifery, but all types of nursing.

In order to provide midwifery for the large majority of women who delivery their babies at home, the existing plan was to train all the FWAs and the female HAs as Community Skilled Birth Attendants (CSBAs). This would provide about one such service provider per 6,000 population or 1,000 families to manage about 50 to 60 normal deliveries and at least one third referrals every year. A monthly delivery rate of 1.5 is in fact quite low, but the CSBAs are also expected to perform other tasks, such as EPI, health related communication, DOTS, ANC, PNC,

contraception, Vitamins A administration, recording and reporting of demographic and epidemiological data etc.

The current number of CSBAs is about 6,000. As many of the existing RNM have not practiced their midwifery skills in the institutions where most of them are currently employed, their numbers cannot easily be added to the available midwifery cadre to work in the obstetric wards. A compounding problem is that many of the FWVs (18m months training) under the DGFP are reaching their retiring age and have never been replaced.

In addition, the rate of training of existing staff to convert them into CSBAs is low. The capacity to produce CSBAs through the existing 37 training centres is about 1330 per year, and it is expected that by 2015 a total of about 13,570 would have been produced. (the attrition rate not considered). This number is grossly insufficient to make significant increases in the percent of childbirth attended by CSBAs by 2015. Furthermore, although it has been agreed in principle that the CSBA training should be a total of 18 months (6 months basic + 9 months field experience + 3 months additional), it is suspected that only the 6 month basic training has been implemented, and that this is insufficient to provide the skills expected of the CSBA. Their training programme is currently being evaluated. It is expected the evaluation will provide evidence for policy decisions regarding the future direction of HR development to provide sufficient basic midwifery skills to respond to the national needs.

Three alternatives are being discussed: (i) revised the implementation of the training of CSBAs and review the numbers needed. The alternative is (ii) to revise the whole career structure of nurse midwife training where the current RNM will do a six month Certificate course in advanced midwifery, while a new two year course is started to become a registered JNM with possibility to continue later towards a two year course and obtain a Degree as RNM. A third option is (iii) to re-start the training FWVs for 18 months, with the last six months specifically on midwifery.

Quality of nursing and their training

Several studies have shown that nursing services, in particular in the public hospitals are inefficient and ineffective. A study published in 2006 (Hadley and Roques), found that between 05.00 to 23.00 hours only 5.3% of the working time is spent in direct contact with patients (trained nurses in fact spend 3.7% time and trainee nurses 16.7%), paper work and indirect patient care takes 32.4% of the working time, while 50.1% time is spent in unproductive and unrelated activities. Basic services were not observed to be provided, e.g., provision of basic hygiene care, feed patients, change wound dressings, insert or care for urinary catheters, clean up after incontinent patients, administer enemas, provide advice on admission or discharge and provision of psychological support or counseling. Temperature recording was done without checking, monitoring of pulse, respiration or fluid intake and output were not found to be checked.

A test among the students showed that except for antenatal care their knowledge in all other topics, e.g., neo-born care, management of delivery complication and partograph is less than 50% and knowledge of family planning and post natal care, per partum hemorrhage, labor and delivery etc. is close to 60%;

Priority activities are

- Streamline the recruitment and promotion rule of the nursing services and post/ recruit/ promote staff as per standard.
- Increase the capacity of the Bangladesh Nursing Council to enable it monitor all the nursing institutes and colleges in the public as well as in the private sector
- Develop a standard teacher: student ratio and fill up the posts of trainers/ teachers accordingly

- Ensure effective hands on training of trainees.
- Supervise the training institutions to provide quality training, adequate training tools etc.
- Start and expand midwifery training for nurses and courses for eligible women from community level. Permanent placement of mid-wifery trained nurses in labour ward/section along with need-based post for midwives in the designated facilities.

4.3.5. Training, Research and Development (NIPORT)

(DG NIPORT/ LD Training, Research and Development)

NIPORT and the institutes under NIPORT (12 FWVTI & 20 RTC) conduct research & survey activities and provides training to develop knowledge, skills and change attitudes of service providers and of M&E staff under DGFP. Another activity of NIPORT is to undertake evaluations and various types of research (cross-sectional, operations research, collaborative research and surveys), while at the same time efficiently disseminate research findings at different levels to strengthen the reproductive health, child health, nutrition and family planning activities. Finally, NIPORT also conducts advocacy with national and international development partners to achieve MDGs ensuring maximum utilization of resources.

Training

As a National Training Institute, NIPORT is playing a significant role in improving the Health, Reproductive Health, Family Planning and Nutrition program through the development of knowledge and skills of Managers, Service Providers, Paramedics, Field Supervisors and Field Workers. NIPORT has been implementing multidimensional training program for Mid-level Managers, Trainers, Paramedics and Frontline Workers. This directly contributes to achieve the Millennium Development Goals (MDG) in the health and population sector. NIPORT has trained in last 7 years more than 68,600 (Sixty eight thousand six hundred) functionaries of the HNPSP program of Bangladesh, working at District, Upazila and Field Levels. NIPORT trainings include topics such as Team Training, Management Development Training, Clinical Management Training, Training of Trainers, FWV training, Comprehensive Orientation, Midwifery Training, Refresher Training, computer training, Early Childhood Development training and Subject Oriented training courses. At the same period, a number of training curriculums were developed. Considering the present needs, the authorities will strengthen NIPORT facilities by establishing new training institutes at District and Upazila levels, which will be constructed through HED.

Research

Research, evaluation and monitoring activities are considered an integral part of the national health, nutrition and family planning program. Under HNPSP, NIPORT has undertaken a number of research studies / surveys including Bangladesh Demographic and Health Survey (BDHS), Utilization of Essential Service Delivery (UESD) Survey, Urban Health Survey, Integration of Reproductive Health Services for Men in Health and Family Welfare Centres, Demand Based Reproductive Health Commodity Project, Bangladesh Maternal Mortality and Maternal Health Services Survey (BMMS) etc. From the beginning, the research unit of NIPORT is contributing to further strengthen the national program.

Priority interventions

(i) Provide training to medical and non-medical officers, trainers, paramedics, field workers and staff on reproductive health, child health, nutrition and Family planning, (ii) Update training curricula for training of different categories / tiers of service providers (iii) Conduct demographic

behavioral aspects of family planning, reproductive health and nutrition program focused research / survey to strengthen the national program; (iv) Undertake human resource (HR) and training related research (v) Conduct and monitor operations research on HNP program improvements (vi) Carry out survey / rapid appraisal / situation analysis and need assessments for the development of HNP program (vii) Conduct research on improvement of Reproductive Health and Demand based Reproductive Health Commodity, ANC, PNC (viii) Conduct national surveys: BDHS, BMMS, UESD surveys, facility survey, Urban Health Survey, etc. (ix) Disseminate the research findings to policy makers, program managers and researchers.

4.4. Health Sector Financing
(HEU, MOHFW)

The overarching goal of health systems and health policy is good health for everybody. Within this, the specific purpose of health financing is to make sufficient funding available to ensure that all individuals have access to effective public health and personal health care.

4.4.1. Health financing framework

Policy discussions identified that more technical analysis and inputs from relevant stakeholders is needed (i) to support of the Government's effort to review and reform health financing, and (ii) to guide the development of action plans to move from the status quo towards achievement of long-term strategies.

Approaches to Health Financing
The purpose of the health financing framework is to guide the development of action plans to move from the status quo towards achievement of long-term strategies by assessing how different health financing instruments currently being discussed (demand side health financing, supply side financing, mixed systems, health insurance, user fees etc) on their inherent principles relating to equity, efficiency, poverty focus, coverage, sustainability and administrative arrangements and in their capacity to contribute to an effective decrease of out-of-pocket expenditure as a core poverty trap. What other factors correlate with financial barriers to access health services which should be addressed. In this context MOHFW will develop both, short and longer term strategies to ensure access of the poor to quality health services, including joint development of agreed methodology on how to identify the safety-net mechanism that protects the poor and disadvantaged population.

Priority activities will include

- Identify critical health financing constraints and solutions in the Bangladesh context that need to be better understood to inform the design of the future health policy.
- Activate relevant task group that discusses the issues health financing framework.
- Assess and review the weaknesses and strengths of the current national health financing system; exploring the gaps in terms of universal coverage, equity, efficiency and quality.
- Undertake joint analysis of revenues/expenditure under different scenarios to assess sustainability and viability of various health sector financing schemes.
- Review and evaluate health financing approaches (e.g. role of pre-payment mechanisms (including community health financing), user fees (with and without retention), private sector financing and PPP, and various types of donor financing) in countries with similar socio-economic situations and evaluate how successful elements of these approaches could be employed in the Bangladesh health financing system. The eventual adoption of free access to primary health care services (like free primary education) as part of the UHS will be an option for serious policy deliberations, based on relevant national studies.
- Evaluate and assess how various health financing mechanisms could contribute to ameliorate the existing taxed based health financing mechanisms in operation in Bangladesh and explore their complementarities.
- Give special consideration to current issues in health insurance, including extension of health insurance to the informal sector and to the poor, for example through micro/community

insurance (both existing funds and proposed pilots); monitoring and evaluation issues; quality management; and regulatory framework

4.4.2. Demand-Side Financing (DSF)

HNPSP recognises that out of pocket costs can be a barrier to access to health services by poor people, and envisaged developing a range of approaches to stimulate demand for health services. It was intended that subsidies would be used to enable and encourage poor people to access services from a range of service providers. The thinking was that placing the finance with the patient could be one way to promote the growth of effective quality services

The ongoing demand side financing scheme (maternal voucher scheme) has some substantial evidence that this has helped to increase the utilisation of safe motherhood services, but there are also some concerns. These relate to (i) affordability and sustainability, if the scheme is to be scaled up, (ii) procedural constraints related to fund disbursement and management (iii) improvement of supply side (HR, logistics, equipment, quality) in order to consistently keep up with the demand side effects resulting from DSF programme, (iv) inclusion of private/NGOs; (v) stewardship role of GOB (vi) to the risk that some aspects of the design of the incentives (e.g. cash payments, service coverage) may be changing provider and patient incentives in ways that are not supportive of the maternal health objectives. Recommendations from the economic evaluation of DSF program might be considered for further scaling up.

4.4.3. Resource allocation formula

Public funding for health care through the MOHFW to geographic areas is currently based on norms related to the size of facilities. Such allocations often do not reflect population need since health facilities and staffing patterns are often distributed in a way that fails to take account of changing demographics and epidemiological requirements.
The 2009 Annual Programme Review suggested that “substantially improving the pro-poor focus of the budget will also require modifying the allocation formula for the revenue budget” (Aide Memoire, APR 2009). The concern stems from evidence that although health status is improving, in poorer and more vulnerable areas the improvement is not as expected .Therefore, MOHFW would require a formula based on population needs and other relevant factors. Introducing such a formula for allocation driven by the needs of the local population might affect the way planning and budgeting is carried out at present.

Interventions
Given the background, a formula based on population adjusted for the local poverty rate could initially be used to set allocations. The formula can be revised over time as more information becomes available on the relationship between population needs and service delivery costs. The recommendations from the ongoing work on resource allocation formula can be considered.
A proposal for formula allocation should take into account the realities of budget management. It is proposed that initially a needs allocation would be introduced for the non-staffing component of the non-development (revenue) budget. This could later be extended to include the staffing component of the Revenue Budget and OPs under the Development Budget.
Priority activities in order to implement the formula will include: High level agreement on the prototype formula and implementation sites; Agreement on the allocations for each site and identification of additional funding; Development of LLP within fixed resource envelopes’. Agree on mechanisms for accelerating local resource availability including new directives for financial delegation.

4.5. Quality Assurance, Standards and Regulation
(DGHS/LD QA)

As described in the section on Hospital Management (3.7) quality of public hospital services has a lot of scope for improvement. Physical structures design and spaces are not conducive for the patients. Although food quality has improved in recent time, thanks to an increase in the per head allocation for food, hygienic conditions need substantial improvement. The tertiary level public sector hospitals have weak culture of practicing of MIS or adequate amounts of MIS logistics. Few upazila and union level facilities have all the posts filled up for physicians. Although the situation of nurses is slightly better, serious lack of nurses is frequent in these facilities. The same picture holds for the posts of paramedic. No hospital has posts of dieticians. Food provided is not according the medical needs or as per the medical conditions

Most of past attempts taken to improve quality of services fell through, due to the lack of sustained and continuous support from policy makers and development partners. Some failed because of design flaws, which did not look out for scaling up or the very approach adopted was not sustainable. Emphasis will have to be given to improving the quality of services, since quality is among the main factors determining the utilization of the public health care facilities.
The elements of quality that need to be given priority are: patient and service provider satisfaction, environment of the health care facilities, availability of equipment and service providers, service provider's communication skills and waste disposal systems.

Improving quality of services in public health facilities is one of the most important issues, as is also reflected by its presence as an indicator in the Result Frame Work (RFW). Acknowledging its necessity, the MoHFW has formed national committees on Quality: The National Steering Committee (TSC), the National Technical Committee (NTC) and the Quality Assurance Task Group (QATG) under DGHS.
Both DGHS and DGFP have been working on quality issues. Part of the MOHFW activities is the use of Standard Operational Procedure (SOPs) in district hospitals for the areas of emergency services, outpatient services, inpatient services, house keeping. District hospitals are also required to do Client Satisfaction Surveys from the outpatient department. Unfortunately, neither the surveys nor SOP are done on a routine basis and in the optimal manner. Especially the quality at Primary Health Care level and in secondary hospitals needs to be strengthened. Some pilots are being planned or already implemented: UPHCP II, Total Quality Culture in 3 districts, Standards Improvement in Sylhet, Quality Culture in government Primary Health Care facilities in Dhaka.

In the private sector, evidence shows that most physicians prescribe excessive, expensive and risky medicines and often ask for excessive diagnostic tests. One study (M.R. Khan, 1998) shows that half of the clinics registered barely meet or fall below the standard inputs defined by the 1982 Drug Ordinance, necessary to obtain registration. The situation among the unregistered clinics is even worse. "Private health providers operate in a non-competitive market that tend to allow these anomalies, maintaining high prices.

A gradation of the licensed institutes, hospitals and individual practitioners need to be developed based on quality through some transparent mechanisms, i.e. accreditation process, a quality assessment by a board, formed with proper representation from the beneficiaries as well as the relevant experts.
Regulation of the quality of hospitals and diagnostic services, vested in the DGHS/ Director of Hospitals and Clinics should be practical. Instruments used for this purpose need to be updated through a workshop of relevant experts. Accreditation also has to be matched with the

comparative advantages that the accredited service providers hold in terms of cost effectiveness. The most fundamental problem however, is the lack of human resources and logistics to monitor the quality of hospitals and other diagnostic services by the Director Hospitals and Clinics.

A proposal for developing 'Hospital Accreditation' through a National Accreditation Council was developed in June 2008 by the DGIS/LD Improved Hospital Service Management. The document shows: (i) the present situation and major challenges for implementing the Hospital Accreditation system, (ii) an overview of the hospital accreditation system, (iii) how to develop the hospital accreditation program in Bangladesh, (iv) the implementation priorities, (v) an action plan towards developing an accreditation system, and (v) review different hospital accreditation programs of different countries. However, the status of this document is unclear and little follow-up appears to have been given.

MOHFW will publicize the locations and the services of the accredited service providers through mass media with the score and relative position. The following quality criteria will have to be considered by the Director:

- Choice of services/ accessibility and access (with adequate and appropriate logistics)
- Information given to clients
- Technical competence of providers
- Interpersonal relations and responsiveness of the service providers
- Mechanisms to ensure continuity of services, e.g., referral
- Appropriate constellation of services.

Priority activities will include

- Improve functioning of National Steering Committee (NSC), National Technical Committee (NTC) and Quality Assurance Task Group (QATG)
- Constitute an accreditation body/council to provide accreditation to both government, non-government and private hospital/service providers
- Include quality performance indicators into the HIS/DMIS (MEU / Planning Wing).
- Update existing Standard Operational Procedures (SOPs)
- Conduct regular client and provider satisfaction surveys in primary, secondary and tertiary level health facilities.
- Create effective 'vigilante teams' with public representatives and government officials for in-house quality assurance to oversee the performance of the health care facilities.
- Develop a Quality Management Strategy and policy for primary, secondary and tertiary level health care services.
- Give priority to in-service training to improve quality in clinical services, communication and quality management, areas which were not given attention to in the past.

4.6. Drug Administration and Regulation
(DGDA + DGHS/LD Procurement, Storage and Supply Mgmt + DGFP/LD same)

The Directorate General of Drug Administration (DGDA) through the Drug Regulatory Authority (DRA) is the national regulatory authority of pharmaceutical products and vaccines in Bangladesh. It has full control on all aspects of drug and vaccine development and use, for any drug produced and/or imported in the country. Consequently, the DRA is the sole authority responsible for controlling and monitoring production and distribution of pharmaceuticals and vaccines in the country, overseeing production, import, distribution and use. However, because of shortage of trained and qualified personnel, the effective execution of these tasks is not that strong. Thus, strengthening the DGDA as the National Regulatory Authority needs to be addressed.

The Drugs (Control) Ordinance of 1982 and the National Drug Policy of 1982 were updated in the National Drug Policy 2005, to make the country a producer and exporter of good quality medicines and to strengthen the Directorate of Drug Administration (DGDA) into an effective regulatory authority. The updating of National Drug Policy 2005 is on process. The recent upgrading of the office into a Directorate General was responding to the provisions of the policy. The Directorate of Drug Administration currently has about 65% of its posts vacant. These need to be filled as a priority. Recruitment for the recently created new posts has to be initiated.

The main functions of the office are to:
- Licensing and registration of drugs including vaccines, medical devices and diagnostics, and implement Drug Acts and Rules.
- Monitor and ensure quality of drugs through surveillance activities and control prices of the commonly used essential medicines and ensure rational drug use and
- Prepare lists of non-prescription (OTC) drugs.
- Ban manufacture, sale and distribution of counterfeit, adulterated and sub-standard medicines
- Upgrade the criteria of registration for import of all medicines and vaccines.
- Provide training in quality control and production of staff in the department.

According to DGDA records in 2002, all essential drugs (ED) were produced locally and about 44.78% of local drugs production was related to essential drugs. There are 22,000 brand named drugs on the market, which involve 1,872 generic and locally produced drugs that meet 93% of the local demand for drugs. There are 256 licensed pharmaceutical factories in the country, six of them are owned by multinational companies, producing about 10% of the local production. 85% of the raw materials used in the local production are imported. Only about 1.1 % of the locally produced drugs is exported. Being a drug exporting least developed country, Bangladesh has a unique position in the region, for not having to adhere to the TRIPS Agreement until 2016.

The Essential Drug List (EDL) was updated as per the latest model of WHO. Inspection check lists have been updated as per the WHO Good Medical Practice (GMP) guidelines, printed and distributed to the concerned offices and officials. Awareness building interventions (posters) were produced on rational drug use (RDU), the code of pharmaceutical marketing were printed and re-printed and distributed. Training was given on Good Manufacturing Practices (GMP) to the pharmacists and chemists working in the field of medicine.

To ensure drug safety and pricing in the country will require collaboration between the DGDA and other regulatory agencies/stakeholders in the Health Sector. DGDA will need substantial

funds to train the officers and staff of the DGDA including drug testing laboratories in monitoring drug quality. In addition, DGDA will have to establish an effective drug testing laboratory of International standard. The existing laboratories need to be modernized. The irregular retail trade of allopathic drugs and medicines, the functioning of spurious drugs or below standard drug and the dispensing of drugs by unregistered physicians or unauthorized sellers needs to be controlled by deploying more staffs at district levels and at possible 'DGDA outlet stations'.

Interventions

Pharmaceutical companies will be checked for functioning of a quality control and quality assurance systems and for the presence and practice of WHO recommended standard operating procedures (SOP). GMP guidelines need to be used for manufacturing each product and through post-marketing surveillance by testing randomly collected samples in drug testing laboratories.

Data on production, import, export, procurement, storage, distribution and sale should be compiled, monitored and evaluated to ensure availability of medicines in all health facilities in both public and private sectors.

Safety, efficacy and quality of all registered medicines should be monitored regularly and information on any substandard, spurious and counterfeit medicines should be made freely available to all concerned by publicity in both print and electronic media.

Rational Drug Use should be ensured by conducting surveys on the systems of prescribing, dispensing and patient compliance. The DGDA, in consultation with the expert committee shall update from time to time the list of essential medicines in line with the current EDL of WHO.

Priority activities will include:

- Establish a modern drug / vaccine testing lab to meet international standards at central level. Expand these lab facilities gradually to regional/district levels.
- Establish a Drug Information and Adverse Drug Reactions Monitoring Cell within the DGDA for Rational Use of Drugs, Strengthen field monitoring and quality assurance of drugs through training of the staff.
- Upgrade the National Drug Policy.

4.7. Procurement and Commodity Supply Management

(Joint Secretary Development and Medical Education; DGHS/LD Procurement=CMSD + DGFP/LD Procurement, Storage and Supply Management / PSSM). Task Group Procurement.

Government of Bangladesh promulgated Public Procurement Act 2006 and Public Procurement Regulations 2008. The introduction of the Procurement Act and Regulations constitute a major reform in the field of public procurement. Procurement guidelines are (i) adhere to the main pillars of sound public procurement: Economy, Efficiency, Fair Access; (ii) maintain transparency in procurement procedures and decisions; and (iii) ensure best practice and good judgment. As far as possible theses Rules and Acts will be followed in all procurements of goods, services and works. The regulations are accompanied by "The Public Procurement Processing and Approval Procedures" (PPPAP), which stipulate the processing time for the approval of all procurement decisions.

Procurement faces a challenge to support adequate and timely program implementation in Bangladesh, and the health sector is no exception. Procurement Performance has shown both strengths and weaknesses. The plan to strengthen and assist the office of the Joint Secretary (Dev & ME) to enable it to discharge its responsibility in matters of Procurement and Logistics management by establishing the 'Procurement and Logistics Management Cell' (PLMC) has not been completed. This cell would be responsible for coordinating and supervising decentralization, training and capacity building efforts, including those required within the key procuring entities under HNPSP. It was also supposed to liaise and intervene with parties outside the authority of procuring entities, such as the CPTU, Finance Ministry, NGOs, etc. Building capacity within the procuring entities has been difficult and results uneven.

Overall, the Family Planning Procurement Unit, which handled a more uniform set of items generally performed better than the Central Medical Stores Depot which handled a larger variety of pharmaceuticals, supplies and equipment.

There is opportunity for improvement in procurement planning and management. Realistic needs assessment for procurement of necessary equipment and medical supplies and reagents (MSR), quality control in preparation of bidding documents and technical specifications, introduction of online procurement system, avoiding long delays in installation and operation of equipment, establish a data base for ensuring store inventory on regular basis and idling of equipment for lack of repair and maintenance, could bring significant change in procurement management systems. While there have been changes in procurement practices in the MOHFW, it entailed considerable technical assistance and oversight. However, the team of CMSD and DGFP is now capable of handling considerably larger amount of contracts than ever before.

4.7.1 Implementation of Procurement

Procurement Plan

MOHFW will develop a procurement plan for the next 18 months, which will provide the basis for procurement methods, estimated cost and procurement processing schedules. From the second year of program implementation, by April 15th each year, - or as and when required to respond to the actual implementation needs and improvements in institutional capacity throughout the duration of the program - MOHFW will prepare plans, which would include on-going contracts rolling into the following year, and detailed procurement plans for the following 18 months, based on the various OPs. Due to complex operations and large volume of procurement, CMSD should hold LD meetings four months prior to finalization of the procurement plan in order to

reach consensus on how to bring the various request together (harmonize them within each Directorate). Coordination among the requisitioning LDs is to be ensured by the relevant Directorate. LDs should keep contact and follow up with CMSD regarding there procurements.

Procurement of Goods

Goods procured under the program will include: pharmaceuticals, vaccines, contraceptives and other health sector goods and supplies. Procurement of goods will be carried out by the procuring entities, working closely with the directorates and decentralized units, under the guidance and supervision of the Joint Secretary (Dev&ME) of MOHFW. Procurement for pharmaceuticals, equipment etc. is part of the LDs ESD and Hospital Management. There is limited decentralization of procurement authority to the District and Upazila levels, based on the number of hospital beds.

Procurement of Services

The implementation of the program will require extensive procurement of services by MOHFW, ranging from individual consultants to consulting firms. It also might need to engage universities, government research institutions, public training institutions, NGOs, etc. The capacity of procurement for services is comparatively weak; hence, MOHFW may include additional consultants under the umbrella of the Procurement Logistic and Monitoring Cell (PLMC) to assist respective directorate/LD for service procurement.

Procurement of Civil Works

In the new program, MOHFW may initiate construction of new health facilities, extension, remodeling or renovation of existing health facilities. Procurement of civil works will be carried out by the HED and PWD according to the delegation of execution of civil works under the guidance and supervision of the Joint Secretary (Dev&ME) of MOHFW. While using DPs funds, they will take into consideration the Environment Management Plan (EMP) and the Social Management Framework (SMF).

Emergency Procurement

In emergencies, resulting from natural disasters, the immediate procurement of pharmaceuticals, vaccines, medical supplies or nutritional supplements is necessary to deliver the goods in the shortest possible time. In such emergencies, procurement follows PPR guidelines for emergency procurement methods through UN Agencies, through shopping. Direct contracting methods may apply and be acceptable.

4.7.2. Procurement Support Systems

Integrated online tracking system (OTS)

Effective monitoring through an integrated Online Tracking System (OTS) under MOHFW is required. The OTS will connect all the procuring entities. OTS will firstly create an inventory of the major equipments and track their life cycle histories (purchase dates, price, company, condition, installation, repair, maintenance, rejection, etc.); secondly, it will create and maintain an inventory of procurement and supplies from the stores to the end users, through a tracking system. These inventories can be placed in all the government hospitals, major offices, and academic training facilities of the ministry. The online tracking of the procurement status and inventory for goods (medicine, furniture and equipments etc.) in CMSD needs to be established and maintained. Further the following recommendations will be taken into consideration during development of the integrated online tracking system:

- Development of a national policy on management of health care technology
- Setting up a Central Asset (including movable assets) Management System

- Improvement and application of Standard Table of Equipment (TOE)
- Improvement of the delivery, distribution and commissioning system
- Establish sustainable maintenance systems for hospital equipment
- Uploading and editing options for technical specifications.

4.7.3. Audits

Procurement audits will be carried out jointly with the internal audit function for financial management. An appropriate financing option will be explored, so that time and cost of contracts can be saved. In addition, routine post-review of procurement actions will be undertaken for major procuring entities (CMSD, Logistic unit of DGFP) for at least 20% of the contract packages under post-review category. MOHFW will disseminate all complaints received against a contract package, irrespective of post- and prior-review contract packages, including the disposal of the complaint.

Interventions

The 'Procurement and Logistics Management Cell' (PLMC) will be established. It will be responsible for coordinating and supervising decentralization, training and capacity building efforts, including those required within the key procuring agencies. It will liaise with parties outside the authority of procuring entities and with important agencies such as the CPTU, Finance Ministry, NGOs. e-procurement will start for the major procuring entities in consultation with CPTU and World Bank.

Decentralized procurement initiatives will be undertaken, where Local Level Planning (LLP) is being implemented. It is imperative for an efficient procurement that economy of scale is matched with efficiency of scale. There are procurements which would be better in the hands of decentralized authorities under close monitoring. This should however, fulfill two conditions: (i) that technical expertise exists in the decentralized units and (ii) that the internal auditing and monitoring systems are functional and strong.

During HNPSP. DP funds for procurement was governed by IDA procurement guidelines, necessitating WB approval at various points in the procurement process to ensure compliance. This has delayed procurement on the ground. In order to avoid such delays, it is suggested that thresholds will be increased and regular post-reviews will be conducted.

CMSD of DGHS and the Logistic Unit/DGFP will prepare standard specifications and put these on the web site. Indenting agencies should place requests based on these specifications. Other authorities should certify fulfillment of the conditions of specification to avoid conflict of interest. Framework contracts might be explored for frequent purchases of similar goods that would reduce the time needed to get the goods delivered, while contractual arrangements for a longer period of time are being put in place, based on the outcome of the tender procedure.

TA should be provided to assist with document preparation (including technical specification) and enhancement of capacity of the technical staff by transfer of knowledge through on-the-job and formal training. Permanent vacant posts need to be filled up to expedite procurement and staff should be retained for at least three years.

Distribution of the procured goods by DGFP are delivered from the various central warehouses down to a chain of Regional Warehouses, Upazila Stores and thousands service delivery points. The supply chain management wing under PSSM is using three different software systems, being WIMS, UIMS and the being web-based system of L-MIS. Goods procured by DGHS are also delivered from CMSD down to the various health facilities.

4.8. Physical Facilities and Maintenance

(Joint Secretary Physical Facilities Devt and DGHS/LD ESD + DGHS/LD IHMI)

The existing facilities which have now been created under the MOHFW are inadequate to cater the increasing needs of the people. In view of the rising trend in population, it is apprehended that unless the government go for construction of new facilities, upgrading & remodeling of existing facilities it would be difficult to provide required HPN Services.

4.8.1. Physical Facilities & Development (HED)

The designing, contract out, supervision and monitoring of construction and repair of Physical Facilities for MoHFW is done by Health Engineering Department (HED) and PWD (Public Works Department) Sometimes it was found that the users like DGHS or DGFP is not involved directly in the design of the UHC or secondary and tertiary level hospitals, although a blue print is sent initially to the DGHS or DGFP for their approval.

Objectives / targets are

- Develop a user friendly physical design for hospitals (children's corner attached to Pediatric corner, breastfeeding corner, adolescent corner, privacy for nurses, cafeteria for patients, family members and care takers, washing and drying of clothes and conducive to disabled persons and men's corners)
- Develop standard designs for various levels of care as per the population and demographic characteristics and disease patterns of the given area
- Develop a standard form for deciding the size and the number of the construction of health facilities in a given area.
- EMP and SMF should be followed in designing and construction of new facilities.

Guiding Principles to be followed for construction/upgrading of facilities are

Need based renovation and upgrading of the existing health facilities will continue along with constructing new facilities and installations. New and upgraded facilities will be synchronized with the provision of manpower, logistics and supplies. While designing new facilities, consideration will be made of demographic and geographic characteristics with special focus on building disaster resilient structures. They will also ensure adequate infection control and waste disposal systems. In remote, inaccessible and large upazilas, where the UHC is far away from most of the people, a few HFWCs may be upgraded as mini UHCs, 1-2 hours away from each other.

Periodical Maintenance of Infrastructure

A comprehensive maintenance plan should be prepared for the health and family welfare facilities for smooth maintenance, to avoid repetition and cost effectiveness. The plan should consider infection control and waste disposal systems.

Strengthening of Health Engineering Department (HED)

HED is recently been upgraded from CMMU (Construction and Maintenance Management Unit). The total HR of HED is 491. But the infrastructure of MOHFW is even in the village level. There are about 16000 infrastructures under MOHFW. Thus the present strength of manpower in different categories as well as available logistics are inadequate as compare to their work load. In handling the expected enhanced work load to ensure client friendly and secured health facilities, there would need for further strengthening of HED. TA support may be taken where necessary.

4.8.2. Maintenance of medical equipment and vehicles

Maintenance is still an underdeveloped part in the health system, because of the non availability of funds in a timely manner and also the incapacity of the Government to establish units for repair and maintenance. MOHFW has three organizations for these functions, called (i) Transport and Equipment Maintenance Organization (TEMO) and (ii) National Electro Medical Equipment Workshop (NEMEW).
It was expected that these organizations will take effective responsibility to repair and maintain vehicles, machines and equipment. Since they were established, their services could not satisfy the needs of the sector. They became just certifying agencies. The certificates are necessary to allow an incumbent to seek these services from outside parties. Otherwise there will be audit objections. Transparency and governance as a whole has become an unsolved issue in these organizations. Control lies directly with the Ministry, but monitoring of their performance leaves much scope to improve.

The allocation of funds for maintenance and repair of facilities, equipment, machines and vehicles (including ambulances) has not taken root as a management culture. The PIP will ensure that a percentage of the budget (to be specified), will be earmarked for post purchase maintenance and repair on an annual basis beginning from the second year. The approval processes in the present procurement system require some review, so that delays, unless absolutely necessary, can be avoided. Maintenance funds are also needed for the fuel of the generators in hospitals, when there is disruption of power supply.

A study will be conducted to assess how the Transport and Equipment Maintenance Organization (TEMO) and National Electro Medical Equipment Workshop (NEMEW) may be strengthened or privatized. As an alternative the roles and responsibilities of these organizations may be reviewed and modified, as procurement agencies of the Ministry of transports and equipment;

COMPONENT 3: GOVERNANCE AND STEWARDSHIP

5.1. Governance Structures and Legal Framework

5.1.1. Governance Structures

Stewardship and governance broadly comprises the policies and strategies adopted by government and their actual translation into improvements in the health status of the population. Much of the progress to date on establishing governance arrangements, particularly within the context of a sector wide approach, has been around development of mechanisms for governance and establishing sector review processes as a stepping stone to broader sector policy dialogue and improvements in processes and procedures. For that reason the two concepts are closely linked.

> Definitions of Stewardship and Governance.
> Stewardship refers to the various policies, strategies and financing functions a government has to fulfill according to its mandate.
> Governance refers to how these functions (policy, strategy and financing) are implemented and put in practice by the various stakeholders.
> While rules are made, standards are given and targets are fixed by stewards, good governance would mean applying these rules and standards in the reality of every day to obtain the stated targets.

At the highest level, in addition to review of periodic progress of MOHFW's development activities by the Honourable Prime Minister, the Parliamentary Standing Committee (PSC) for the MOHFW has the important role to oversee functions to ensure transparent and effective health care delivery for the people.

The GOB has established different professional regulatory and statutory bodies with the objectives of overseeing the development of a competent professional workforce, ensuring provision of standardised and quality health services and protecting the people's right to health. These bodies are meant to play important oversight roles to ensure transparency and accountability (see details in section 5.4, institutional reforms)

At the decentralised levels, Districts and Upazilas have facility and/or program specific committees. These committees include representation from the local communities at the Community Clinic level to local government and private sector representation at District and Upazila level. The performance of these committees varies, depending local factors. Strengthening of District and Upazila level committees should be priority in the next programme.

5.1.2. Boundaries of the Sector

Another issue related to governance is the question what constitutes in fact the health sector in Bangladesh, in particular when drafting a new sector program. At the moment the boundaries of the sector are not well defined. The previous sector program was without doubt the largest program to support the health sector, but it was not the only one. There are – according to the Annual Development Programme (ADP 2007-08) – a total of 23 projects included in the health

sector (13 investment and 10 TA projects), of which 4 are under the responsibility of other Ministries, but operate within the sector (e.g. Urban health programme under Ministry of Local Government).
It is therefore important to realise that the boundaries of the health sector sometimes extent beyond the mandate of the MOHFW. This implies the need for establishing formal relationships and bodies to oversee and lead joint initiatives with the non-public sectors, recognizing their comparative advantage for diversifying and innovation of services provision. MOHFW is expecting to learn from the experience of the various non-public initiatives and collaborate with those elements that are successful and appropriate for effective service delivery.

The same issue also complicates sector coordination. The lack of a clear definition as to what constitutes the health sector, and therefore what constitutes its 'SWAp' has reduced its potential. The HNPSP, although described as a 'sector wide development programme', is considered by many as a large co-financed World Bank project. Most activities will fit within the framework, but anything that does not, is pursued outside the HNPSP planning and expenditure framework. Examples are (i) several specialised hospitals included in the ADP, (ii) some major vertical programs negotiated with GFATM, GAVI, USAID and others), (iii) numerous NGO programs with external funding and (iv) the urban health program (funded by AsDB). A number of infrastructure projects within the Ministry are outside the funding of the HPNSSP. For the HPNSSP specifically, coordinating bodies include the HNP Forum and the HNP Consortium Committee. They are important in terms of the HPNSSP. However, broader collaboration including the parastatal organisations, the NGOs as well as the Ministry of Local Government, Rural Development & Cooperatives (MOLGRDC) and Ministry of Chittagong Hill Tract (MOCHT) remains weak and uncoordinated. Their interventions should eventually be brought into the HPNSSP, if possible at district and national level.

Interventions

- Assign one of the existing units to coordinate with other ministries involved in health services
- Consider to move away from the project approach through reducing the number of projects. If possible bring new and existing projects under the SWAP modalities of the new program.

5.1.3. Legal and Regulatory Framework

Bangladesh has a wide range of legal instruments and gazetted policies which assign different mandates, responsibilities and authority for the regulation of health sector. The origin of much of the legislation dates back to pre-independence times, ranging from The Vaccination Act of 1880 to recent legislation such as the Medical and Dental Council Act of 1980. These acts are periodically revised and updated through Ordinances. The main regulation functions under the MOHFW are the accreditation of hospitals, private health services, diagnostic centres and training institutions (including medical colleges); the licensing and control of pharmaceuticals; the licensing of some cadres of health workers; and overall setting of standards, including for alternative medical care and medical waste management. The Safe Blood Transfusion Act 2002 (implemented 2004) and the Safe Blood Transfusion Rules and Regulations 2008 provide the existing legal framework for the use of blood and blood related products. A draft Blood Transfusion Policy is under consideration of the MOHFW for the final approval.

The MOHFW also works in close collaboration with other statutory bodies in the area of health sector regulation, in particular the Bangladesh Medical and Dental Council (BMDC), The Pharmacy Council of Bangladesh (PCB), The Bangladesh Nursing Council (BNC), Bangladesh Medical Association (BMA), State Medical Faculty (SMF) and the Ayurvedic, Homeopathy and

Unani Board (AHUB) (see 3.3 below for their functions). In the private sector, the Bangladesh Private Clinic Ordinance 1982 is being followed to allow private clinic to run their operations.

The legal framework to regulate the pharmaceutical sector in Bangladesh is contained in the, Drug Act of 1940, revised in 1946, the Drug Control Ordinance 1982, the National Drug Policy 2005, which is gazetted and for which some amendments are necessary to the legal framework.
The main agencies to implement the regulation in relation to the pharmaceutical sector are the Directorate of Drug Administration (DDA) in the MOHFW and the Bangladesh Pharmacy Council (BPC). The DDA has responsibility for the quality control of pharmaceutical products and the licensing of pharmacy cadres to practice, while the main role of the BPC is to regulate the training of professional pharmacy cadres and their registration.

Under the new national development plan, the MOHFW proposes to increase the effectiveness and functionality of the various national regulatory bodies (BMDC, BNC, BPC, etc) through revision of their mandates, structures and building their capacity. The existing structure and capacity of the MOHFW Directorates (DHS, DFP and DDA) need to be reviewed and strengthened to increase their supervisory capacity and enhance institutional management. Eventually, coordination with the various interventions that take place in the health field (MOLGRDC, MOCHT, NGOs), but that are not (yet) part of the formal health sector under the oversight of the MOHFW, will be initiated.

For patients (clients), a legal framework is required to ensure the rights of health consumers. The present Consumer Rights Protection Act (2009) excluded health consumers' rights. During the next sector programme, the existing health related legal frameworks will be reviewed and updated. A Taskforce should be installed to (i) assess the needs of any new law/ordinance, (ii) revise some of the existing ones (gaps) and (iii) determine measures to implement the existing legal framework appropriately.
In summary, the stewardship role of the public sector in policy formulation and regulating the sector needs to be further strengthened.

5.2. Management of the health sector

5.2.1. Health Sector Reforms

The previous sector program, the HNPSP 2003-2010, included several 'reform areas' in its overall objectives. The most important ones were

- Decentralisation (including hospital autonomy and financial decentralisation)
- Diversification of service provision (including accreditation and contracting out to private sector through the former MSA)
- Demand Side Financing (DSF, being mainly the maternal voucher scheme)
- Budget management, Sector management and Aid Management (including equity related indicators and integration of NNP in the two Directorates)

The APR concluded in May 2009 that the reform agenda had only partially been addressed.

Based on the draft National Health Policy, the draft Population Policy, the Vision 2021, the NSAPR II and the Draft 6th 5-Year-Plan, the new sector program (2011-2016), will select (partly) another set of policy reforms that are more in line with recent thinking and experience within the MOHFW and form an integral part of the structure of this sector program. They represent a mixture of MDG related and policy related interventions that are all of high priority to the MOHFW. The indicators measuring their results are part of the regular Result Framework (RFW), but not all will be available every year (when they are DHS related).
Through the RFW (Annex 7.1) they are all related to the Goal, the Strategic Objective and the Strategies of the health sector, mentioned in section 2.3. Most (but not all) will have measurable targets to be reached at the end of the program in 2016. The main reform areas in HPNSSP are:

Table 5.1. Reform areas with their results, baselines and targets

No	Reform Area	Results (RFW)	Values	Targets
1	Initiate integrated PHC / UHS-CC under LLP	Results 1.4.		
2	Strengthen an annual planning, budgeting and reporting cycle (based on 3 yr rolling plans of OPs	Results 2.1.		
3	Strengthen an integrated and comprehensive monitoring system	Results 2.2.		
4	Ensure a properly motivated, appropriately skilled workforce in adequate numbers where and when it is needed.	Result 2.3.		
5	Improve resource allocation that takes population and poverty into account	Result 2.4.		
6	Improve and streamline procurement systems	Result 2.6.		
7	Policy reform and legal frameworks	Results 3.1		
8	Sector management, reforms and EGV	Results 3.2		
9	Strengthen decentralisation process and expand LLP experiences	Results 3.3		
10	Strengthen and expand institutional reforms / PPP	Results 3.4		
11	SWAp and coordination; deliver on the Paris declaration	Results 3.5		
12	Improve and streamline Financial Management Systems (FMS)	Results 3.6.		

Note: The assumption under these reform areas is that – if implemented in together - they will have substantial impact on all the relevant MDGs and the various operational indicators under service delivery in the RFW.

5.2.2. Equity, Gender and Voice (EGV)
(MOHFW/JC Health Economics Unit)

Equity

Reducing inequities between regions, socio-economic groups, gender, poverty and specifically targeting hard to reach groups for health services (e.g., urban, haor, hill, char, island, urban slum etc) will be central to the next sector program. There are different kinds of inequities. Income or wealth inequity is a major one. The BIDS/HEU survey 2003 shows that the poor bear a disproportionately share of the burden of ill health and suffering. On average, 8.8% of monthly household income was spent on illness treatment. But the poorest households had to spend about 38% of household income to meet the treatment cost of illness episodes, which is a heavy burden by any scale. On the other hand, the richest households spent only 3.4% of household income for treatment purposes. Unofficial payments for eligible services, reducing waiting time, medicines, improved quality of consultations, are well documented practices in public hospitals. A 1987 BIDS study showed that 36% of the patients in OPDs in rural areas and 32% in urban areas had to pay for the treatment of their illness in government health facilities. According to the World Bank / Euro Health study of 2004, 24% of outpatients and 65% of inpatients paid unofficial payments for getting service in public hospitals. In district hospitals as high as 94% of the inpatients made unofficial payments. Measures need to be taken to address these problems in HPNSSP.

Equity is also a matter of ensuring populations with various social, professional, religious, ethnic, behavioral and even regional status are better able to access the same kind of facilities and services and are provided the support that they require to keep well and healthy. Research and surveys such as the last BDHS have shown differences in family planning adoption and use, age at marriage and age at first pregnancy by region. Hard to reach areas also have worse coverage of services. From the supply side, inequity is due to the unavailability of doctors as well as to the lack of quality health services, medicines and supplies in certain regions and for specific people. For instance, minorities in the Chittagong Hill Tracts are still deprived. Providing them access to health care is an important equity issue. Particular professional categories are harder to reach than others – e.g. garment workers cannot be reached by HAs or FWAs, because of their long working hours.

The new sector program will put in place specific measures and adjustments in approaches and services in order to ensure that the needs of the various regions and groups are identified, analysed and appropriate measures taken. There is a realization that the "one size fits all" approach will not work, if equity concerns are to be addressed. The voice of these citizens' should be sought, listened to, and special fund allocations and decentralized authority will be developed to meet their needs. This means a genuine commitment to rolling out a process of collecting increasingly disaggregated data in order to allow MOHFW using them as evidence for a drive to reach the most marginalized with services and information that suit them. Involving the community in planning, managing and supervision of health care is critical for responsive, efficient and effective management of services and their utilization.

Gender

The Government of Bangladesh has made it a priority to eliminate discrimination against women and girls and promote gender equity. This will continue to be reflected in the next health sector programme. Various disparities between girls and boys, women and men has been reduced in Bangladesh, such as life expectancy, primary school enrollment rates, and early childhood mortality but still there are differences regarding access to health services. There still exists a number of areas with serious inequalities and discrimination for girls and women. This is manifested in the high mortality rates, malnutrition rates, incidences of violence, and lack of

access to health services. Often women are dependent on their husband's and In-Laws' decision about the access to and use of health care facilities. There is a lack of women friendly health facilities (ensuring privacy, addressing violence against women, addressing Emergency Obstetric Care). This not only puts the woman's health and life at jeopardy, but also affects the health of the child. Access to hospital care is influenced by gender, as shown by a BIDS/ HEU study in 2003. Only between 20-49 years do women use out-patient facilities in any numbers in public sector health facilities, with a similar trend for in patient services. Between 15-19 years, attendance rates are higher. Women's use of public services decreases as one goes up through the levels of care from HFWC to UHC to district hospital. This is most obvious in the case of young infants. The study showed that utilization of in-patient facilities was 62% for males compared to 38% for females, with the chance that the younger the child the higher the disparity. The same scenario emerges at the age of 65 years and above.

Women are still disproportionately responsible for the rearing and care of children, as well as for taking birth control measures. Early marriage, early pregnancies, heavy household responsibilities are some of the factors that increase their disadvantage and discrimination. Girls and women should be enabled to take their own decision regarding their family planning. One of the main reasons for the higher drop-out rate of school girls than boys (BBS 2008) is early marriage and consequently early pregnancies. The longer girls and young women can attend school, the better will be their education and thus they will be better able to 'negotiate' their marriages and pregnancies.

On the service delivery side there are various gender related issues of concern that will need to be addressed. There is gender imbalance regarding Human Resource planning, development and management at facility level. More than 50% of new doctors are women, but their drop-out rate is very high and only few female doctors carry on their work in the facilities (APR 2009). Issues of postings, housing and promotion for women need to be addressed in order to ensure better retention. There are gender dimensions also in the doctor: nurse ratios, as most nurses are still women. The ratio is the reverse of what is recommended internationally, having more doctors than nurses. Their scope for employment, carrier opportunities, professional development and roles and responsibilities in their work place has gender dimensions. Reforms whereby they could be given better formation, better supervision and more responsibilities, would enable them to carry out their functions more effectively. Such measure could make nursing a more attractive profession. At the lower levels, the HAs and FWVAs are mainly women with men being at the supervisory levels. This is a matter for concern, as are the processes of recruitment and training.

Various attempts are being made to improve the monitoring and evaluation systems so that adequate sex disaggregated and gender appropriate data is available and used by planners and implementers. Also at the institutional side there are now various attempts being made to assess how gender responsive budget allocations can be included within the MTBF (Mid-Term Budget Framework) initiatives of the Ministry of Finance. In order to assess how equitably resources are being allocated to women and men, girls and boys, there is a need to monitor resource allocations and expenditures according to whom the services are reaching.

Voice and accountability

The word "voice" becomes only meaningful once it is linked to "accountability". Government has initiated different mechanisms to promote voice for instance the National Health Users' Forum, the Health Advisory Committee; and the Citizen's Charter of Rights. But all these mechanisms provide very limited contribution to ensure incorporation of voice and accountability in the health system, due to non-functionality and/or follow up of planned activities. There is a number of local and international NGOs, civil society organizations, consumer associations and media which play

a role in the health sector, trying to amplify voices of the poor, demand greater and better service accountability, and generate information through public disclosure.

These NGOs are not coordinated and do not exchange their experiences with each other with the result that there is little effective coordination in terms of lessons learned, advocacy and targeting of efforts. There is no mechanism of linking them to government initiatives, and there is little response from DPs as well. As a result, relevance and impact on government and government initiatives is limited. Moreover, there is evidence that although voice may lead to answerability (right to receive relevant information and explanation for actions), it does not necessarily lead to enforceability (right to impose sanctions if the information or rationale is deemed inappropriate). There is an uncontrolled practice of medicines and mechanisms used by traditional healers, but there is no regulatory body to control this. The next sector program should consider this issue.

Interventions

The implementation of the Citizen's Charter for health service delivery will be ensured in the health facilities. Stakeholders groups would be formed (elected local government. representatives, NGOs, women groups, private providers, gate keepers etc) at all levels to monitor quality of services, ensure increased utilization, representation, voice and accountability.

Priority activities for EGV include

- Mainstream EGV issues in all components of the sector program and ensure that they are adequately budgeted for (at central and local levels).
- Improve coordination on EGV issues through assigning and strengthening GNSP Unit as the focal point. Align GNSPU with other GOB as well as WID mechanisms
- Reconstitute and reactivate gender advisory committees and constitute committees/forums for NGO/stakeholder/community participation to address equity and voice issues
- Ensure that EGV and accountability concerns are addressed in the objectives, activities and indicators of all operational plans and in the overall results framework (RFW). They should be regularly monitored and the results should be discussed in appropriate forums.
- Ensure collection, analysis and use of disaggregated data (based on sex, economic situation, and ethnic identity disability) to assess progress and for policy formulation.
- Build capacity and understanding of health care providers, administrators, policy makers and stakeholders on equity, gender, voice and accountability.
- Monitor resource allocation, expenditure and health service use from an EGV perspective.
- Develop network and partnership with NGOs, private sector and DP community. Pilot new interventions/models on EGV issues and replicate if appropriate.
- Encourage private and NGOs to work in hard to reach areas under appropriate supervision by responsibles of Upazila Health Services
- Develop/update EGV related strategies; accelerate expansion of Women Friendly Hospital Initiative and develop a coordination mechanism with OCC to ensure medico-legal services for victims of GBV at district and upazila levels
- Develop indicators for measuring levels of voice and accountability and evaluate the progress; use the Health Users' Forum as a tool/mechanism for incorporating citizens' voice both at policy and field levels;
- Continue research on EGV issues to develop and support evidence based policy options and strengthen and improve data and knowledge management.

5.2.3. Strengthened stewardship

The management structure of MOHFW distinguishes Line Directors (LDs), Program Managers and Deputy Program Managers (DPM), each with their specific area of responsibility. This facilitates their internal coordination, as the areas of overlap between their respective responsibilities will become clear. It will also allow the restructuring of the budget by component and not only by activity (as is currently the case).
The issue of poor internal coordination between the various 'pillars' of MOHFW has been mentioned on several occasions, pointing out the fragmentation and duplication of the current structure of the MOHFW, leading not only to substantial inefficiencies, but also making the sector less responsive and effective to address the increasingly more complex interventions that require more integrated or 'horizontal management'.

Since the APR in 2009, MOHFW has made commendable progress in reducing the number of LDs from the 38 (in 2009) to 31 (in 2010), partly by mainstreaming the various tasks of the National Nutrition Program (NNP) into the two Directorates and by re-defining their respective areas of intervention. Under the banner of "Rationalisation the Directorates", it seems that further restructurering of the two main institutions responsible for service delivery might be expected.

A special feature of the management culture in MOHFW is the often short time period that most LDs remain in function. Given their age being close to retirement, they often leave their posts before they have been able to take important, long-awaiting decisions or undertake the necessary initiatives to guide the implementation of the OP they are responsible for. A suggestion made during the first APR (2007) to define some 'anchors' for the most important OPs has not provided the solutions which were hoped for. Other suggestions are mentioned below:

- Delegate part of the responsibility of the LD to their PM and DPM. As these are more permanent and technical positions, providing them with specific responsibilities will ensure a better continuation in the implementation of the OP and more commitment to earlier agreed policy and budgetary decisions.
- Nominate a Deputy Line Director to cover temporary absence of the Line Director.
- Promote a culture of maintaining institutional memories / knowledge while transferring staff.

5.3. Decentralisation: The Upazila Health System and LLP

5.3.1. Decentralisation

The role of local government bodies is important, if decentralization is to reap its full benefit.
The 1983 UP Ordinance, updated in 2009 accords formation of 2 of the 13 committees of the Union Parishad (UP) on health and family planning, and on water and sanitation. The TOR includes raising of funds for the poor, improving health, family planning and water, sanitation; quality of care; monitoring and evaluation of the services provided and participation in local level planning. UPs should therefore, in the light of the Ordinance and its responsibilities bestowed in the Ordinance, receive funds to discharge its responsibilities, either directly from the Ministry of Finance or from the OP of the relevant LDs. UPs should be given the responsibility of effectively monitoring the quality of construction works at ward and union levels.

Decentralization of the management of the service delivery with proper participation of the community in its management and delegation of financial power to the appropriate level to make the facilities "for the people, by the people and of the people" will be useful. The role of the Ministry of Local Government will be crucial in ensuring and facilitating public involvement in managing the provision of public health care. This will also be useful in introducing alternative financing models (e.g. retention of local cost recovery mechanisms) to meet the financing gaps and improve fiduciary arrangements. Although HPSP and HPNSP envisioned wide ranging decentralization of financial and administrative authority, broadly speaking this did not happen.

The new sector program will pay focused attention to this. Clear communication towards this end to both the decentralizing (central and district) levels and to the decentralized level (Upazila and below) will be the first step, followed by capacity building of district and lower level authorities at least at the initial period. In initiating the PHC / Upazila Health System (UHS), intensive communication will take place with the various bodies and committees at that level. Relations between the District Civil Surgeon Office, Deputy Director (Family Planning) Office, the Upazila Health Complex, the Health and Family Welfare Centres (HFWC) at Union level and the Community Clinics need to be well defined and explained to all the stakeholders.

The working relations and the role between the district and upazila health systems and the district parishad, upazila parishad, union parishad and also other stakeholders needs to be well defined. In addition to that, administrative and financial delegation and authority also needs to be defined clearly with the aim to strengthen the decentralization process.

5.3.2. Local Level Planning (LLP)

The lessons from the review of a number of case studies of local level planning, e.g. (i) Chougachha model, (ii) Thana functional improvement Pilot project (TFIPP), which pre-dated the Sector-Wide Approach, (iii) LLP-HPSP, (iv) JICA's Safe motherhood promotion projects (SMPP), and (v) the joint GOB-UN project 'Accelerating Progress towards Maternal and Neonatal Mortality and Morbidity Reduction (MNH)', revealed that a combination of central facilitation and guidance, resource augmentation - both physical and human -, logistic support, additional training, supervision and monitoring and concentrated managerial attention contribute to improved outcome. However, in the absence of their institutionalization, these positive experiences remain unsustainable.

Considerable experience has been gained in developing local level plans with guidance of the LLP Toolkit. The LLP Toolkit suggests the preparation of Upazila plan on the basis of five principles: (i) consider local needs, (ii) participatory, (iii) feasible to implement with available resources and skill, and (iv) effective and sustainable.
Structure of the local level planning teams at Upazila and District are prescribed in the Toolkit which also suggests the role and responsibility of the supervisory structures at the Directorate and the Ministry-level. Unfortunately, these structures are restricted to line officials only. The Toolkits however allow LLP to identify local needs and within the constraints of local resources, to set targets for activities and estimate budget needs for achieving the targets. The Upazila LLP for all the 43 Upazillas under the 6 Pilot Districts are available with the LLP Core Cell of the Directorates, which have been engaged this year in assessing their budget needs and finding ways of providing required resources from approved budget for FY 2010-11.

Over the last few years, LLP exercises were being carried out at Upazila level by the MOHFW. MOHFW identified six Districts in six divisions as Pilots for operationalizing Local Level Plan (LLP). The Districts are: Bhola (Barisal division), Cox's Bazar (Chittagong division), Sherpur (Dhaka division), Satkhira (Khulna division), Lalmonirhat (Rajshahi division) and Sunamganj (Sylhet division).

One of the main problems with past and current attempts in LLP is that neither the resources available nor the extent of resource delegation are known to those preparing the plans. Under the current system, central control over resources mean that managers must seek approval for most spending, human resource and other decisions delaying their ability to deliver services. Moreover, separation of planning and implementation between DGHS and DGFP poses serious challenge to the realistic possibility of having a single plan at either the District or the Upazila level.

With the current Governments' interest to support decentralization as a policy, which is also reflected in the draft Health Policy 2010 and the draft Population Policy, in the dialogue as part of the APR 2009, decentralized planning had found greater acceptance. It was suggested that over the short to medium term, LLP processes would need to be effectively linked with the budget process for better accountability at District and Upazila levels (Aide Memoire 2009). The prioritized action plan was prepared following the APR 2009, and one of the 6 performance based financing indicators was 'feasibility and implementation plan for operationalising pilots on 6 local level district plans (Aide Memoire 2009, Action point 12b)'. MOHFW has consistently expressed interest in decentralization and local level planning in both the Sector Programmes. HPSP introduced Upazila-level LLP involving all Upazilas. However, in spite of gaining considerable experience in drawing up LLP, these exercises were not linked to budget process and as a result did not have any resource allocated to them for operationalisation.

Interventions
LLP operationalisation need fair trial time. The number of plans needs to be limited within the management capacity of the field-level implementers and of the supervisors since the pilot involves a learning process for all categories of stakeholders. The feasibility of operationalising a district plan under the present legal, administrative and budgetary reality has been examined, and it has been suggested that under the circumstances it is neither 'realistic' nor 'easily implementable'. A number of suggestions have been made for the 'next steps' to be taken over the medium-term by MOHFW regarding LLP, grouped under 3 headings: planning issues, implementation issues and policy issues.

Priority activities will include

- Strengthen capacity at the two Directorates and within MOHFW to launch and sustain the operationalisation of LLP over a longer period.
- Decide on the duration, number and geographical variation of the upazilas to be included in the proposed LLP interventions.
- Consolidated District Plans should be based on the Upazila plans
- Revise and update the LLP Toolkit, reflecting the following changes: 3-year planning cycle; clearly spelt out responsibilities of the LLP Core Cell in arranging for resource envelope and providing feedback to the local-level; budget demands as per OPs; complementarity of goals and activities between the field-level services provided by the two Directorates; role of the community especially of the elected representatives of local government at Union and Upazila levels.
- Ensure coordination by the DGs between LDs of Sector-Wide Management, ESD, Hospital Improvement, CDC etc.
- Ensure proper staffing and provision of technical support for the LLP cells in DGHS/DGFP.
- Introduce changes in the various support systems: (i) increased delegation of administrative and financial power by Secretary to the cost centres, (ii) provision of capacity building, including short trainings on administrative, management and financial management to the concerned officers in Districts / Upazilas, (iii) development of performance indicators and evaluation mechanism, (iv) guidance and mentoring by the two Directorates, and (v) meeting the needs for human resources, drugs and equipment.

5.3.3. Strengthening Primary Health Care / UHS through LLP

The introduction of Primary Health Care (PHC) in rural and urban areas of Bangladesh (mentioned in section 3.6) will be linked with the government policy on Local Level Planning (LLP). Implementation of LLP has so far been largely limited to training and developing a toolkit. Problems encountered included inadequate capacity for assisting Upazila managers for planning, weak supervision and limited understanding of the overall objective of LLP among program managers. Implementation of LLP and budget piloting in 6 districts and 14 Upazilas are at the stage of preparation. MOHFW has decided to form a national level committee and 6 district committees to carry forward the task of decentralised planning and budgeting under the overall LLP policy directions. It is expected that after detailed preparations by MOHFW, the PHC/ UHS program can become part of these initiatives.

Priority activities will include

- Initiate preparations for an integrated PHC / UHS intervention in a limited number of districts and Upazilas that will specifically integrate the current expansion of Community Clinics.
- Define responsibilities, tasks and interventions by the various levels and revise the essential package to include non communicable diseases.
- Organise LLP steering group meetings, and coordination meetings with relevant LDs. Define the link between LLP and the PHC / UHS initiative.
- Organise orientation and briefing for central, district and upazila managers on planning and management. Explain the concept of PHC / UHS system.

5.4. Institutional and Intersectoral Activities

There are a variety of institutions operating and contributing to health in the sector. However, among the institutions that are mentioned below, only the DPs are participating in the SWAp. The others (parastatal organisations, the private (for profit) sector and the private (not-for profit) sector, are not involved in the reviews of the program or decision-making of the sector budget and can therefore not be considered as SWAp partners. The same applies for the Ministry of Local Government, Rural Development & Cooperatives (MOLGRD&C) that is – amongst others -responsible for a large urban health program in Bangladesh (with funding from AsDB). In short the current institutional arrangements within the health sector do not allow for an optimal coordinated response to the many challenges the MOHFW is facing. A thorough revision of the current coordination modalities is needed, if the MOHFW intends to broaden its scope of intervention and assumes full responsibility for the stewardship of the health sector. The issue of coordination is addressed in more detail in the next section (5.5).

Development of the health sector requires direct involvement, interaction and collaboration with policies and programs of ministries, agencies and a variety of different role players, viz., (a) government ministries and agencies, (b) private and other non-state health service providers, and (c) professional associations, mass media, community organizations and various other non-governmental actors contributing to health sector's development.

Within the government, programs of a number of relevant ministries reinforce health outcomes, e.g., Ministry of Local Government, Rural Development & Cooperatives (MOLGRDC), Ministry of Education (MOE), Ministry of Primary and Mass Education (MOPME), Ministry of Food & Disaster Management (MOF&DM), Ministry of Women & Children Affairs (MOWCA), Ministry of Social Welfare (MOSW), Ministry of Agriculture (MOA), Ministry of Fisheries & Livestock (MOFL), Ministry of Information (MOI), Ministry of Commerce (MOC), Ministry of Finance (MOF), Ministry of Law, Justice and Parliamentary Affairs (MOLJPA), etc. An inter-ministerial committee could serve as a forum for coordinating the activities of all ministries.

Besides, participation of various technical organizations/agencies both within and outside MOHFW is vital for the successful implementation of the sector program. Private sector led health service providers and drug producers are also key actors in the implementation of the sector program. They have to shoulder social responsibility in furthering government efforts for developing an efficient and effective health service in Bangladesh. NGO health programmes have traditionally supplemented and complemented government efforts, particularly in reaching poor and hard to reach populations. They have played a key role in service delivery and more recently in facilitating processes of voice and accountability which will become increasingly important for ensuring quality as well as governance. Their relation with MOHFW has been described in section 5.4.4. At the moment there is no institutional arrangement for ensuring NGO participation in the health sector. An advisory committee to the Secretary will be constituted to guide and identify areas of participation. A strategy of NGO participation will be developed and implemented to facilitate their participation

Successful implementation of the program will require partnerships between MOHFW and active participation of the mass media, academia, professional groups, Community Based Organizations (CBOs) and civil society organizations (CSOs). At the moment the feasibility of such collaboration with the private-for-profit and the private non-for-profit is unclear. This could be addressed by using the proposed Health Users' Forum. It is suggested to constitute an Advisory Committee to guide and identify areas of NGO participation and develop a strategy for NGO participation in the health, population and nutrition sector.

5.4.1. Parastatal Organisations

The most important councils in the sector with licensing functions are:
- Bangladesh Medical and Dental Council (BMDC),
- Bangladesh Nursing Council (BNC),
- Bangladesh Pharmacy Council (BPC),
- State Medical Faculty (SMF),

Other parastatal organisations / associations with regulatory functions in specific fields are:
- Nutrition: the Bangladesh National Nutrition Council (BNNC)
- Service Delivery: the Bangabandhu Sheikh Mujib Medical University (BSSMU), the Dhaka Shishu Hospital and the Dhaka National Medical College and Hospital,
- Alternate medical care: the Bangladesh Homeopathy Board, and the Bangladesh Unani and Ayurvedi Board,
- Teaching and medical education: the Bangabandhu Sheikh Mujib Medical University (BSMMU), and the Bangladesh College of Physicians and Surgeons (BCPS),
- Research: the Bangladesh Medical Research Council (BMRC),

Most of these parastatal organizations are affiliated with the MOHFW. They are engaged with a variety of activities, including regulatory functions. MOHFW is providing financial support to them. However, due to lack of strategic vision, their effective contributions are not visible in the sector program.

There is a need to strengthen these existing regulatory bodies, through ensuring a critical mass of skilled human resources, cash flow and logistics. Their potential functions for the MOHFW are important and are not optimally used. Monitoring, reviewing, evaluating and applying the regulatory criteria periodically and practicing a system of periodic updating of licensing could contribute substantially to improvements in teaching, service delivery, amongst others. Therefore, the existing boards and their TORs may need review, reformulation and in general some stimulus to contribute actively to the work the MOHFW is required to do under the laws of the country.

Possible areas where initiatives could be taken are reinforcing professional medical ethics and the elaboration of a 'Code of Conduct' to be used (and adhered to) by service providers. Another important task is enforcement of regulations in consultation with the professional associations

The DGHS/LD IST in collaboration with Centre of Medical Education (CME) could consider inviting representatives of the Bangladesh Medical and Dental Council (BMDC), the State Medical Faculty (SMF), the Bangladesh Nursing Council (BNC) and the Bangladesh Pharmacy Council (BFC) to provide technical support to the various regulatory bodies. This will enable them to play their regulatory role more effectively.

Interventions
As part of strengthening government's stewardship and governance role, mandate and structure of the regulatory bodies will be reviewed, revitalized and – if necessary - adjusted accordingly. Requirements of setting new entities like accrediting bodies for medical education, hospital service delivery and for ensuring food safety will also be explored. The possibility of signing MOUs to ensure that training of the required human resources is improved may be explored with

the BSMMU and BCPS. Similarly, MOUs may be signed with the various service delivery organisations.
MOHFW will ensure that these regulatory functions will not only be applied for the public sector, but will also be extended to the private (for-profit) and the NGO sector. MOHFW being the government's body that ensures the proper functioning of the whole health sector has the legal mandate to do so. Under the new sector program, it will start to reinforce this mandate to ensure quality in the provision of health care (both public and private), decent professional training and reinforcement of existing laws and regulations.

5.4.2. Public Private Partnerships (PPP)

The government recognizes the wider involvement of the private sector, including non-state institutions[10] for enhancing effective health service delivery. Public Private Partnerships (PPPs) in health services delivery and in the areas of medical and allied education will be further expanded and strengthened with effective monitoring and regulatory mechanisms. MOHFW will explore the establishment of a PPP unit, being a unit where coordination and collaboration between the public and private sectors can be strengthened.

The benefits of public private partnerships are not in an increase in funds, but rather (i) improved management of scarce resources, i.e., more efficiency and gain in effectiveness – focus on outputs, economy of scale that accrue from integrating designs and interventions, (ii) collaboration and coordination for better logistics and asset management, (iii) innovations in service design and management and – finally – (iv) inclusion of management expertise.

For MOHFW, involvement in PPPs shows that government is concerned equally with the management of outputs and outcomes as with the inputs, or in other words: manage contracts rather than manage resources. Providing services and accounting for these services by the same agency implies a dual responsibility and as such creates an inherent conflict of interest. Contract management could well result in greater accessibility, affordability (if necessary through public sector subventions for the poor), and quality of defined standards, leading to improved efficiency and accountability. Moreover the stewardship and regulatory role of GOB needs strengthening.

On the other hand, for the private sector contracted partners, PPPs should be sufficiently rewarding against the investment to be made and risks to be taken. Partners should be allowed and in fact rather prompted to respond and manage with innovation and vision. In this way, PPPs could also address noble goals, such as equity, inclusion, empowerment of the service recipients, protection of environment, social justice and right based service provision. Much will depend on the vision and forward thinking of the MOHFW in negotiating these contracts with its private (for profit and not for profit) partners.

The proposed "Private Health Care Facilities Services Act" is currently being reviewed to replace the 1982 Clinical Practices Ordinance of 1982. It is suggested that the issue of PPP and its potential benefits for the health sector will be included in this new legislation.

[10] The **'private sector'** includes (i) the private for-profit institutions, organisations and individual care providers AND the private not-for-profit organisations (NGOs, CSOs and FBOs).

On a more practical note, it is suggested that one of the conditions of granting licenses or extending them to private health care facilities, will be the provision of including emergency medical / diagnostic services in these health facilities.

5.4.3. Development Partners (DPs)

The HNP consortium consists of representatives of all agencies (pool, non-pool and parallel funding agencies) that operate in the health sector and relate in one way or another with the MOHFW. Once a year, it selects among its members the chair and co-chair, responsible for its day-to-day operations.
The consortium aims to coordinate and streamline actions and procedures amongst collaborating and/or co-financing DPs on the one hand, and between DP and GOB on the other. The consortium in principle will meet monthly on the basis of a pre-established and shared agenda.
In its communication with GOB the Consortium will always attempt to speak with one voice through its chair. This will reduce opportunity cost in policy dialogue and free-up valuable analytical and coordination capacity on the side of both DP and GOB. The HNP Consortium will provide for inter-DP coordination, strategic agreements among DPs of the sector program and policy / budget related issues. A secretariat may assist the chair of the HNP Consortium. All DPs (both pool and non pool) try to refrain from having regular meetings to discuss their specific projects or other concerns with senior management of the MOHFW. Formal work-related relations between GOB and the MOHFW are addressed in section 5.5.4 under the heading of 'SWAp arrangements'.

5.4.4. Non Governmental Organisations (NGOs)

Non Governmental organisations (NGOs) are a significant and growing source of health services in both rural and urban Bangladesh. NGOs also fulfill a role in coordinating user constituents of the health sector, whose voice is important in terms of user perception and in holding MOHFW accountable to deliver its policies. Currently in Bangladesh this representation of constituents is facilitated through "Health Watch", which was formed to be an independent eye/watch on the health program, on behalf of users, citizens and other stakeholders (funded by Sida). They are not attached to any implementing organisations. The intention is to bring out a status report on a specific topic each year.

The MOHFW could facilitate strengthening the engagement with the NGO and private sector, but in doing so recognise that NGOs and the private sector are not a homogenous group in terms of their engagement and involvement in the health sector. Some are well established in institutionally strong NGOs, (i) (i) as health care providers, (ii) as innovators in diversifying modalities of health care delivery, (iii) in training formal and informal health service providers, (iv) in research and development, (v) work as catalyst/facilitator for creating demand for services and linking community with health/FP facilities, and (vi) in holding government accountable for its interventions through raising community and civil society voices. There are a number of NGO coordinating groups in existence, e.g. National Health Alliance, Peoples Health Movement, Coalition for Urban Poor, Breastfeeding Foundation, etc. Building and strengthening linkages with these coordinating groups is an important way of building stronger engagement with constituents in the sector.

The role of NGOs and the private sector should be considered within all strategies and programmes of the MOHFW. Partnership building through coordination should be a key principle of the MOHFW, as it tries to both modernise and diversify the health sector. However, partnerships can only work effectively if (i) the stewardship and regulatory functions of the

MOHFW are working effectively and if (ii) there is commitment and interest within MOHFW to broaden its stewardship role in the sector.

However, if a change of policy direction materializes, funding of NGOs through contracting out (or outsourcing) part of the MOHFW work, could then be considered as part of the PPP related initiatives. Regular and mutual consultations already could greatly improve the efficiency and effectiveness of the overall performance of the sector. NGOs with limited financial resources that provide care in places where the public services are not very present, could become eligible for such support, based on criteria that need to be developed, put in place and divulgated.

In summary: the current regulatory framework for private-sector health care provision is inadequate for ensuring minimum standards of service quality, though there are some successful initiatives that could be replicated. Establishment of a suitable regulatory framework, with adequate mechanisms for implementation and enforcement is therefore a high priority. This should include re-directing regulation to the assurance of the quality of services and to ensure fair competition. MOHFW needs to show that it is committed to build partnerships with NGOs and the private sector in the health through creation of functioning mechanisms to do so. The establishment of an NGO and private sector unit in the MOHFW could be a first, essential step.
As there already exist an NGO Cell in the GNSP Unit, it is suggested that this cell will function as a focal point for NGO issues. Among its first tasks it could develop a strategy for facilitating NGO participation and constitute an advisory committee to provide policy guidelines.

5.5. Sector Wide Management and Coordination

5.5.1. Aid Effectiveness

Both the Government of Bangladesh (GOB) and the Development Partners are committed to the principles of aid effectiveness as codified in the Paris Declaration.

Principles of the Paris Declaration

- **Ownership**, i.e. the government sets the agenda, has clear strategic priorities linked to a medium-term framework and reflected in annual budgets.
- **Alignment** between DPs and government, meaning DPs align themselves with the government's agenda, policies and strategies, and use government systems.
- **Harmonization** through sharing of information, simplifying procedures and establishing acceptable common arrangements, between government and DPs.
- **Managing for results** – transparent and monitorable performance assessment frameworks to assess progress against national targets.
- **Mutual accountability** – mutual assessments of progress in implementing agreed commitments on aid effectiveness and common processes to appraise their effectiveness and efficiency.

In light of the Paris Declaration on Aid Effectiveness, a Joint Co-operation Strategy 2010-2015 signed in June 2010 by both DPs and the Government of Bangladesh. It emphasizes the importance of government's agenda, alignment with government's systems, the simplification of procedures, acceptable common arrangements and mutual accountability.
For better Aid Effectiveness in the next sector program, the principles of the Paris Declaration and the JCS will be followed. In deciding on a next health sector instrument, GOB and DPs need to take the opportunity to put into place simpler and more effective mechanisms for policy dialogue, sharing of information, management of funds, and monitoring of results consistent with these principles.

Bangladesh has a number of the foundations considered essential for greater aid effectiveness. National Development Plans (including a new Poverty Reduction Strategy Paper) have been agreed with clear strategic priorities, and a Medium Term Expenditure/ Budget Framework (MTBF) have begun to be rolled out across government. But it will take some time before these building blocks are fully in place. The MTBF is already operational within 33 ministries, including MOHFW. A new draft National Health Policy has been drafted, but it still remains to be finalised and approved by Cabinet. It is expected that the Health Policy will be finalised in line with the NSAPR II, ADP and 6th Five Years Plan. It will ensure that access to health services is pro-poor and equitable.

HNPSP is more a sector programme than a full SWAp. Other parts of government are responsible for large swathes of health policy and implementation, most notably the Ministry of Local Government, Rural Development and Cooperatives (MOLGDRC), who lead on health in many urban areas. To many observers HNPSP was presented as a sector program. However, it was not the only program operating in health in the country:
1. A true Sector Wide Approach would encompass both urban AND rural health services (i.e. MOLGRDC, MOHFW, and MOCHT), as well as the buy in and participation from other players, including the Ministry of Finance (MOF).

2. It would include a clear strategy for working with the private sector – something which is essential given that more than half of all health expenditure in Bangladesh takes place within the private sector.
3. Finally, it would also include regular consultations and dialogue with the large NGO sector in the country that – in many places – fills the gap where the MOHFW services do not provide adequate and quality care.
While government's commitment to developing a new health sector instrument represents a real opportunity for more coherent policy implementation, effective coordination and greater aid effectiveness, in reality it has involved only limited consultations outside the realm of the MOHFW to date. In addition, several service areas are overlapping and might be revisited in their design, responsibilities and implementation issues.

5.5.2. Alignment with Government Procedures

DPs support for health outcomes in Bangladesh have been aligned with government priorities in intent, but the development of a next sector program offers a welcome opportunity for improving aid effectiveness through streamlining arrangements for DP financing. The existing arrangements have evolved organically in response to circumstances, but in reality over time have become quite cumbersome.

According to the PIP, the overall budget for HNPSP was USD 5,418.0 million over the full period. Of this, the donor community pledged USD 1,488.0 million (27.4%). Owing to a variety of circumstances, budget execution quickly fell behind schedule and full budget execution remains unlikely, despite an extension of the programme until the end of June 2011. Owing to different policies and practices, donors chose to support HNPSP in different ways. Budget Support has not been considered possible, due to high fiduciary risk.

Under HNPSP, seven donors pool their funds into a multi donor trust fund (MDTF) administered by the World Bank. In addition, 10 donors support the Programme through parallel funding mechanisms, meaning that a significant share of donor finance remains "off budget" (approximately 47 per cent in 2007). Some major players, for example GAVI and GFATM, while central to HNPSP's objectives, continued to provide complementary support through vertical instruments that are not at all integrated with government implementation arrangements, thereby further undermining aid effectiveness. Aside from the administrative burden associated with parallel financing, this also means that reporting is not aligned to the HPNSSP results framework.

HNPSP used mainstream government financial management and procurement systems to implement policy. This in theory should help underpin clear arrangements for policy dialogue, monitoring, and financing. However government financial requirements have proved to be unpredictable in practice, due to relatively weak MOHFW procurement and financial management systems (2008 OECD DAC report). Extra procurement and financial management checks were needed to be agreed between GOB and the World Bank before pool funds have been released, meaning far lower donor utilization rates in comparison to government funds. Beyond the pool, donors continue to negotiate support separately, outside the common arrangements of the pool, using parallel procedures, and with gaps in reporting to GOB. As a consequence, donors and government have expended an awful amount of energy on discussing the details of HNPSP financing arrangements, as opposed to regular policy dialogue and monitoring.

5.5.3. Harmonisation among donors

The current degree of harmonisation in Bangladesh remains less than desired by most stakeholders. Donor fragmentation, however, cannot entirely be blamed upon weak government ownership or systems. The donor consortium has become cumbersome, and few members have shown willingness to become "silent partners", thereby reducing transaction costs. Respective donor policies and financial positions have ebbed and flowed over the five year period, meaning that sometimes individual donors have been eager to make contributions into the pool, and other times not, further making predictability difficult. World Bank IDA loans were reportedly drawn down into the pool at the beginning of the programme, meaning the demand for other donor support tended to come in bulk towards the end of the programme when it wasn't always available. The Consortium has endeavored to harmonise DP practices by preparing a paper which identifies four principles: (a) joint, missions and analytical work; (b) a division of labour where lead partners are identified for particular themes; (c) coordinated technical assistance in terms of support to task groups; and (d) common harmonised procedures.

There has been some progress in establishing a division of labour between DPs for thematic areas. However, it has not proved possible to translate these core principles into a concrete action plan for harmonisation and alignment. There is a wide variation in DP positions, making it difficult to achieve a consensus on how to move forward.
Overall, the intention of one plan financed through a single prioritized expenditure programme using aligned and harmonised procedures is far from being achieved.

5.5.4. Coordination and SWAp Arrangements

NSAPR II notes that "unfortunately not much progress could be achieved in inter- and sub-sector coordination, resulting in duplication, wastage and missed opportunities. Similarly coordination and collaboration could not be effectively established and operationalised between HPN and other sectors, relevant to the HPN sector" (6th Five Year Plan 2011-2016). Establishing a functioning system of coordination between health, nutrition and family planning and between other Ministries (notably MOLGRDC) at all levels of service delivery, including DPs and UN agencies, NGOs and the private sector will be needed to avoid duplication and diversify service delivery and to enhance performance.
Although the MOHFW and the other statutory bodies meet to better coordinate their respective roles, there is no formal coordination mechanism to ensure that the roles of each agency is respected, adhered to and coordinated. Such a coordination mechanism could provide a more comprehensive oversight of regulating the sector rather than the individual responsibilities performed independently by each agency, as is currently the case.

A number of very real policy issues need to be worked through in finalizing the design for the new HPNSSP. These include whether the SWAp should cover both rural and urban services through inclusion of MOLGRDC; a Treasury model with resources channeled through MOF and rewarding results delivered on the ground could potentially underpin this. In order to help inform the choice of modality, the World Bank has agreed to apply some of the PEFA methodology agreed with the MOF to assess the quality of public finance management across government and apply them specifically to the PFM within MOHFW. Consistency with other instruments being developed for sector support, for example for the primary education (sub)sector, is also important.

Whatever modality emerges, government and donors must take the opportunity to improve aid effectiveness through simplifying arrangements for policy dialogue, monitoring against results, and financial management. The more strategic and aligned with government systems the modality is, the less cumbersome it is likely to be, and it would allow greater focus on some of the real institutional and policy issues that are likely to undermine implementation.

It is unlikely that all donors will be able to pool funds, but basic principles, perhaps encapsulated within a code of conduct, need to be agreed across both pool and non pool donors. And the MOHFW should demonstrate greater willingness to engage in policy dialogue to shape the program in order to provide more incentive for alignment and harmonization.

The way the **dialogue** between MOHFW and the DPs is organised can be summarised as follows:

At the level of the Bangladesh Government with its development priorities, ways of 'doing business together' in the future has been described in the Joint Cooperation Strategy (JCS 2010-2015). The proposed dialogue in the JCS will be institutionalised through GOB – DP Local Consultative Group (LCG) meetings. The LCG plenary will provide a forum for on-going dialogue between the GON and the DPs on the countries development challenges, national plans and strategies, new development initiatives and preparations for the annual Bangladesh Development Forum (BDF). A LCG Steering Group prepares the JCS Action Plan that serves as a tool to define and monitor priority actions to address aid effectiveness challenges in Bangladesh. A summary of the Bangladesh Joint Cooperation Strategy 2010-2015 is provided in Annex 7.4.

The LCG sub-group for the health sector is composed of representatives from senior management of the MOHFW and representatives from the HPN Consortium (the DP executive committee of the sector). The Working Group meets regularly (twice a year?) to discuss jointly expected result frameworks in priority reform areas. Priority actions, timing and milestones will be discussed and decided there. The purpose of the Working Groups is to provide a forum for policy and budgetary considerations related to the sector. They are the meeting point where the senior management structures of the MOHFW (Honourable Minister, Secretary and his senior staff) meet with the representatives of the DP in the sector (being the HPN chair and some of its members). The Terms of Reference of the Working Groups can be found in Annex 2 of the JCS 2010-2015. The LCG Working Groups replaces the previous HNPSP Coordination Committee.

The 'HNP Forum' (chaired by Secretary, MOHFW and composed of representatives of other relevant ministries, civil society organizations (CSO), DPs along with MOHFW officials), meets once a year to present its performance over the previous period, either based on joint reviews (APR or MTR) or based on an internal review of its work (based on APIR).

Various joint task groups and technical committees operate under the sector program. A coordinator (technical) from MOHFW and from the DPs of each task group will be asked to report back to his/her 'constituency' to allow a broad sharing of information at both sides. The most important Task Groups are: MNCH, Nutrition, Public Health, M&E, HRH, Health Financing, Procurement, Financial Management and Gender, Equity and Voice, QM and HFRG. Additional task groups may be formed when new issues and challenges arise.

An external and independent review of the sector program will be conducted annually (APR) and at mid-term (MTR). The review will be undertaken by independent international and national consultants, during a period that will allow its conclusions and recommendations to be included in the drafting of the next annual Operational Plan by the various LDs. The review will be followed by a 'policy dialogue' and the development of an agreed joint action plan (Aide Memoire) by the MOHFW and DPs that is subsequently used for the new Annual Operational Plan and the new annual budget. TOR and the selection of consultants will be undertaken jointly.

In the first year of the sector program, MOHFW together with the DPs will develop a Code of Conduct that specifies the responsibilities and obligations of both partners, their way of communication and doing 'business' together during the implementation of the program.

Eventually a Harmonisation Manual could be elaborated that provides the details of how the harmonisation and alignment will be implemented in Bangladesh.

5.6. Financial Management (FM)

(MOHFW/ JS FMD + DGHS/LD Improved Financial Mgmt + DGFP/LD Improved Fin Mgmt)

5.6.1. Funding modalities

Ten years from its launch, the two sector programs HPSP and HNPSP have achieved commendable results. They have shaped and strengthened government health policy and supported its implementation, technically and financially. They has also rationalized and simplified external health financing, making it more flexible, aligned and predictable than in the past. This has been accomplished partly through the resources and commitment coming from the pool and non-pool partners. The establishment of a large "pooled fund", financed both by government and development partners has certainly contributed to improved working relationships between the government and its development partners. Perhaps most importantly, experience has been acquired with the funding modalities under HNPSP that can now serve to improve any flaws that existed. Others will provide parallel financing within the remit of HNPSP, to be reflected in the PIP.

The funding modalities for the next sector program provide all stakeholders (GOB, MOHFW, pool and non-pool partners) with the opportunity to review and analyse past experiences, look at strengths and weaknesses and decide what changes could or should be made to realise even better results. In Annex 7.3, the current funding modality is being presented. It will allow the reader to see the various issues that need to be taken into account when presenting the new funding modality that will build on what has been working well and that will suggest alternatives for what was working less well. However, a detailed exercise on funding modalities along with a Fiduciary Risk Assessment is required in order to take a concrete decision on which option to follow.

Options for the new sector program

Based on the financial current situational, as described in Annex 7.3, this section briefly describes the proposed changes to the current aid modality system to make the system more efficient, increase harmonization and taking it a step forward towards commitments made in the Paris Declaration.

As discussed earlier, one of the major achievements of the current HNPSP aid modality is that funds are already channeled through the regular government system and there is no parallel funding under the pool fund modality. Following are a few suggested options to change the current aid modality.

1. Use the current system differently: from input-based to 'results framework'

The current system of separate reporting and tracking of pool funds should no longer be practiced in the next sector program. This practice decreases government ownership in the program and increases transaction costs. Resources are spent on complying with procedures that from a FM perspective aren't meaningful. In fact, the separate reporting process may even decrease fiduciary assurance, due to the possibility for double charging. The existence of two budgets (for Development and Non-development) increases this risk even further (duplication), as is pointed out in the section on Health Financing (4.4.3). Pool funds form part of the overall resource envelope but for budgeting and reporting they are differentiated by source of funding usually into three categories (i) GoB, (ii) RPA and (iii) Direct Project Aid (DPA). As discussed in Annex 7.3, the chances of ceasing activities, in case of pool funds not being made available to the government increases many fold when they are treated separately in the reporting requirements.

It is proposed that pool funds will be provided to the GoB to support an agreed set of policy intentions / decisions, summarised in a matrix derived from government's sector program. Pooled funds will be provided, but not as development funds. It should be the government's discretion on how it bifurcates between revenue and development in these funds, even more so, as that distinction is likely to disappear during the period of the next sector program (see section on Health Financing). As GOB now is planning to move towards integrating these two budget streams, the question will be how to divide the resources between recurrent and capital expenditure for the government.

A comprehensive policy matrix should be developed and agreed between the government and the DPs and also internally within the DPs. This matrix will form the basis of disbursement. In this way, DPs will become concerned about the achievement of the policy matrix, rather than about tracking the GOB spending, even more so, as spending doesn't necessarily mean achieving results. Designing and agreeing on a comprehensive matrix will remain a challenge both for the DPs and the government, as it should address not only new mechanisms for reporting on the 'funding mechanisms' but also address various procurement issues[11].

The indicators to be used in the matrix could at least partly be taken from the Result Framework in Annex 7.1 and from the table in the reform section (5.2.1). They will be a combination of outcome, output, input and process indicators. They should be reliable, easy to measure, attainable and regularly available, in short they should be SMART[12] or close to being SMART. The question how the policy related results from the indicators in the matrix will determine the amount of funds to be disbursed to GOB, remains to be discussed at a later stage.
Regarding reporting, the GoB will provide DPs with reports on compliance of the policy matrix and the regular government financial reports as produced through IBAS.
To avoid the issue of fungibility, the policy matrix can be used where the government is required to increase the budgetary allocation or expenditure or both by xx% each year.

2. Procurement: from external control to strengthening national systems
One of the major areas of concern in the MTR/APRs has been the current procurement process where the government is heavily dependent on IDA for clearing the procurement documents above the threshold of US$ 300,000.

The Paris declaration gives clear emphasis on using country systems. The issue arises if country systems are not performing well or are inadequate. A mapping of current GoB procurement practices should be done in order to establish the effectiveness of the system in terms of making efficient and transparent procurements. If procurement system to a large extent achieves good practices, GoB systems could be entirely used to process transactions. Additional procedures can be designed and implemented in order to make the procurement system work better; this will help in strengthening the existing system rather than undermining it.

The policy matrix can now be used to implement procurement reforms over a period of time. The first year can include actions to carry out the mapping or assessment of the current system,

[11] For the WB in particular this implies moving from an 'investment loan operation' towards a 'policy development operation' (see for details the box 3.1 in the APR 2009 Vol II, Technical Report, page 111/112) or the website:
<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,contentMDK:20120732~menuPK:268725~pagePK:41367~piPK:51533~theSitePK:40941,00.html >
[12] SMART = Specific, Measurable, Attainable, Realistic and Time Bounded

followed by adopting recommendations and implementation. Implementation of the recommendations can follow in the second year with assessment taking place whether the GoB system is really performing better.

The possibility of using framework contracts can also be explored in order to minimize procedural delay. A framework agreement is a general term for agreements with providers which set out terms and conditions under which specific purchases can be made throughout the term of the agreement. The process of signing a framework contract can well be conducted under the GoB procurement rules. Once a framework agreement is reached, government can continue to use the supplier till the time agreement has been signed for. This also reduces administrative cost as the MoHFW will not have to go through the procurement procedure again and again during the framework contract period.

3. Joint Financing Arrangement (JFA)

Once a decision has been made about the two alternatives mentioned above (using a Result Matrix to be used for policy dialogue and procurement reforms), a next step is to consider using a 'Joint Financing Arrangement (JFA)'. JFA is an agreement between a number of donors and a recipient government specifying how donors may jointly finance a set of activities. JFA details the joint financing procedures, disbursements, consultations, monitoring and reporting, procurement and auditing.

4. Summary on funding modalities

Annex 7.3 describes the current funding modalities under HNPSP. It shows that a lot has been achieved and that in fact only two hurdles remain: the reporting mechanism required under the current funding modality and the flaws in the procurement system.

From the available information, it seems possible to conclude that the current reporting system is not 100% watertight, presents substantial transaction costs for the MOHFW and might reduce ownership to continue funding once the external support is reduced. A Fiduciary Assessment of the financial management system of the MOHFW is therefore needed, before firm decisions can be made on the choice of the best future funding modality. Fortunately, a start has already been made with a financial management study and other studies are in preparation. These will help all stakeholders to make (jointly) a better informed decision.

Regarding procurement, the same conclusion is reached. A mapping of current GOB procurement practices should be done in order to establish the effectiveness of the system in terms of making efficient and transparent procurements.

If possible, the results from these studies should be available before the upcoming appraisal mission expected for the end of November 2010. If that is not possible, some of the outstanding issues could be included in the result matrix for future follow-up and discussions.

Outstanding issues could be:

1. PFM reform should be at the heart this exercise and a PFM reform action plan should be developed based on a detailed PFM assessment. Actions to be completed under this reform action plan could be made part of the policy matrix.
2. Internal audit should be a continuous process. At some stage during the next sector program this should become part of the MOHFW, rather than a contracting-out exercise.
3. A long-term technical assistance (TA) program should also be designed involving both government and DPs. The management of this fund can be contracted out to a specialist TA management company. This will help in speeding up the TA procurement process and also make it more transparent. It will help in strengthening the existing system to make it more comprehensive and predictable.

5.6.2. Future Fund Management

Over the 10 year period of HPSP and HNPSP, the WB has assumed the responsibility to manage the pool fund on behalf of the DPs. A Memorandum of Understanding (MOU) to that effect has been signed by the partners that were in the pool fund. It has been a demanding job, coping with many uncertainties in the beginning about the PFM capacity within the MOHFW, the decision to continue funding even if the audit reports were not always positive and with DPs that sometimes changed their interventions and as a consequence their pledges and commitments for the next phase of disbursements. Next to these operational problems, the staff of the WB at the time had to respond to many detailed questions about the financial reports they submitted to the HNP Donor consortium, where both pool and non-pool funders meet regularly. The WB had had to balance its own responsibilities for the implementation of the program with its responsibilities to manage the funds in the name of all pool funding agencies. This dual position has brought some inherent tensions for all concerned.

It seems therefore realistic to raise the question at this moment in time, whether it is advisable for anyone to continue with this dual responsibility or opt for other alternatives. As the new sector program will start in the middle of 2011, it is now a good moment that all stakeholders, both senior management of the MOHFW and the representatives of the various pool and non-pool donors should decide whether to continue under the current management OR that other options need to be explored. This could be an 'external independent agent' that manages the funds on behalf of the MOHFW and the Consortium (jointly) or a continuation of fund management by the WB or another of the DPs, willing to undertake this additional and complex task.

If, on the other hand, the money flows directly following the Treasury Model (based on an agreed results framework), the DP funds will be transferred to GOB Central Treasury Account (CTA) and released through the regular GOB budget execution procedure i.e. funds are managed like any other domestic revenue of the GOB. However, due to the fact that different DPs have different fiscal years and many cannot make multi-annual commitments, there is a need to create a 'pooling account' that serves as a 'buffer' before releasing the DP funds to the CTA. This means that a Common Pool Account (CPA) is established by the MOF in the name of MOF to which DPs deposit their contributions, AFTER showing evidence of expenditure for a specified (quarterly?) period. From this CPA account, MOF may then withdraw money to the CTA.
The achievements in the mutually agreed Development Linked Indicators (DLI) do not have any influence on the release of funds during the fiscal year. They only matter to decide on the level of DP commitments for the next fiscal year.
The advantage of the CPA account is that various DPs, each with different fiscal years, procedures for commitments and advances, can all be part of the same arrangement. The other advantage is that the CPA arrangement does not require an external "trustee", as the CPA is in the name of MOF i.e. the Government of Bangladesh. As the same arrangement is currently proposed (and discussed) for the education (sub)sector, there are important advantages for MOF to adopt the same mechanisms for both sectors. The arrangement is simple, but at the same time it gives the required assurances, while allowing different DPs to participate under one arrangement.
The proposed disbursement structure will be guided by a legal framework, the 'Joint Financing Arrangement (JFA)' that is to be negotiated in details (with specified DLI) between MOF, the MOHFW and the DPs, once the overall mechanism has been agreed between all participating partners.

5.7. Technical Assistance (TA)

In addition to these general mechanisms of partnership arrangements, the health sector requires Technical Assistance (TA) from national and international consultants to support the MOHFW with challenges that most often relate to technical issues and/or innovations. Such support can be short-term (for a limited period of a few weeks / months) or long-term, being periods of one year or more. In the past, TA has sometimes been hired, without clear justifications or intentions by the MOHFW to use the recommendations provided at the end of the consultancy.

Several principles need to be established before deciding on the need of Technical Assistance:

- The need for TA has to be expressed in writing by the MOHFW (TOR). A clear justification for the required expertise has to be provided (being that MOHFW itself does not have the expertise available among its staff).
- Work that could be done by staff of the MOHFW, but that is not able to do it, due to other pressing responsibilities, should not qualify for (inter)national TA.
- In principle TA will only be justified, if it brings expertise that is not available within MOHFW. Areas of expertise that qualify for such support are most often of a clear technical nature or relate to innovations that the MOHFW intends to undertake. Such TA should only be requested, if MOHFW has the clear intention to move forward and implement some of the advice provided in the final report of the consultants.
- Part of the TA assignment should include the transfer of his/her knowledge, expertise and experience to colleagues in the MOHFW, assigned to work with the expert.
- The unit or Line Director to which the TA has to report has to be clearly stated.
- Selection of the required TA should include (i) his/her specific technical expertise and experience, (ii) individual and social qualities to relate and inspire his co-workers and – if possible – (iii) knowledge and exposure to the complex Bangladesh health sector.
- Management of the TA is the responsibility of the unit / LD asking for it. The unit should provide proper working conditions (room, printer and photocopier) and provide timely (if possible before the start of the assignment) relevant background documentation (reports, reviews, minutes etc), needed to do the work.
- In order to increase the efficiency of the TA, a draft work program and relevant appointments should be made by the unit / LD responsible for the assignment before the arrival of the TA.

In order to facilitate the process of recruitment of consultants and make it as impartial and transparent as possible, MOHFW might consider outsourcing this function under strict guidelines and control mechanisms (TOR). The cost that this will incur has to be balanced with the time and efforts spend by MOHFW staff to provide the LD timely with relevant and good CVs of various candidates to be selected for the various assignments.

5.8. Risks and Mitigation

Risks	Risk mitigating measures	Rating
SERVICE DELIVERY		
Maternal health services will not be able to reduce MMR	The Maternal Health Task Group (MHTG) will provide technical support and guidance to implement an acceleration of the maternal health program. The MHTG will advocate with senior political and policy makers for the promotion of delivery by skilled attendant for all women, with a special focus on male involvement in supporting women's birthing plans.	S
FP Services will not be able to increase CPR and lower TFR agreed targets replacement levels	DGFP in collaboration with DGHS will substantially scale up their efforts in introducing long-term FP methods and well as ensuring sustainability and expansion of current routine FP services. They will develop a new Adolescence Reproductive Health strategy (with other ministries) to delay age of marriage and first pregnancy.	H
Nutrition services will not become integrated in peripheral health facilities of both DGHS and DGFP	DGHS and DGFP speak now with one voice when instructing (and supervising) the lower levels (UHC and below) to undertake nutrition related work (weighing, Road to Health Chart, nutrition advice etc). The Nutrition Task Group will continue to provide advice and guidance to the respective departments. Effective inter-sectoral working is developed at all levels to ensure that the multi-sectoral aspects of nutrition are appropriately coordinated.	M
Non CDC are not given the required priority they need	Attention for NCD (ischemic heart disease, hypertension, diabetes etc) will be expanded to all secondary and tertiary hospitals, while at the same time prevention and life style improvements will be introduced and advocated. The Public Health Task Group will provide technical support to both CDC and NCD LDs.	M
SYSTEMS STRENGTHENING		
Preparation of Operational Plans (OP) with budgets by the LDs will be delayed	Together with Planning Units of DGHS and DGFP, the MOHFW Planning Wing will elaborate (and simplify) the formats and procedures for the development of OPs and budgets of all LDs. Merging revenue and development budgets by MOF will facilitate the planning exercise by reducing overlap and reporting time.	S
Monitoring and internal review mechanisms remain weak	Each LD will have a technical staff to assist in M&E function of the LD and there will be sufficient fund, tool and equipment for monitoring. Central MOHFW will give the M&E Unit appropriate and institutional support to execute its functions. Production of progress reports complete with up to date data will be done on a routine basis and disseminated.	H
The activities suggested in the Health Workforce Strategy (2008) will only partially and slowly implemented	HR Task group will make sure that the implementation of the Health Workforce Strategy remains high on the policy agenda of MOHFW; It will develop a road map with detailed actions, realistic timeframe for its implementation. MOHFW will work in collaboration with the public service commission to ensure that the health sector is prioritized for HR.	S
Quality of pre-service and In-service training through accreditation and licensing will not be improved	Together with relevant councils in the sector, the MOHFW will strengthen its accreditation and licensing roles by institutionalizing and anchoring such activities firmly in the work of the relevant LDs. The MOHFW will be seen to be effectively implementing its regulatory function in relation to pre-service and in-service accreditation through publicizing the withdrawal of accreditation of poorly performing training institutions.	S
Expansion of nurse and midwifery training will not be undertaken timely	The Nursing Council will be strengthened and take its role and responsibilities to higher levels by supervising and guiding existing institutions on what to do. The Nursing Council in conjunction with MOHFW will be proactive in promoting nursing and midwifery as a professional career choice for in-school youths.	L
Revision of the resource allocation criteria based on population and poverty rates will not be undertaken	The Health Financing Task Group will make sure that the (pro-poor) resource allocation remains on the policy agenda of the MOHFW. The HFTG will carry out annual pro-poor budget and expenditure analysis and prepare briefing paper for health partners.	M
Improvements in Quality of Care in public and private health facilities will not receive support	Through an effective regulation and accreditation system in both public and private sector health facilities, the MOHFW will reinforce its stewardship role to provide decent and quality care at low cost to the population. This will be done in close collaboration with the various councils and other regulatory bodies.	H

Risks	Risk mitigating measures	Rating
The new legal requirements on procurement will not be acceptable to the DPs to include in the sector program	The current GOB procurement system will be assessed in order to establish the effectiveness of the system in terms of making efficient and transparent procurements. In the meantime the strengthening of procurement procedures can be included in the policy matrix for future decision making. Performance targets will be determined, adherence monitored and performance reported as part of the routine reporting to all stakeholders.	H
Infrastructure: Insufficient money will be provided to add maternity wings at the union level and beds / equipment for	The attainment of MDG 5 and for FP the attainment of NRR = 1 figures among the highest priorities in the MOHFW. It can therefore be expected that resource allocation under this OP, will give priority to the improvement of infrastructure at the UHC, Union and CC levels.	S
Maintenance systems and existing structures will remain an ineffective part of MOHFW	MOHFW will undertake as a matter of urgency a review of the functioning of TEMO and NEMEW. Based on its findings the decision will be taken to revamp these institutions or outsource maintenance to external entities.	S
STEWARDSHIP AND GOVERNANCE		
Equity, Gender and Voice remains outside the mainstream of MOHFW interventions	MOHFW has various opportunities to mainstream equity, gender and voice. The sector program provides many concrete suggestions and actions that the various LDs can incorporate in their annual Ops. Ongoing training will be done with health managers on EGV issues and practical steps for their integration rolled out.	M
Involvement of community in management of health care is ineffective without political and technical support	The experiences with the implementation of LLP and the Toolkit that was developed during that time, allow for structural involvement of the local authorities at the various levels. Technical expertise with the management and financial implications of the expansion of the LLP are widely available in the country and will be used. LLP, including use of toolkit will become routine throughout the country	S
Introducing effective PPP may take longer than usual time	The introduction of PPP as a strategy of the MOHFW depends to some extent on its commitment to effectively introduce a unit within the ministry responsible for relations with the private and NGO sectors. Results can only be expected in 2-3 years time.	M
Coordination between MOHFW and all stakeholders (private sector and NGOs) is not a priority for the MOHFW	MOHFW legal mandate is to provide overall stewardship to the whole sector, including to those that are currently outside the SWAp. It is expected that MOHFW will recognise and honor this formal responsibility and define and give life to the coordinating structures that are required Additionally stakeholders will be promoted to recognize the legal mandate of MOHFW and will respect and comply to the MOHFW implementation of its mandate.	S
Decentralization in planning management and budgeting may not take place effectively	The current government has put decentralisation and in particular the expansion of the CCs high on its priorities. It has already started to recruit large numbers of staff for the CCs and initiated the repairs needed in the existing Clinics. By linking the priority for the CC with the PHC/UHS and incorporating it in the LLD there are chances that these policies will be effectively implemented. Ongoing monitoring of implementation will be done and reported.	M
DPs will continue to micro-manage the sector and will not be able to focus on the main policy issues (Policy Matrix)	Most DPs are conscious about their previous involvement in 'input management'. By bringing the policy agenda back in the matrix and allowing for reasonable reliable fund management by MOHFW, most pool DPs will actively participate in the renewed policy dialogue under the JCS 2010-2015. Non pool funding agencies will continue to negotiate their projects bilaterally with the government Alignment and harmonization of all aid will continue to be strengthened.	S
Funding modalities may be too restrictive and delay implementation	The proposed funding modalities in this sector program are fully based on the existing GOB financial management procedures (fund flow and reporting). It will allow the pool DPs to focus on the policy outputs that have to be achieved under this funding modality	M
GOB financing does not meet required % of GOB budget and spending levels remain insufficient	The new funding modalities will free a lot of time of the MOHFW staff for admin related work (at various levels). It will also bring the MOF closer to the MOHFW in finding out whether their reporting is adequate and timely. Closer involvement of MOH with the health sector might enhance the GOB contribution to health	S
Overall Risk Rating		S

Rating: H (high); S (Substantial); M (Modest); L (Low/Negligible).

6. ESTIMATED BUDGET OF HPNSSP 2011 – 2016

6.1. Introduction

The SWAp in Bangladesh, starting in July 1998, is now at the end of its second phase, but is still moving towards greater maturity with the need to further strengthen government ownership, program planning, budget exercise and implementation. The estimated development budget for the current Health, Nutrition and Population Sector Program (HNPSP), which outlines activities from 2003-11, is Taka 16,566.47 crore. Out of the total development budget, GOB contribution is Taka 6299.11 crore (38%) and DP contribution is Taka 10,267.34 core (62%).

Considering 100 percent utilization of 2010-11 ADP allocation for HNPSP, the total development budget expenditure in June 2011 will stand at Taka 13,541.00 crore (Table 1A). Out of which DP contribution is Taka 8,156.03 crore (79.4%) against the commitment of Taka 10,267.34 crore.

Budgeting of the next sector program for 2011-16 has been initiated[13]. It is based on the comparison of estimated cost and expenditure of the current sector program and the budget request of the 38 OPs.

6.2. Three scenarios

The data available from various sources (MOF, MOHFW, etc.), government's document and strategies and trend analysis of budget allocations and absorption of previous years were used to estimate an indicative budget for the next health sector program. Three different scenarios: high, middle and low were derived, using some assumptions. The results of the projections are presented below.

Scenario 1: High
The high scenario used the budget request provided by the respective Line Directors (LDs). The tentative budgets prepared by the LDs show that a total of Taka 41,187.52 crore (US$ 5969.20 million) is demanded by LDs for the next sector program (Table 6.1). Yearly average estimated cost is Taka 8,237.50 crore (US$ 1193.84 million). The estimation shows that the requested budget for 2011-2016 is almost 2.5 times higher than the estimated cost of HNPSP (2003-2011).

Scenario 2: Middle
Medium-Term Budgetary Framework (MTBF) of Ministry of Finance shows the estimated budget for the MOHFW for 2010-11 and also the projected budget for 2011-12 and 2012-13. Using these figures as the basis, an indicative MOHFW development budgets for 2013-14, 2014-15, and 2015-16 has been estimated. The projections show that the indicative budget for the period of 2011-16 is Taka 31,848.54, crore (US$ 4615.73 million) and this is nearly double the development budget of HNPSP (2003-2011).

[13] Review of earlier studies and experiences show that input-wise costing using targets of the health sector and unit costs leads to cost figures which are much higher than the Government's capacity to generate fund for the HPN sector. Therefore attempts were made to estimate an indicative budget for the next sector program, both total and OP-wise, as it was done in the earlier program documents.

The trend of the projection of MTBF shows that average growth rate of the development budget of the MOHFW for the years 2010-11, 2011-12 and 2012-13 is 21 percent, which was used to project an indicative estimated budget for 2014-15 (Taka 7,422.22 crore) and 2015-16 (Taka 8,980.89 crore). According to the projection the yearly average estimated cost is Taka 6,369.71 crore (US$ 923.14 million). The projected estimated budget for each Operational Plan (OP) has been estimated using the percentage share of the estimated development budget during HNPSP (2003-2011).

The OP-wise budget requests by LDs are presented in Table 2A in the Annex. It appears that the budgeting process used by the LDs so far is incremental in nature with a substantial additional amount of money requested for the coming years. The MOHFW is at the moment still working to bring these preliminary budgets in line with the ceilings given in the MTBF by the Ministry of Finance.

Scenario 3: Low

The low scenario is based on the OP-wise projected budget using MTBF projections and on the actual capacity to utilize the fund during HNPSP[14]. According to the Low scenario the estimated indicative budget is Taka 26,030.00 crore (US$ 3,772.46 million) for the next sector program.

The estimated absorption capacity varied significantly by OPs and the total fund utilization rate was 82 percent during HNPSP. The percentage of fund utilized by the OPs during 2003-11 is presented in Annex 7.7 (Table-1A).

Table 6.1: Estimated Cost for the HPNSSP (2011-2016)

Scenarios	Total		Yearly average		Ration of projected budget to estimated cost of HNPSP
	2011-16 (in Crore Taka)	2011-16 (in million US$)	2011-16 (in Crore Taka)	2011-16 (in million US$)	
High	41,440.12	6,005.81	8,288.024	1,201.162	2.50
Middle	31,848.54	4,615.73	6,369.708	923.146	1.92
Low	25,702,00	3,724.93	5,140.400	744.986	1.55

6.3. DP Contributions

In addition to GOB, the HPN sector is currently being supported by sixteen development partners (DPs), in the form of both pooled and non-pooled parallel funding. The three scenarios described above depict a picture of the total development budget outlay of HPNSSP (2011-16). The GOB, based on internal resource mobilization capacity may be in a position to share the burden of 35% of the resource requirement for the next sector program. The GOB, therefore, expects the DPs (both pool and non-pool) to make contribution to the extent of rest 65% of the development budget requirement for implementation of the HPNSSP starting July 2011. Based on three scenarios DP contribution may be made to the extent of either Taka 26,771.89 crore (US$ 3,879.98 million) – high scenario, or Taka 20,701.53 crore (US$ 3,000.22 million) – middle scenario, or Taka 16,919.36 crore (US$ 2,452.08 million) – low scenario respectively (Table 3A).

[14] The fund utilization rate was calculated using the data on estimated cost during that period and also the expenditure, which is the total of actual expenditure up to June 2010 and the ADP allocation for 2010-2011. The estimated cost and expenditure from 2003-2011 is presented in Table 1A.

6.4. Estimated Budget by component

In order to use the economic classification of the budget next to the functional classification, used for management purposes by the MOHFW, the 38 OPs have been 'regrouped', each under one of the three components[15]. Table 6.2 below provides for each of the three components, the estimated budget, the actual spending and the projected budget for 2011-16 according to the three scenarios.

According to the MTBF projection (middle scenario) 65.8 percent budget is allocated for the Service Delivery Component and 30.9 percent for System Support and 6.4 percent for Governance and Stewardship. It should be pointed out that there is a substantial difference between the requested budget by the various LDs and the available budget, given by MOF. In the coming period a process of rationalizing the OP budgets has to be done, based on (i) the absorption capacity of the sector and (ii) the main 'drivers' of the new program (e.g. CC, UHS, etc) along with putting more resources in the areas emphasized for priority consideration.

Table 6.2: Estimated Budget and Expenditure (2003-2011), Budget Requests (2011-2016) and Projected Budget (2011-2016) by Component. (in crore Taka)

Components	HNPSP estimated budget 2003 - 2011			HNPSP actual spending 2003 - 2011			% of Budget Spent	Amount LD Requested	MTBF Projection	Projection based on Absorption capacity
	GOB	PA	Total	GOB	PA	Total	2003-2011	2011-2016	2011-2016	2011-2016
1.Service Delivery	2,293.8	8,606.3	10,900.0	1,681.8	6,936.9	8,618.6	79.1%	24,218.0	20,954	16,568
2. Systems Support	3,975.6	1,144.5	5,120.0	3,681.0	937.7	4,618.6	90.2%	15,534.6	9,839	8,875
3. Governance / Stewardship	29.9	516.5	546.5	22.4	281.5	303.9	55.6%	1434.9	1,055	586
Total (in Crore Taka)	6,382.6	10,183.9	16,566.5	5,385.1	8,156.0	13,541.2	81.7%	41,187.5	31,849	26,029
Total (in Million US$)	925.01	1475.93	2400.94	780.45	1182.03	1962.49		5969.20	4,615.80	3,772.20

Table 6.3 presents the figures for the service delivery component. The estimated budget for Service Delivery Component is Taka 20,954 crore according to high scenario, Taka 20,282 crore according to middle scenario and Taka 16,568 crore according to low scenario. The projection for high scenario shows that the highest allocation is for Essential Service Delivery (ESD) followed by Nutrition Service Program and Improved Hospital Management. Both MTBF projections (middle scenario) and projection based on absorption capacity (low scenario) show that ESD should receive the highest allocation in Service Delivery component.

[15] Activities of some operational plans overlapped with more than one component. For the purpose of analysis, the particular component has included OPs with the major portion of the activities of that component.

The figures show that the fund absorption capacity is highest for Systems Support component (90%) followed by Service Delivery (79%) and Governance and Stewardship (56 %). The fund utilization rate by OP is presented in Table 6.4 and Table 6.5 for the components, Systems Support and Governance and Stewardship respectively.

6.5. Comparison of old 38 OPs and new 31 OPs

There were 38 Operational Plan during HNPSP and development budget of HNPSP was allocated according to these OPs. The MOHFW has decided to reduce the number of OPs in the next sector program to 31. The estimated 38 OPs have been rearranged in to 29 OPs and two new OPs, viz., (i) Community Based Health Care and (ii) Surveillance of Epidemics and Emerging and Re-Emerging Diseases have been proposed. The activities of the next sector program will be broadly similar in nature with new elements based on needs of the time. The comparison of the old 38 OPs and new 31 OPs is presented in Table 4A.

Table 6.3: Estimated Budget and Expenditure (2003-2011), Budget Requests (2011-2016) and Projected Budget (2011-2016) by Component-Service Delivery. (in crore Taka)

Operational Plan (OP) related to Service Delivery	Estimated budget 2003 -2011 GoB	Project aid	Total	Estimated expenditure 2003 - 2011 GoB	Project aid	Total	% of Budget Expended 2003-2011	Amount Requested 2011-2016	MTBF Projection 2011-2016	Projection based on Absorption Capacity 2011-2016
Essential service delivery	478.9	2,373.5	2852.45	368.1	2,038.9	2,407.0	84.4%	5,130.8	5,484	4,627
Communicable Disease Control	164.2	477.4	641.39	76.2	230.7	306.9	47.8%	1,697.5	1,233	590
TB & Leprosy Control	33.8	540.6	574.4	18.4	468.2	486.6	84.7%	49.6	1,104	935
Health education & promotion	45.5	60.0	105.5	43.8	53.3	97.2	92.1%	551.3	202	187
Improved Hospital Services Management	449.1	787.2	1236.30	254.5	655.5	910.0	73.6%	2,964.7	2,377	1,750
Alternative Medical care	53.1	7.5	60.6	49.8	7.1	56.9	93.8%	244.0	117	109
Non-communicable Disease Control & Other Public Health Interventions	37.4	152.2	189.5	11.9	106.7	118.6	62.6%	1,703.7	364	228
National AIDS/STD Program and Safe Blood Transfusion	14.6	552.7	567.2	12.4	418.6	431.0	76.0%	1,074.1	1,090	829
National Eye Care	9.5	10.9	20.4	8.2	7.5	15.8	77.3%	22.6	39	30
National Nutrition Program	143.4	1,107.1	1,250.5	86.2	799.1	885.4	70.8%	4,479.7	2,404	1,702
Clinical Contraception Services Delivery	328.6	278.6	607.2	349.0	274.3	623.3	102.7%	2,199.3	1,167	1,198
Family Planning Field Services Delivery	342.0	1,650.0	1,992.0	268.5	1,431.2	1,699.7	85.3%	2,339.9	3,830	3,267
Maternal, Child & Reproductive Health Services Delivery	153.2	537.7	690.9	104.6	382.9	487.5	70.6%	1523.9	1,328	937
Information, Education & Communication	40.5	71.0	111.5	30.2	62.8	93.0	83.4%	236.9	214	179
TOTALS	2,293.8	8,606.3	10,900.0	1,681.8	6,936.9	8,618.6	79.1%	24,218.0	20,954	16,568

Table 6.4: Estimated Budget and Expenditure (2003-2011), Budget Requests (2011-2016) and Projected Budget (2011-2016) by Component-Support Service. (in crore Taka)

	Estimated budget			Estimated expenditure			% of Budget	Amount	MTBF	Projection based on Absorption
	2003 -2011			2003 - 2011			Expended	Requested	Projection	Capacity
Operational Plan (OP)	*GoB*	*Project aid*	*Total*	*GoB*	*Project aid*	*Total*	2003-2011	2011-2016	2011-2016	2011-2016
In-service Training	85.6	195.0	280.6	68.8	149.2	218.0	77.7%	610.0	539	419
Pre-service education	132.0	82.0	214.0	109.1	182.9	292.0	136.5%	1,225.0	411	561
Management for Procurement, Logistics & Supplies	312.3	8.7	321.1	407.8	3.3	411.1	128.0%	660.0	617	790
MIS-Health, Services & Personnel (Health)	18.7	60.8	79.5	16.7	50.1	66.8	84.0%	2,001.1	153	128
Quality Assurance	1.1	6.6	7.7	1.0	5.3	6.2	80.4%	9.5	15	12
Micro-nutrient Supplementation	27.6	77.4	104.9	16.5	77.8	94.3	89.8%	192.0	202	181
Nursing Education & Services	33.0	62.2	95.1	26.7	46.5	73.1	76.9%	1,021.8	177	136
Strengthening of Drug Administration management	6.2	4.2	10.4	1.1	1.7	2.8	27.1%	62.5	20	5
MIS- Services & Personnel (FP)	13.1	15.0	28.1	9.4	4.0	13.5	47.9%	31.7	54	26
Procurement, Storage & Supplies Management	103.5	5.5	109.0	56.6	2.3	58.8	54.0%	158.0	209	113
Training, Research & Development (NIPORT)	14.8	106.7	121.5	6.8	81.7	88.4	72.8%	200.0	234	170
Physical Facilities Development (c,r & m)	3,227.6	520.6	3,748.2	2,960.6	333.1	3,293.6	87.9%	9,363.0	7,206	6,332
TOTALS	3,975.6	1,144.5	5,120.0	3,681.0	937.7	4,618.6	90.2%	15,534.6	9,839	8,875

Table 6.5: Estimated Budget and Expenditure (2003-2011), Budget Requests (2011-2016) and Projected Budget (2011-2016) by Component-Governance/Stewardship (in crore Taka).

	Estimated budget			Estimated expenditure			% of Budget	Amount	MTBF	Projection based on Absorption Capacity
	2003 - 2011			2003 - 2011			Expended 2003-	Requested	Projection	
Operational Plan (OP)	*GoB*	*Project aid*	*Total*	*GoB*	*Project aid*	*Total*	2011	2011-2016	2011-2016	2011-2016
Research & Development (Health)	1.4	24.2	25.7	1.1	17.2	18.3	71.1%	33.4	49	35
Sector-wide Program Management (Health)	3.8	14.8	18.6	1.6	8.0	9.6	51.6%	26.1	36	18
Human Resource Management (Health)	2.3	4.1	6.4	1.8	3.4	5.2	80.7%	13.1	12	10
Improved Financial Management (Health)	1.4	1.6	3.0	1.0	1.5	2.4	80.5%	2.7	6	4
Sector-wide Management-FP	1.2	2.5	3.7	1.9	3.8	5.7	155.0%	19.1	7	11
Human Resource Management - FP	2.5	23.0	25.5	2.3	17.8	20.1	79.0%	104.5	49	39
Improved Financial Management - FP	1.9	1.5	3.4	1.9	1.0	2.9	85.9%	7.5	7	6
Sector-wide Management-MOHFW	1.7	29.5	31.1	0.8	10.5	11.3	36.2%	49.6	60	22
Human Resource Management - MOHFW	1.8	8.3	10.1	1.6	3.0	4.5	44.8%	17.5	19	9
Improved Financial Management - MOHFW	4.1	21.2	25.2	3.0	10.2	13.2	52.3%	37.5	49	25
Health Economics Unit	4.8	20.3	25.1	4.2	18.2	22.5	89.3%	173.9	48	43
Policy reforms	2.9	365.6	368.6	1.2	187.0	188.2	51.1%	950.0	709	362
TOTALS	29.9	516.5	546.5	22.4	281.5	303.9	55.6%	1434.9	1,055	586

7. ANNEXES

Annex 7.1. The Indicative Result Framework (RFW) of HPNSSP

The Indicative Result Framework (RFW) presented below follows closely the main chapters and section of the sector program. It builds and expands on the Performance Framework, developed with MOHFW during the APR 2009. As only a few new figures were available at the time of writing, most figures presented here are from the APIR 2009, representing the outputs of 2008.

Indicative Results Framework 2010 - 2016

Interventions	Indicators
Goal: Achieve improved health and wellbeing of the people at a stabilized population level consistent with the development objectives of Bangladesh. Note: BDHS figures will be available every three (3) years	**Outcome indicators**
	Infant mortality rate: (BDHS)
	Under 5 mortality rate (BDHS)
	Neonatal mortality rate (BDHS)
	Maternal mortality ratio (Bangladesh MM Survey; baseline and end line)
	Total Fertility Rate (BDHS)
	Population Growth Rate (%) (SVRS)
	Prevalence of stunting among 6-59 month old children (BDHS)
	Underweight children under 5 (6-59 months) (BDHS)
	Life expectancy at birth (Sample vital registration system, annually)
	Prevalence of HIV in MARP (Sero Surveillance, annually)
Program Development Output Increase availability and utilization of user-centered, effective, efficient, equitable, affordable and accessible quality HNP services. **Strategic Objective:** In line with MDG and NSAPR-2 goals and targets, ensure equitable and quality health care for all citizens in Bangladesh by improving access to and utilization of evidence-based high-impact health, population and nutrition related services; strengthened systems to support service delivery; and effective stewardship and governance.	
Component 1: Service delivery improved (output, input and process levels)	
Results 1.1 Improve access to essential health services maternal, neonatal and child health family planning and reproductive health nutrition services communicable diseases (STD/AIDS, TB, malaria, Kala-Azar, other vector borne diseases Non Communicable diseases Note: BDHS figures will be available every 3 years	Percent of delivery by skilled birth attendant (BDHS /ESD, annually)
	Antenatal care rate (at least 3 visits) (BDHS/ESD, annually)
	At least 1 postnatal checkup for mothers within one week (BDHS)
	Contraceptive prevalence rate (BDHS/ESD, annually)
	% using permanent and long term methods (BDHS/ESD, annually)
	Unmet need for family planning (BDHS)
	Full immunization of children by age 1 (EPI/CES; every year)
	Percent of children 9-59 months receiving Vit A supplementation (BDHS).
	Prevalence of children (6-59 ms) Underweight (BDHS)
	Prevalence of children (6-59 ms) Stunted (BDHS)
	Rate of exclusive BF in infants under 6 months (BDHS)
	Percent of 6-23 months children fed with all Infant and Young Child Feeding (IYCF) practices (BDHS)
	TB Case Detection Rate (National TB Program, annually)
Results 1.2 Improve equity	Percent of births delivery by skilled birth attendants by wealth quintiles

Interventions	Indicators
in essential service utilization	(BDHS/ESD every year)
	Use of modern contraceptive methods by wealth quintiles (BDHS/ESD; annually)
	Use of modern contraceptive methods by age of women (adolescents) (BDHS/ESD; annually)
Results 1.3 Improved awareness healthy behavior	Percent of married women receiving home visits in last 6 months by Community Workers (HA, FWA, CNP, NGO workers) (BDHS)
Results 1.4. Improved PHC through CCs	% of the population visiting CCs Year round availability of medicines
Component 2: Strengthened systems to support service delivery in place (output, input and process levels)	
Results 2.1. Strengthened Planning and budgeting procedures	Number of LDs submitting annual workplan and budget by defined time
Results 2.2: Strengthened monitoring and evaluation systems	Comprehensive MIS reports on service delivery published and distributed (MIS bi-annually and APIR annually)
	% Upazilas providing MIS reports by 15th of each month
	OP progress report reviewed with policy makers at MOHFW and directorate levels (every month)
Results 2.3: Improved human resources - development and management	Bangladesh Health Workforce Strategy in place for implementation
	Comprehensive HRH Master plan developed
	Central HRIS in place
	Proportion of vacant positions at Upazila level and below (HRIS annually and Health Work Force Survey every two years)
Results 2.4: Health sector financing strengthened	% share of total GOB budget allocated to MOHFW budget
	% of MOHFW expenditure going to Upazila level and below (Public Expenditure Review; annually)
	Resource allocation formula based on population numbers and poverty levels developed and endorsed by MOHFW
Results 2.5: Strengthened quality assurance and supervision systems	
	# of HF with functional QA team (HF Survey; every two years)
	Hospital accreditation system developed
Results 2.6: Sustainable and responsive procurement and logistic systems	# Relevant officials trained in procurement procedures each year.
	Development of online tracking system for all procuring entities
Results 2.7: Strengthened sec. and tertiary Hosp services	# District hospitals upgraded
	# District hospitals having CCU
	All Medical College Hospitals have ICU and CCU facilities
Results 2.8: Strengthened emergency preparedness & response	Emergency health response strategy developed
Results 2.9: Effective health	% health facilities having effective waste management systems (Health facility

Interventions	Indicators
care waste management	Survey, every 2 yrs)
Results 2.10: Improved infrastructure and maintenance	Number of Community Clinics established and functional (MIS; annually)
	% HF with functional and equipped Comprehensive EOC/Basic EOC (Health Facility Survey, every 2 years)
	% of basic equipment that is functional at date of visit (using a standard list of equipment for each health service delivery level)
Component 3: Effective stewardship and governance (output, input and process levels)	
Results 3.1: Policy reform and Legal Framework	Regulatory framework for accreditation of public and private sector health sector and teaching/training institutions in place
	Regulatory framework for Quality Assurance (QA) in hospitals in place
Results 3.2: Sector management, Reforms, EGV	Sector coordination mechanisms developed and used
	# Health facilities adapted to give woman friendly services
Results 3.3: Decentralisation through LLP procedures	Number of Upazilas and districts having functional LLP procedures
Results 3.4: Institutional reforms	
	Number of public hospitals having autonomous management
	Number of private hospitals providing emergency services
Results 3.5. SWAp and improved DP coordination	Number of LCG Working Group meetings of the health sector held
	Code of Conduct prepared and adhered to by DPs in line with Paris Declaration
Results 3.6: Strengthened Financial Management Systems (FMS), (funding, reporting, procurement)	Elaboration and implementation of a FM Action Plan
	% project aid fund disbursed quarterly and annually
	Percentage of serious audit objections settled within the last 12 months
Results 3.7: Technical cooperation and review	Number of short- and long-term consultancies requested and finalised

Next Steps: Add baseline and targets

Annex 7.2. Titles of Operational Plans (OPs)

Directorate General of Health Services (DGHS)

1. Essential Services Delivery (ESD)
2. Alternative Medical Care (AMC)
3. National Eye Care.
4. Behavior Change Communication (IEC/BCC)
5. HIS, E-Health and Medical Bio-Technology (MBT)
6. HRM and In-service Training.
7. Pre-Service Training.
8. Planning, Monitoring and Research.
9. TB & Leprosy Control.
10. Communicable Disease Control (CDC)
11. National AIDS and STD Programme.
12. Hospitals Services Management and Safe Blood Transfusion.
13. Non Communicable Disease Control (NCD)
14. Maternal Neonatal and Child Health Care (MNCH)
15. Community Based Health Care (CBHC)
16. Surveillance and Control of Epidemics and Emerging and Re-emerging Diseases.

Directorate General of Family Planning (DGFP)

1. Family Planning Field Service Delivery.
2. Clinical Contraception Service Delivery.
3. Maternal, Reproductive and Adolescent Health.
4. Planning and Monitoring of FP.
5. HRM and MIS.
6. Information, Education and Communication (IEC/BCC)
7. Procurement, Storage and Supply Management (PSSM)

Ministry of Health and Family Welfare (MOHFW)

1. Governance, Stewardship, HR & Financial Management.
2. Sector-wide Programme Management and Monitoring.
3. Health Economics Financing (HEF) / Gender, NGO and Stakeholder Participation (GNSP).
4. Physical Facilities Development (HED)

Other Agencies

1. Nutrition Services Program (NSP)
2. Training, Research & Development for Population Services (NIPORT).
3. Strengthening of DA and Management (DACA)
4. Nursing Education and Services (DNS)

Annex 7.3. Funding modalities under HNPSP

Disbursement Arrangement for HNPSP

At present a number of Development Partners (DPs) are providing support to Government of Bangladesh (GOB) under two major categories i.e. (i) pooled funds[16]; and (ii) non-pooled funds. Pooled funds are made part of the overall development budget of MOHFW and are reflected in the annual development program (ADP). Pooled DPs deposit money through International Development Agency (IDA)[17] into the 'HNPSP Forex Account', held and maintained by GOB at the central bank. Amount deposited by DPs in the forex account is equal to estimated six months expenditure, based on the various OPs to be funded by pooled funds. GOB's regular financial and accounting procedures are used to make expenditures out of the pooled fund. Non-pooled funds disbursement is negotiated between GOB and each DP individually and incorporated into the bilateral financing agreements between the two parties.

From the 'Forex Account', foreign exchange is transferred to the Consolidated Fund (CF) of GoB on the advice of the Controller General of Accounts (CGA) of Bangladesh, as reimbursement of the money spent from the GOB funds, known as Reimbursable Project Aid (RPA).
For development expenditure, MoHFW releases GOB allocations up to the 2nd quarter and RPA up to 1st quarter, without making any reference to MOF. For the release of 3rd quarter of GOB allocation and subsequent of RPA, concurrence from MOF is required, which is dependent on the MoHFW providing expenditure reports of the previous quarters. Similarly, the WB does not replenish RPA funds to the forex account without receiving expenditure reports of the HNPSP (consisting of all 38 OPs). The MOF equally does not release funds for the 4th quarter, unless information regarding the previously released funds for the first three quarters is provided.

Reporting Requirements

MOHFW sends a Financial Monitoring Report (FMR)[18] of actual expenditure, documents in favor of the expenditure, agreement etc., and other information (as required by IDA). MOHFW prepares quarterly financial statements accounting for all receipts and expenditures in the preceding quarter, reconciling the accounts for the quarter, and estimating cash requirements for the next six months. Annual consolidated financial statements are also prepared, reflecting the planned activities and budget allocations for the OPs.

The Line Directors (LDs) send the statement of actual and acceptable expenditures, relevant documents in favor of the expenditure to the Financial Management and Accounting Unit (FMAU) in each quarter. On receipt of these statements FMAU consolidates the expenditures and finalizes the total expenditure after having examined the eligibility of the expenditures on basis of the operational plan/credit agreement for onward submission to IDA.

[16] Pooled money is Reimbursable Project Aid (RPA). Money is transferred to a consolidated fund of the Ministry of Finance (MOF), once it has been spent by GOB.
[17] IDA is a pooled DP amongst other DPs but it also plays the role of management (financial) agency for HNPSP. All DPs providing support through pooled funds have agreed IDA as administrator of these funds under trust fund arrangements. World Bank is the IDA for HNPSP.
[18] GOB and the DPs have agreed to accept a single set of FMRs, largely based on the financial statements currently prepared by MOHFW.

Internal Controls
General Financial Rules (GFRs) and the financial management handbook for the health sector serve as the framework for internal controls. These are followed for making expenditures under the HNPSP.

Internal Audit
At present, there is no in-house internal audit function within the MoHFW. MoHFW contracts out audit firms to carry out internal audit of the health sector. IDA oversees the selection process of the firm to be contracted for internal audit.

External Audit
External audit as agreed between GOB and the DPs is conducted by the Comptroller and Auditor General (C&AG) Bangladesh, which is the regular external audit system of the government. The audit report contains a separate opinion as to whether the financial statements submitted during the fiscal year, together with the procedures and internal controls involved in their preparation, can be relied upon to support the transactions and balances of the Forex and other accounts, and the contributions of GoB and the DPs.

Two concerns with the current funding modality
The current HNPSP made an important headway in aligning aid (pooled funds) with government processes and procedures to a certain extent. However, the current HNPSP aid flow mechanism raises concerns in terms of prudent fiscal management.

Reporting: Under the current HNPSP fund flow arrangement, MOHW has to consolidate all accounts of the cost centers and report separately to DPs against the expenditure from the pooled fund. The current method therefore is a reimbursable cost mechanism in which the WB only releases funds to GOB, once the expenditures are made and reported through a separate reporting system to the IDA, for the entire HNPSP (all 38 OPs).
Requirement to report pool funds separately slows down progress of funds utilization, as reports from more than 2,000 cost centers have to be reconciled and compiled. Missing reports from even few cost centers or LDs is considered as incomplete for the purpose of onwards submission to IDA, thus receiving funds for the subsequent periods becomes time consuming, resulting in slow disbursements and less progress in implementation.
The requirement also affects adversely government ownership of the program. When activities are reported separately government tends to associate them with external funding and once the funding is finished, government may cease that particular activity.
This reporting arrangement has major implications on transactions costs for MOHFW and MOF. Next to the transaction costs, it seems that the reliability of the reporting system is insufficient as evidenced by the fact that the Comptroller and Auditor General has given an adverse opinion on the consolidated financial statements presented. This among others because the reconciliation between the information coming from IBAS system and from the cost centers could not be done.

Finally the procedure of requesting special reports that require another reporting and accounting system (than the one used for all GOB, IBAS) is likely to reduce assurance on possible mis-use of the funds – the latter because it is still an opportunity for double charging i.e. the MoHFW may be charging their accounts from the cost centres for the same expenditure as paid by the CGA using the regular GoB system.

Procurement: IDA is heavily involved in individual procurement transactions[19], which is against the spirit of SWAp. Under current arrangements, procurement above the threshold of US$ 300,000 has to be referred to the IDA for clearance. Analysis in the Mid-Term Review (MTR) report shows that pool fund spending lagged behind spending by GOB despite availability of sufficient funds in the pool and timely expenditures being reported[20]. Reasons given are the complex procedures regulating procurement in the WB. Recently, the Public Procurement Act has been amended, resulting in reluctance among DPs to follow GOB procurement procedures (considering high fiduciary risks).

The current funding modalities, being part of the Treasury systems, may help to speed up the implementation of the program, if some improvements / changes are brought into the practices of financial reporting and procurement.

[19] Bangladesh HNPSP, APR, Volume II. Independent Review Team, 10th May, 2009.
[20] Bangladesh HNPSP, MTR, Volume II. Independent Review Team, 31st March, 2008.

Annex 7.4. Joint Cooperation Strategy (JCS 2010-2015)

In June 2010, the GOB and the Development Partners finalised their "Bangladesh Joint Cooperation Strategy (JCS 2010-2015)", expressing their mutual commitment to the principles of the Paris Declaration on Aid Effectiveness (2005) and Accra Agenda for Action (2008). The JCS sets standards for effective management of development assistance through joint programming, use of GOB administrative and financial systems, joint appraisal for co-financed programmes and joint review of progress in their implementation. Its signatories[21] have agreed on the following principles:

The Government of Bangladesh will aim to:

- Exercise ownership and leadership in developing and implementing national development strategies through broad consultative processes among the relevant stakeholders
- Translate national development strategies into prioritised, balanced, results-oriented operational programmes as expressed in MTBF and Annual Development Programmes
- Coordinate aid at national, regional and local government levels in an inclusive partnership dialogue with the DPs and other stakeholders and encourage the participation of civil society and the private sector.
- Continue to implement key reforms and programmes in democratic governance, economic governance and socio-economic development.

Development Partners will aim to:

- Respect partner country leadership and take effective steps to strengthen the partner country's capacity, including aid management and public financial management, to exercise this leadership
- Support the implementation and monitoring of the national development plans and strategies, programmes and policies
- Align with the GOB's policies and strategies and increase the use of GOB systems and procedures according to the individual mandate and country strategy, if any, of each DP
- Share information on programme spending and commitments with relevant GOB programme partners to facilitate improved predictability of DP funds.
- Ensure the complementarity of various assistance modalities and align their support with the Medium Term Budgetary Framework

Government and Development Partners will jointly:

- Implement the Bangladesh JCS to improve aid effectiveness in the country, monitor progress towards greater aid and development effectiveness and hold each other accountable on the basis of the JCS Action Plan and the Joint Development Results Framework.

[21] AsDB, Australia, Canada, Denmark, European Union, Germany, Islamic Development Bank, Japan, Korea, Netherlands, Norway, Spain, Sweden, Switzerland, UK, United Nations, USA and the World Bank.

Annex 7.5. Action Plan for mainstreaming nutrition services
(Nutrition should be a common package for children and mothers)

Sl	Activity	Service delivery		Responsibility	
		Existing	Proposed	Current	Proposed
a) Child Nutrition					
1	Exclusive breast feeding	ANC, PNC, BCC, Safe Delivery, ABCN	ANC, PNC, BCC, Safe Delivery, IMCI, CC,	DGHS, DGFP, NNP	DGHS, DGFP
2	Complementary Feeding	-do-	-do-	-do-	-do-
3	Supplementary Feeding	-do-	-do-	-do-	-do-
4	Growth Monitoring and Promotion (GMP)	ABCN	IMCI (facility & community based), EPI, CC	DGHS,NNP	DGHS
5	Vitamin A supplementation	EPI (<1 yr) EPI/NVAC (12-59M)	EPI (<1 yr) EPI/NVAC (12-59M), IMCI	DGHS, IPHN	DGHS
6	Iron supplementation (Micronutrient powder)	ABCN, ICDP	Community-IMCI, CC	DGHS,DGFP	DGHS,DGFP
7	Zinc supplementation with ORS	Community & F-IMCI	Community & F–IMCI, CC	-do-	-do-
8	Other Micronutrients (Vit D, Calcium etc.)	Nil	-do-	-do-	-do-
9	Deworming	Filariasis/NVAC	Filariasis/NVAC	DGHS	DGHS
10	Immunization	EPI	EPI	DGHS	DGHS
11	BCC (Personal hygiene, hand wash, school health, other BCC)	BCC (HEB)	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
12	Therapeutic management of severe acute malnutrition (facility and community)	Pilot intervention is ongoing in selective districts through NGOs	Community & F-IMCI, ESD, CC	DGHS, DGFP	DGHS, DGFP
b) Maternal and Newborn Nutrition					
1	Iron-Folic Acid supplementation for pregnant and lactating women	ANC, PNC, ABCN	ANC, PNC, CC	DGHS, DGFP,NNP	DGHS, DGFP
2	Early initiation of breastfeeding	ANC, ENC, PNC, SBA, CSBA, IMCI	ANC, ENC, PNC, SBA, CSBA, IMCI, CC	DGHS, DGFP	DGHS, DGFP
3	Personal hygiene	BCC	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
4	Vitamin A –post partum	RH, MCRH, PNC, ABCN	RH, MCRH, PNC, CC,	DGHS, DGFP,NNP	DGHS, DGFP
5	Identification and management of Low Birth Weight (LBW)	PNC, ENC, IMCI, ABCN	PNC, ENC, IMCI, CC,	DGHS, DGFP,NNP	DGHS, DGFP

Sl	Activity	Service delivery		Responsibility	
		Existing	Proposed	Current	Proposed
6	Weight monitoring of pregnant women	ANC, ABCN	ANC, CC	DGHS, DGFP, NNP	DGHS, DGFP,
7	Food intake (quantity and quality)	BCC, ABCN	BCC, ANC	DGHS, DGFP,NNP	DGHS, DGFP
8	BCC	BCC	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
c) Adolescent Nutrition					
1	Anemia (Iron and Folic Acid)	ABCN, ICDP	School Health, CC, sector adolescent forum, ICDP	DGHS, DGFP,NNP	DGHS, DGFP
2	Strengthening nutrition component of school health and nutrition	School Health	School Health	DGHS	DGHS
3	Personal hygiene	BCC	BCC (HEB) and sector programs	DGHS, DGFP	DGHS, DGFP
4	Deworming	ABCN, Filariasis, School Health, MCRH	ICDP, School Health, CC, Filariasis, MCRH,	DGHS, DGFP	DGHS, DGFP
5	BCC (Nutrition education and counseling)	BCC,ABCN	BCC (HEB) and sector programs	DGHS, DGFP,NNP	DGHS, DGFP
d) General Population					
1	Food Fortification (iodized salt, edible oil with vit. A etc)	Ministry of Industries, MoH&FW	Ministry of Industries (project implementation), MoH&FW (Coordination, policy formulation, monitoring)	DGHS, MOHFW	DGHS, MOHFW
2	Food hygiene and safety	IPHN/BSTI	IPHN	DGHS, MOHFW	DGHS
3	Dietary guidelines	IPHN, INFS, BNNC	IPHN	BNNC	BNNC
4	Inter-ministerial coordination with MOFDM, Agriculture, Industries, Fishery &Livestock, Education, MOWCA, LGRD, Social Welfare, Information	MoH&FW	MoH&FW	BNNC, MOHFW	BNNC, MOHFW
5	Legislation & policy formulation	MoH&FW	MoH&FW	IPHN,MOHFW	MOHFW

ABCN: Area Base Community Nutrition
ANC: Ante Natal Care
BCC: Behavioral Change Communication
BNNC: Bangladesh National Nutrition Council
BSTI: Bangladesh Standards and Technical Institution

ENC: Essential Newborn Care
EPI: Expanded Program on Immunization
IMCI: Integrated Management of Childhood Illness
INFS: Institute of Nutrition and Food Science
CC: Community clinic
HEB: Health Education Bureau
ICDP: Integrated Community Development Project (ICDP), Ministry of CHT Affairs
IPHN: Institute of Public Health Nutrition
NNP: National Nutrition Program
NVAC: National Vitamin A Plus Campaign
PNC: Post Natal Care
RH: Reproductive Health

Annex 7.6. Nutrition as part of the human life-cycle.

The targets of the Nutrition Service Program (NSP) are:
1. More than 90% of clients are seen for ANC/delivery/PNC/FP/EPI/IMCI and received the specified package of nutrition services in their last visit;
2. More than 80% of target group received specified home visits in the past month / quarter

Health/ FP Contacts	Community Level Essential Nutrition Services	Facility /Clinic /Center Level Essential Nutrition Services
Pregnancy and ANC	• Provide/encourage use of daily iron/folic acid (IFA) supplements and counseling on IFA compliance/side effects; • Counseling on foods and diet in pregnancy; • Prepare for breastfeeding • Conduct home visits by trained volunteers/CHW to all PW in the catchment area for above	• Provide/encourage use of daily iron/folic acid (IFA) supplements and counseling on IFA compliance/side effects; • Counsel on foods and diet in pregnancy; • Prepare for breastfeeding • Monitor weight gain • Assess/treat/refer for moderate/severe anemia
Delivery	• Assist mothers to initiate breastfeeding immediately/within one hour; • Administer postpartum vitamin A for mothers; • Breastfeeding: check/ensure position & attachment, check sucking by newborn • Counsel on no use of pre-lacteals; feed only breast milk (colostrum) • Teach manual expression for LBW newborns if necessary	• Assist mothers to initiate breastfeeding immediately/within one hour; • Administer postpartum vitamin A for mothers; • Breastfeeding: check/ensure position & attachment, check sucking by newborn • Counsel on no use of pre-lacteals; feed only breast milk (colostrum) • Take birth weight • Teach manual expression for LBW newborns if necessary
Postnatal Care (PNC)	• Counsel on exclusive breastfeeding for 6 m, frequency, prevention/treatment of common difficulties • Check position & attachment; • Teach manual expression of breast milk, • Continue IFA supplements for mothers, • Counsel on diet: quantity and foods • Home visits by trained volunteers/ CHW at days 1, 3, 7, 28 after delivery	• Counsel on exclusive breastfeeding for 6m, frequency, prevention/ treatment of common difficulties; • Check position & attachment; • Teach manual expression • Continue IFA supplements, • Counsel on diet: quantity and foods • Monthly weighing of infants
Family Planning	• Counsel on exclusive breastfeeding as part of postpartum family planning: position, attachment, manual expression, assessing and maintaining adequate milk supply • Counsel on adequate complementary feeding after 6 months: quantity, quality, dealing with 'poor appetite', feeding during/following illness; iron supplements • Monthly home visits by trained volunteers/CHW from birth to 12 months	• Counsel on exclusive breastfeeding as part of postpartum family planning: position, attachment, manual expression, assessing and maintaining adequate milk supply • Counsel on adequate complementary feeding after 6 months: quantity, quality, dealing with 'poor appetite', feeding during/following illness, iron supplements • Monthly weighing of infants < 12 m
EPI	• 0-6 months: counsel on exclusive breastfeeding, frequency, position, attachment, manual expression, assessing	• 0-6 months: counsel on exclusive breastfeeding, frequency, position, attachment, manual expression,

Health/ FP Contacts	Community Level Essential Nutrition Services	Facility /Clinic /Center Level Essential Nutrition Services
	and maintaining adequate milk supply • 6+ months: counsel on complementary feeding after 6 months: quantity, quality, dealing with 'poor appetite', feeding during/following illness • Encourage/provide pediatric iron supplements • Administer vitamin A supplement • Monthly home visits by trained volunteers/CHW from birth to 12 months	assessing and maintaining adequate milk supply • 6+ months: counsel on complementary feeding after 6 months: quantity, quality, dealing with 'poor appetite', feeding during/following illness • Encourage/provide pediatric iron supplements • Administer vitamin A supplement • Monthly weighing of infants <12m
IMCI	• 0-6 months: counsel on exclusive breastfeeding, frequency, position, attachment, manual expression, assessing and maintaining adequate milk supply • 6+ months: counsel on complementary feeding after 6 months: quantity, quality, dealing with 'poor appetite', feeding during/following illness • Provide pediatric iron supplements • Administer vitamin A supplement • Monthly home visits by trained volunteers/CHW from birth to 12 months	• 0-6 months: counsel on exclusive breastfeeding, frequency, position, attachment, manual expression, assessing and maintaining adequate milk supply • 6+ months: counsel on complementary feeding after 6 months: quantity, quality, dealing with 'poor appetite', feeding during/following illness • Provide pediatric iron supplements • Administer vitamin A supplement • Monthly weighing of infants < 12 m • Therapeutic feeding and recuperation of moderate/severe cases with follow up

Note: Key supporting strategies for mainstreaming nutrition in health/FP are:

A. National and local health and FP communication campaigns to include key messages on breastfeeding, complementary feeding, micronutrients and maternal nutrition.

B. Health information systems contain recommended indicators for essential nutrition interventions.

C. Logistics and supply systems strengthening initiatives include micronutrients and weighing scales for centers/facilities.

D. Training/supervision conducted with practical hands-on nutrition training for interventions integrated within MCH trainings on key services e.g. ANC/delivery/FP/EPI.

E. Coordination with other sectors includes adolescent nutrition and medical/nursing curricula (Education), hand washing before complementary feeding (WASH), food safety and crop diversity (food & agriculture), disaster management.

Annex 7.7. Estimated Budget of HPNSSP

Table 1A: Estimated costs (RPIP) and estimated expenditure by OPs during HNPSP (Crore Taka)

Sl. No.	Name of the Operational Plan(OP)	Estimated cost PIP(2003-2011)				Estimated Expenditure (2003-2011)			
		GOB	PA	Total	% of Total	GOB	PA	Total	% fund utilized
1	Essential service delivery	478.91	2373.54	2852.45	17.22	368.09	2038.88	2406.97	84.38
2	Communicable Disease Control	164.02	477.37	641.39	3.87	76.16	230.69	306.85	47.84
3	TB & Leprosy Control	33.81	540.60	574.41	3.47	18.40	468.20	486.60	84.71
4	Health education & promotion	45.53	59.96	105.49	0.64	43.82	53.34	97.16	92.1
5	Improved Hospital Services Management	449.08	787.22	1236.30	7.46	254.53	655.51	910.04	73.61
6	Alternative Medical care	53.14	7.50	60.64	0.37	49.80	7.06	56.86	93.77
7	Non-communicable Disease Control & Other Public Health	37.35	152.17	189.52	1.14	11.92	106.69	118.61	62.58
8	National AIDS/STD Program and Safe Blood Transfusion	14.56	552.67	567.23	3.42	12.40	418.61	431.01	75.99
9	In-service Training	85.56	195.04	280.60	1.69	68.80	149.15	217.95	77.67
10	Pre-service education	132.02	81.96	213.98	1.29	109.08	182.93	292.01	136.47
11	Management for Procurement, Logistics &	312.34	8.71	321.05	1.94	407.82	3.27	411.09	128.05
12	Research & Development (Health)	1.43	24.24	25.67	0.15	1.07	17.18	18.25	71.09
13	MIS-Health, Services & Personnel	18.72	60.75	79.47	0.48	16.72	50.06	66.78	84.03
14	Quality Assurance	1.11	6.63	7.74	0.05	0.97	5.25	6.22	80.36
15	Sector-wide Program	3.81	14.78	18.59	0.11	1.57	8.01	9.58	51.53
16	Human Resource Mgmt (Health)	2.32	4.12	6.44	0.04	1.81	3.39	5.20	80.75
17	Improved Financial Management (Health)	1.38	1.64	3.02	0.02	0.83	1.45	2.28	75.5
18	Micro-nutrient Supplementation	27.56	77.36	104.92	0.63	16.47	77.80	94.27	89.85
19	National Eye Care	9.46	10.92	20.38	0.12	8.22	7.53	15.75	77.28
20	Nursing Education & Services	32.98	62.15	95.13	0.57	26.68	46.45	73.13	76.87
21	Strengthening of Drug	6.19	4.22	10.41	0.06	1.13	1.69	2.82	27.09
22	Clinical Contraception Services Delivery	328.60	278.55	607.15	3.66	348.98	274.31	623.29	102.66
23	Family Planning Field Services Delivery	341.99	1650.03	1992.02	12.02	268.48	1431.20	1699.68	85.32
24	Maternal, Child &	153.23	537.71	690.94	4.17	104.59	382.89	487.48	70.55
25	Information, Education &	40.53	71.01	111.54	0.67	30.15	62.83	92.98	83.36
26	MIS- Services & Personnel	13.14	15.00	28.14	0.17	9.44	4.04	13.48	47.9
27	Procurement, Storage & Supplies Management	103.50	5.45	108.95	0.66	56.55	2.29	58.84	54.01
28	Sector-wide Mgmt-FP	1.22	2.45	3.67	0.02	1.91	3.78	5.69	155.04
29	Human Resource Mgmt - FP	2.50	22.98	25.48	0.15	2.34	17.79	20.13	79
30	Improved Financial Management - FP	1.93	1.48	3.41	0.02	1.90	1.03	2.93	85.92
31	Training, Research & Development (NIPORT)	14.80	106.65	121.45	0.73	6.76	81.66	88.42	72.8
32	National Nutrition Program	143.43	1107.08	1250.51	7.55	86.24	799.12	885.36	70.8

Sl. No.	Name of the Operational Plan(OP)	Estimated cost PIP(2003-2011)				Estimated Expenditure (2003-2011)			
		GOB	PA	Total	% of Total	GOB	PA	Total	% fund utilized
33	Physical Facilities Development (c,r & m)	3227.62	520.55	3748.17	22.62	2960.57	333.06	3293.63	87.87
34	Sector-wide Mgmt-MOHFW	1.67	29.47	31.14	0.19	0.83	10.45	11.28	36.22
35	Human Resource Management - MOHFW	1.84	8.29	10.13	0.06	1.55	2.99	4.54	44.82
36	Improved Financial Management - MOHFW	4.08	21.17	25.25	0.15	3.00	10.20	13.20	52.28
37	Health Economics Unit	4.83	20.30	25.13	0.15	4.11	18.24	22.35	88.94
38	Policy reforms	2.93	365.63	368.56	2.22	1.20	187.01	188.21	51.07
	Total	**6299.12**	**10267.35**	**16566.47**	**100.00**	**5384.89**	**8156.03**	**13540.92**	**81.73**

The percentage distribution of estimated cost of the current program shows that the allocation of physical facilities development was the highest (22.62%) followed by ESD (17.22%) and family planning field service delivery (12.02%). Along with the estimated cost, Table 1A also shows the estimated expenditure of the current sector program[22].

[22] The estimated expenditure (2003-11) includes the cumulative actual expenditure from 2003 to 2010 and the budget allocation for 2010-11. The fund utilization rate shows that there are over expenditure (i.e. utilization rate is more than 100%) in four OPs. The reason behind this is that the budget of the OPs has been revised and in the process of approval. Moreover, it is not also decided from which OP this additional fund will be transferred. So the analysis used the final HNPSP budget which is presented in RPIP.

Table 2A: Budget requests by 38 OPs (in Crore Taka)

	Name of the Operational Plan	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	Total requested budget
1	Essential service delivery	986.53	950.05	1054.75	1058.7		5130.83
2	Communicable Disease Control	415.75	412.77	251.23	346.7	271.06	1697.51
3	TB & Leprosy Control	8.98	9.43	9.91	10.4	10.92	49.64
4	Health education & promotion	106.26	111.26	111.26	111.26	111.26	551.3
5	Improved Hospital Services Management	505.86	550.95	597.31	655.25	655.33	2964.7
6	Alternative Medical care	44.7	46.75	48.8	50.85	52.9	244
7	Non-communicable Disease Control & Other Public Health Interventions	331.67	334.5	352.92	342.34	342.28	1703.71
8	National AIDS/STD Program and Safe Blood Transfusion	175.68	193.25	212.57	234.56	258.01	1074.07
9	In-service Training	122	122	122	122	122	610
10	Pre-service education	200	220	250	275	280	1225
11	Management for Procurement, Logistics & Supplies (CMSD)	120	125	130	140	145	660
12	Research & Development (Health)	6.55	7.15	6.55	6.55	6.55	33.35
13	MIS-Health, Services & Personnel	404.06	423.71	424.2	393.85	355.24	2001.06
14	Quality Assurance (Health)	1.66	1.78	1.89	2	2.22	9.55
15	Sector-wide Program 16Management (Health)	5.33	5.33	5.83	5.34	4.24	26.07
16	Human Resource Management (Health)	2.29	2.08	2.49	2.86	3.42	13.14
17	Improved Financial Management (Health)	0.52	0.52	0.54	0.54	0.54	2.66
18	Micro-nutrient Supplementation	30	32	35	45	50	192
19	National Eye Care	3.21	4	5	5.05	5.35	22.61
20	Nursing Education & Services	192.97	201.07	206.67	208.52	212.58	1021.81
21	Strengthening of Drug Administration management	16.05	10.51	9.83	9.38	16.79	62.56
22	Clinical Contraception Services Delivery	352.93	393.91	404.91	558.11	489.39	2199.25
23	Family Planning Field Services Delivery	384.19	419.73	465.96	513.28	556.69	2339.85
24	Maternal, Child & Reproductive Health Services Delivery (FP)	227.55	268.62	283.9	295.35	448.56	1523.98
25	Information, Education & Communication (FP)	47.21	47.22	47.22	47.23	48	236.88
26	MIS- Services & Personnel	7.49	10.84	2.24	7.49	3.69	31.75
27	Procurement, Storage & Supplies Management	28.48	29.55	31.54	32.78	35.61	157.96
28	Sector-wide Management-FP	4.64	3.62	3.6	3.64	3.57	19.07
29	Human Resource Management - FP	18.79	21.88	22.96	21.95	18.92	104.5
30	Improved Financial Management - FP	1.76	2.14	1.18	1.16	1.23	7.47
31	Training, Research & Development (NIPORT)	26.39	44.14	48.29	43.84	37.34	200
32	National Nutrition Program	575.54	760.33	978.57	1101.18	1064.1	4479.72
33	Physical Facilities Development (c,r & m)	1872	1872	1873	1873	1873	9363
34	Sector-wide Management-MOHFW	8.98	9.43	9.91	10.4	10.92	49.64
35	Human Resource Management - MOHFW	2.64	3.71	3.94	3.9	3.26	17.45
36	Improved Financial Management - MOHFW	7	7	7.5	8	8	37.5
37	Health Economics Unit	35.67	35.13	34.78	34.65	33.7	173.93
38	Policy reforms	180	185	190	195	200	950
	Grand Total	7461.33	7878.36	8248.25	8777.11	8822.47	41187.52

Table 3A: The high, middle and low scenario budget projections by GOB and DP contribution (assuming DP contribution of 65%).

Name of OPs	High Scenario			Middle scenario			Low scenario		
	GOB	PA	Total	GOB	PA	Total	GOB	PA	Total
Essential service delivery	1795.79	3335.04	5130.83	1919.31	3564.43	5483.74	1619.51	3007.67	4627.18
Communicable Disease Control	594.13	1103.38	1697.51	431.57	801.48	1233.05	206.46	383.43	589.89
TB & Leprosy Control	17.37	32.27	49.64	386.50	717.78	1104.28	327.40	608.04	935.44
Health education & promotion	192.96	358.35	551.3	70.98	131.82	202.8	65.37	121.41	186.78
Improved Hospital Services Management	1037.65	1927.06	2964.7	831.86	1544.89	2376.75	612.33	1137.19	1749.52
Alternative Medical care	85.40	158.60	244	40.80	75.78	116.58	38.26	71.06	109.32
Non-communicable Disease Control & Other Public Health Interventions	596.30	1107.41	1703.71	127.52	236.83	364.35	79.80	148.21	228.01
National AIDS/STD Program and Safe Blood Transfusion	375.92	698.15	1074.07	381.67	708.81	1090.48	290.03	538.63	828.66
In-service Training	213.50	396.50	610	188.80	350.64	539.44	146.65	272.34	418.99
Pre-service education	428.75	796.25	1225	143.98	267.39	411.37	196.49	364.91	561.4
Management for Procurement, Logistics & Supplies (CMSD)	231.00	429.00	660	216.02	401.19	617.21	276.62	513.72	790.34
Research & Development (Health)	11.67	21.68	33.35	17.27	32.08	49.35	12.28	22.80	35.08
MIS-Health, Services & Personnel	700.37	1300.69	2001.06	53.47	99.31	152.78	44.93	83.45	128.38
Quality Assurance	3.34	6.21	9.55	5.21	9.67	14.88	4.19	7.77	11.96
Sector-wide Program Management (Health)	9.12	16.95	26.07	12.51	23.23	35.74	6.45	11.97	18.42
Human Resource Management (Health)	4.60	8.54	13.14	4.33	8.05	12.38	3.50	6.50	10
Improved Financial Management (Health)	0.93	1.73	2.66	2.03	3.78	5.81	1.53	2.85	4.38
Micro-nutrient Supplementation	67.20	124.80	192	70.60	131.11	201.71	63.43	117.80	181.23
National Eye Care	7.91	14.70	22.61	13.71	25.47	39.18	10.60	19.68	30.28
Nursing Education & Services	357.63	664.18	1021.81	64.01	118.87	182.88	49.20	91.38	140.58
Strengthening of Drug Administration management	21.90	40.66	62.56	7.00	13.01	20.01	1.90	3.52	5.42
Clinical Contraception Services Delivery	769.74	1429.51	2199.25	408.53	758.70	1167.23	419.39	778.88	1198.27
Family Planning Field Services Delivery	818.95	1520.90	2339.85	1340.35	2489.22	3829.57	1143.59	2123.80	3267.39
Maternal, Child & Reproductive Health Services Delivery	533.39	990.59	1523.98	464.91	863.40	1328.31	327.99	609.13	937.12
Information, Education & Communication (FP)	82.91	153.97	236.88	75.05	139.38	214.43	62.56	116.19	178.75
MIS- Services & Personnel	11.11	20.64	31.75	18.94	35.17	54.1	9.07	16.84	25.91
Procurement, Storage & Supplies Management	55.29	102.67	157.96	73.31	136.14	209.45	39.60	73.53	113.13
Sector-wide Management-FP	6.67	12.40	19.07	2.47	4.59	7.06	3.83	7.11	10.94
Human Resource Management - FP	36.58	67.93	104.5	17.14	31.84	48.98	13.55	25.16	38.7

Improved Financial Management - FP	2.61	4.86	7.47	2.30	4.26	6.56	1.97	3.66	5.63
Training, Research & Development (NIPORT)	70.00	130.00	200	81.72	151.76	233.48	59.49	110.49	169.98
National Nutrition Program micro should added	1567.90	2911.82	4479.72	841.42	1562.64	2404.06	595.73	1106.35	1702.08
Physical Facilities Development (c,r & m)	3277.05	6085.95	9363	2522.00	4683.72	7205.72	2216.08	4115.58	6331.66
Sector-wide Management-MOHFW	17.37	32.27	49.64	20.95	38.92	59.87	7.59	14.09	21.68
Human Resource Management - MOHFW	6.11	11.34	17.45	6.81	12.66	19.47	3.06	5.67	8.73
Improved Financial Management - MOHFW	13.13	24.38	37.5	16.99	31.55	48.54	8.88	16.50	25.38
Health Economics Unit	60.88	113.05	173.93	16.91	31.40	48.31	15.04	27.93	42.97
Policy reforms	332.50	617.50	950	247.99	460.55	708.54	126.65	235.20	361.85
Grand Total	14415.63	26771.89	41187.52	11146.98	20701.53	31848.5	9110.42	16919.36	26029.78
Grand Total (US$ million)	2089.22	3879.98	5969.21	1615.50	3000.22	4615.72	1320.35	2452.08	3772.43

Table 4A: Comparison of old 38 OPs and new 31 OPs

Sl. No.		Name of New Operational Plan	Name of Old Operational Plan	Comments
1	DGHS	Essential Services Delivery	1. Essential service delivery	Previously one OP (MNCH includes DSF)
2	DGHS	Maternal, Neonatal and Child Health Care		
3	DGHS	Community Based Health Care		New OP
4	DGHS	TB And Leprosy Control	2. TB & Leprosy Control	
5	DGHS	National AIDS and STD Program	3. National AIDS/STD Program	The new OP excludes safe blood transfusions
6	DGHS	Communicable Diseases Control	4. Communicable Disease Control	
7	DGHS	Non-Communicable Diseases Control	5. Non-communicable Disease Control & Other Public Health Interventions	
8	DGHS	Surveillance of Epidemics and Emerging and Re-Emerging Diseases		New OP
9	DGHS	National Eye Care	6. National Eye Care	
10	DGHS	Hospital Services Management and Safe Blood Transfusion	7. Improved Hospital Services Management	The new OP includes safe blood transfusions
11	DGHS	Alternative Medical Care	8. Alternative Medical care	
12	DGHS	In-Service Training and Human Resources Management	9. Human Resource Management (Health) 10. Quality Assurance (Health) 11. In-service Training	Three merged in to one
13	DGHS	Pre-Service Training	12. Pre-service education	
14	DGHS	Planning, Monitoring and Research	13. Research & Development (Health)	
15	DGHS	Management Information Systems and E-Health	14. MIS-Health, Services & Personnel	E-health is included in new OP
16	DGHS	Behavior Change Communication	15. Health education & promotion	
		Procurement, Storage and Supply Management	40 % of the estimated budget will shifted to IHMS, 40 % to ESD, 15 % CDC and 5% to eye care.	
17	DGFP	Maternal, Reproductive and Adolescent Health	17. Maternal, Child & Reproductive Health Services Delivery (FP)	
18	DGFP	Clinical Contraception Services Delivery (Rural and Urban)	18. Clinical Contraception Services Delivery	
19	DGFP	Family Planning Field Services Delivery (Rural and Urban)	19. Family Planning Field Services Delivery	
20	DGFP	Planning and Monitoring of Family Planning	20. Sector-wide Management-FP	
21	DGFP	Human Resources Management And Management Information Systems	21. Human Resource Management - FP 22. MIS- Services & Personnel - FP	Two merged in to one
22	DGFP	Information, Education and Communication	23. Information, Education & Communication (FP)	
23	DGFP	Procurement, Storage and Supply Management	24. Procurement, Storage & Supplies Management	
24	Other agency	Training, Research and Development for Population Service (NIPORT)	25. Training, Research & Development (NIPORT)	

25	Other agency	Nursing Education and Services	26. Nursing Education & Services	
26	Other agency	Strengthening of Drug Administration and Management	27. Strengthening of Drug Administration management	
27	MOHFW	Physical Facilities Development	28. Physical Facilities Development (c,r & m)	
28	MOHFW	Governance, Stewardship, Human Resources and Financial Management	29. Improved Financial Management (Health) 30. Improved Financial Management - FP 31. Improved Financial Management - MOHFW 32. Human Resource Management - MOHFW 33. Policy reforms	Five merged in to one (Policy reforms excludes DSF)
29	MOHFW	Sector-Wide Program Management and Monitoring & Evaluation	34. Sector-wide Program Management (Health) 35. Sector-wide Management-MOHFW	Two merged in to one
30	MOHFW	Health Economics and Financing	36. Health Economics Unit	
31	MOHFW	National Nutrition Services (NNS)	37. Micro-nutrient Supplementation 38. National Nutrition Program	Two merged in to one