

Public Expenditure Review (PER) 2003-04

Health Nutrition and Population Sector Program

(Ref. No.: MoHFW/PRU/Health – Econ/PER/2001-02/295/299 of 23 November 2005)

Submitted to:

Joint Chief & Line Director
Health Economics Unit
Ministry of Health and Family Welfare
14/2, Topkhana Road
Dhaka, Bangladesh

Submitted by:



Research, Training and Management International
(formerly JSI Bangladesh)

and

Associates for Development Services Ltd. (ADSL)

in collaboration with

Center for Development Studies (CDS)

June 2006

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A. K. M. Ghulam Rabbani, Ph.D
M Nazmul Huq
Abu Hena Reza Hasan
Sheik Mohammed Abdul Amin
Habibur Rahman
Jamil H Chowdhury

Submitted to:

Joint Chief & Line Director
Health Economics Unit
Ministry of Health and Family Welfare
14/2, Topkhana Road
Dhaka, Bangladesh

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Preface

The Health Economics Unit (HEU) is the focal point of the Ministry of Health and Family Welfare (MoHFW) to conduct policy oriented, evidence based and expenditure tracking studies to help and review policy formulation.

The HEU undertook the task of conducting Public Expenditure Reviews (PERs) from the beginning of Health and Population Sector Program (HPSP). The PER for the period 2003-04 is the sixth of the series of PER so far conducted by the HEU. It analyzes the MoHFW expenditure during the first year of the Health, Nutrition and Population Sector Program (HNPS). (HNPS).

The prime objective of the PER is tracking the MoHFW expenditures for the year 2003-04 with special focus on equity and efficiency of MoHFW. Akin to the National Health Accounts 1999-2001, under the present PER, the MoHFW expenditures are classified by provider, source and function of health care. It also examines the existing resource allocation technique of MoHFW across administrative districts and assesses whether these are equitable based on health as well as poverty needs. PER 2003-04 also attempts to project the resource envelope available to GoB that would be useful for the successful implementation of the HNPS.

The task of accomplishing the analysis and preparing the report of this Public Expenditure Review 2003-04, was assigned to JSI, Bangladesh, currently known as Research, Training and Management (RTM) International, a leading organization in health and population field.

I must congratulate the team of consultants for their excellent work. Dr. A K M Ghulam Rabbani, Team Leader, and his associates Mr. Habibur Rahman, an ex Secretary to the Government of Bangladesh, Mr. Nazmul Haque, Assistant Professor, Department of Statistics, University of Jahangirnagar, Savar, Dhaka and Mr. Abu Hena Reza Hassan, Associate Professor, IBA, University of Dhaka worked hard and provided good excellent technical support to finalize the PER.

My special thanks are due to my colleagues in the Health Economics Unit who provided invaluable support and cooperation.

It is my pleasure to note my appreciation to those who contributed at different stages and in different capacities which enabled finalization of this work. A special word of thanks and gratitude are due to Mr. Rafael Cortez and Dr Dinesh Nair of World Bank, and Dr. Guenter Dietz of GTZ for their great concern and cooperation down from the beginning of the process to the completion of this PER.

It is my belief that this report as well as the databases collated will be valuable to the policy- and decision makers, researchers and academicians towards a better understanding of the trends in MoHFW resource allocation and expenditures. This will also help the policy makers in deriving need based resource allocation from which the poor will be more benefited.

Any further comment on this document will be highly appreciated.



Md. Jahangir
Joint Chief & Line Director
Health Economics Unit
Ministry of Health and Family Welfare

Acknowledgement

We would like to thank Mr. Md. Jahangir, Joint Chief & Line Director, Health Economics Unit (HEU), Ministry of Health and Family Welfare (MoHFW) for putting trust on us and for giving us the opportunity to accomplish such an important assignment of the MoHFW. We are thankful to all other officials of HEU, specially to Mr. Abdul Hamid Moral, for extending necessary cooperation and facilitation in the process of conducting the assignment and also for providing requisite secondary information from different published sources including report of last NHA and previous PERs.

We are grateful to all concerned members of the Central Data Processing Unit (CDPU) of the Controller General of Accounts, Ministry of Finance, Government of the People's Republic of Bangladesh for providing enormous support with relevant data. We also owe our gratitude to all concerned members of the Financial Management and Audit Unit (FMAU) of the MoHFW for providing necessary support to the consultants and important inputs.

We highly appreciate the efforts and hard work of all the members of the review team. We are particularly thankful to Mr. Habibur Rahman, former Secretary to the Government of Bangladesh, who strengthened the study team with his professional insights and guided the course of the study. We are also thankful to Mr. Jamil H Chowdury, Director, Research and Evaluation RTM International, who provided professional support and maintained excellent coordination with the HEU and the consultants. Last of all we thank Mr. Syed Anawrul Islam, Deputy Chief Executive, RTM International for his time in editing and reviewing the report.

Ahmed Al-Kabir, Ph.D
Chief Executive
Research Training and Management International

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Acronyms

ADP	Annual Development Program
BBS	Bangladesh Bureau of Statistics
BCC	Behaviour Change Communication
BIA	Benefit Incidence Analysis
BNP	Bangladesh Integrated Nutrition Program
CC	Community Clinic
CDPU	Central Data Processing Unit
CDS	Centre for Development Studies
CGA	Controller General of Accounts
CH	Child Health
CI	Concentration Index
DH	District Hospital
DMCH	Dhaka Medical College Hospital
DP	Development Partners
ERTI	Education, Research and Training Institutes
ESD	Essential Service Delivery
ESP	Essential Services Package
FMAU	Financial Management and Audit Unit
FP	Family Planning
FWA	Family Welfare Assistant
GDP	Gross Domestic Product
GoB	Government of Bangladesh
HA	Health Assistant
HDS	Health and Demographic Survey
HEU	Health Economics Unit
HIES	Household Income Expenditure Survey
HNPS	Health, Nutrition and Population Sector Program
HPSP	Health and Population Sector Program
ICHA	International Classification for Health Accounts
IMED	Implementation, Monitoring and Evaluation Division
JSI	John Snow Inc., Bangladesh
LCC	Limited Curative Care
MCH	Medical College Hospital
MDG	Millennium Development Goals
MoF	Ministry of Finance
MoHFW	Ministry of Health and Family Welfare
NGO	Non-Governmental Organization
NHA	National Health Accounts
OOP	Out of Pocket Payments
PA	Program Aid
PC	Planning Commission
PER	Public Expenditure Review

PIP	Program Implementation Plan
PRSP	Poverty Reduction Strategy Paper
RH	Reproductive Health
RHC	Rural Health Center
SH	Specialized Hospital
TFR	Total Fertility Rate
THE	Total Health Expenditure
ToR	Terms of Reference
UD	Urban Dispensaries
UHC	Upazila (Thana) Health Complexes
UHFWC	Union Health and Family Welfare Centers
UMH	University Medical Hospital
USC	Union Sub-centers

Executive Summary

Background and Objectives

Public Expenditure Review (PER) covering the period from July 2003 to June 2004 is the first expenditure analysis of the Health, Nutrition and Population Sector Program (HNPSPP) of the government by function, by provider and by source of funding. PER for the year 2003-2004 has been conducted with the aim of addressing overall issues raised in the previous PERs as well as tracking the MoHFW expenditures under the guideline of HNPSPP. The theme of PER 2003-04 is to analyze the MoHFW expenditure with especial focus on equity.

Data Sources

The major data sources for the analysis of MoHFW expenditure comprise (a) Central Data Processing Unit (CDPU) of Controller General of Accounts (CGA), Ministry of Finance, (b) Annual Budgets for relevant years, Government of the People's Republic of Bangladesh, and (c) other requisite secondary information from different published sources including NHA 1999-2001 and previous PERs provided by HEU.

Expenditure Tracking

In the financial year 2003-04, MoHFW spent Taka 27,861 million for HNPSPP, which is only 0.83 percent of the GDP. Overall, MoHFW's expenditure has shown an increasing trend during 1995-96 to 2003-04 both in nominal as well as real terms and has almost doubled during the period in nominal terms with an exponential growth of 8.1 percent per annum. In contrast, in real terms, the increase was 48 percent with an annual growth of 4.8 percent (Figure 1 and Annex Table B1).

While comparing MoHFW's expenditure with the overall GoB expenditure it is revealed that in 2003-04 MoHFW spent only 5.6 percent of the overall GoB spending. In comparison, MoHFW's share of total GoB spending was 7.2 percent in the year 1995-96 representing approximately 3 percent fall per annum (Figure 2). The declined share of MoHFW in overall GoB spending indicates the fact that less priority has been given to the health sector when the health needs of the country are pressing.

The Development Partners' (DPs) share to MoHFW expenditure shows a steady increase between 1995-06 and 1999-2000, suddenly experiencing a dramatic decline since 2002-03 and 2003-2004 (Figure 4). Much of this decline is due to lack of preparedness of the MoHFW to spend the allocated development fund. On the other hand, the GoB's share to the total MoHFW expenditure has doubled with an annual growth of 9.1 percent (Annex B) during 2001-2002 to 2003-04.

Expenditure by Geographical Locations

The divisional distribution of MoHFW expenditures suggests that almost one-third is spent in Dhaka division followed by Rajshahi (22 percent), Chittagong (18 percent), Khulna (11 percent), Barisal and Sylhet both 8 percent (Table 4). Although Sylhet and Barisal divisions received lesser share of total MoHFW resources but in per capita terms, Sylhet received the highest public health care resources (Taka 236 per capita). Moreover, a typical Bangladeshi received Taka 205 from the public resources assigned to the health sector. Although the rural areas receive almost two-third of the total resources but, in per capita terms, they receive significantly less resources as compared to their urban counterparts (Table 5).

Expenditure by Source, Provider and Function

The Upazila and below level facilities received approximately half of the MoHFW resources most of which served at the grass-root level. The second but distant providers are Medical College Hospitals (MCH)-10 percent, District Hospitals-7 percent followed by Specialized Hospitals (SH)-4 percent, Education, Research and Training Institutes (ERTI)-3 percent, University Medical Hospital (UMH)-1 percent and other facilities-2 percent. Nevertheless, the health administration received almost one-fifth of the total MoHFW resources.

The analysis of MoHFW expenditures by functions indicates that services of curative care accounts for one-third of the total expenditure, followed by health administration- 22 percent, capital formation-20 percent and maternal & child health; FP and counselling-17 percent. It is noteworthy to mention that the curative cares are mainly funded from the revenue sources. In contrast, the lion's share of the capital expenditure comes from the development sources.

The economic classification of MoHFW expenditures by sources points out that the pay and allowances accounted for more than one-third of the total expenditures in 2003-04 followed by supplies and service -27 percent, capital formation-20 percent, grants in aid-10 percent and the rest-7 percent (Table 7). Development expenditures are the major source of supplies and services, grants in aid and capital formation.

Expenditure on ESD

MoHFW spent Taka 14,870 million for ESD in 2003-04, which is approximately 53 percent of its total expenditure (exclusive of secretariat overhead) (Annex Table B3). The largest component of ESD, in terms of spending, is the Family Planning (FP) constituting approximately half of the ESD expenditure (Figure 6). Moreover, child health (CH) is one of the other important components accounting for 25 percent of total ESD expenditures followed by reproductive health (Non-FP) - 16 percent, Limited Curative Care (LCC) - 8 percent, support service and coordination - 2 percent and Behaviour Change Communication (BCC) - 1 percent.

Resource Allocation: Need Vs. Actual

The distribution of per capita resource allocation across districts reveals that the current allocation system is neither based on health needs nor on poverty status of the districts (Table 8). For instance, Kishoreganj, a very poor district, receives Taka 83 per capita, which deserves Taka 236 per capita when needs are considered. In contrast, a non-poor district Sylhet currently receives Taka 182 per capita, where the need is Taka 29 per capita only. Resource allocation according to the poverty status reflects that on an average a very poor district receives Taka 102 per capita only where its actual need is Taka 159 per capita (Figure 8). On the other hand, a non-poor district, on an average, receives more resources (Taka 103 per capita) as compared to its actual need estimated at Taka 70 per capita.

Equity in Health care Finance and Delivery

In per capita terms, on an average, a Bangladeshi spends Taka 398 annually. The per capita distribution of OOP payments for healthcare by gender reveals equal sharing of healthcare payments among the male and female population (Table 9). A significant variation of health care payments has been observed when disaggregated by broad age groups. For the boys aged under 14 years, per capita healthcare expenditures seem to be higher as compared to their girl counterparts. In contrast, in reproductive age group the per capita expenditure is

significantly higher for female as compared to the male of the same age group indicating the existence of gender disparity in the healthcare system of Bangladesh.

Who Benefits from Public Spending?

The poor are particularly disadvantaged, receiving less public resources devoted to health as compared to the rich people of the country (Table 11). The poorest 20 percent of the population receive only 19.1 percent of the total public healthcare subsidy and the richest 20 percent receive approximately one third of the total subsidy. The primary healthcare facilities seem to be more pro-poor as compared to the tertiary level facilities. Moreover, the analysis of Concentration as well as Kakwani indices reveals that all the public facilities seem to be proportional and hence benefiting the poor to some extent where the primary facilities are relatively more pro-poor.

Efficiency of MoHFW

The total allocation in the revised Development Budget for 2003-04 was Taka 18,476 million, whereas the actual expenditure was Taka 13,383 million and the achievement was 72.4 percent. In the Non-Development Budget the revised allocation was Taka 14,967 million while the actual expenditure was Taka 14,478 million, the achievement being 96.7 percent. Expenditures in many cases have exceeded the budget provision. For example, the revised allocation for the project "Strengthening BCC Unit to Support Advocacy Activity" was Taka 23 million whereas the actual expenditure was Taka 37 million. In the cases of some projects such as "Upgradation of 50 Bedded Burn Unit to 100 Bed", "Establishment of 5 Nursing Institute", UN Joint Initiative on Safe motherhood" no expenditure has been incurred. Moreover, the allocation to the health sector as share of GDP also shows a decreasing trend indicating inefficiency of the performance of the health sector (Figure 11).

Future Resource Envelope Available to GoB

The successful implementation of Health, Nutrition and Population Sector Program (HNPSPP) depends on the availability of adequate resources during the entire planning period. The projection of resources available to GoB has shown a gradual increase during 2004-05 to 2009-2010. The revised PIP of HNPSPP of November 2005 has estimated total financing need of this program as Taka 324,503 million of which DPs would provide 33.3 percent of expenditures. With committed PA and assuming the existing trend of government allocations of resources for MoHFW, the most likely scenario is that the total availability of resources may be about 98 percent of actual requirements for HNPSPP by the end of program period in 2009-2010. Total amount of resource shortage may be around Taka 5,326 million.

However, the planning document of HNPSPP has identified GoB expenditure and DP assistances as major sources of funding. It is as such necessary to think about some other alternative sources for funding HNP sector programs. Some of these sources may be user fees, social insurance and community insurance. These however need more critical examination before implementation.

Recommendations

The specific recommendations of the Public Expenditure Review (PER) 2003-04 are as follows:

- The current practice of capacity based resource allocation should be revised to adopt pro-poor allocation so that poor receive more resources to maximize equity. The allocation

should be made in such a way that the poorer districts receive more while allocation to non-poor districts remain unchanged. MoHFW should develop a guideline that would be strictly used for resource allocation of HNP sector. Moreover, GoB should try to enhance the NHP sector resources to improve its overall performance.

- Successful implementation of HNPSPP may become difficult for expected shortage of resources. Hence, the primary focus of the concerned authority should be to ensure adequate resource for the program. Their proactive role is expected in obtaining necessary GoB budget allocations and DPs' contributions. Other than GoB and DP's contribution, social insurance and community insurance schemes have potential to become alternative sources of financing. However, these insurance schemes are still in very immature stage in Bangladesh. Concerned authority should move fast to formulate policies and implementation framework for these schemes in the country.
- It is imperative to introduce an efficient targeting mechanism so that poor can get more benefits from the limited public resources owed to the health sector. Moreover, proper monitoring as well as supervision of the service providers should be ensured. The providers should also be provided with adequate training for delivering quality of care.
- Expenditure to be incurred in accordance with the rules, regulation and instructions issued from the Ministry of Finance. In order to make the efficient and transparent use of budget allocation, the MoHFW should prepare the budget estimates in accordance with the priority and strategy to fulfil the objectives and targets keeping in view of the scarcity of resources. Necessary steps need to be taken from the 1st of July to start execution of budget grants to achieve the target. Moreover, no expenditure shall be incurred for the item for which no budget provision exists and a competent authority must sanction the expenditure. In financial management, arrangement of proper training to the relevant officials should also be made.
- In order to increase the transparency, efficiency and information availability of MoHFW, it is imperative to improve and update the entire database system. It is also crucial to conduct nationally representative household surveys, particularly the health and demographic survey periodically at regular time intervals. Moreover, it is recommended to ensure greater accessibility to the database for researchers and policy makers for better policy prescriptions.
- There should be a central policy for inter-ministerial cooperation to access the requisite data. To this end, a *National Databank* should be developed. The HEU of MoHFW should take lead in setting up such a databank where all the relevant documents and the databases, which are crucial for deriving national policies, will be gathered.

Finally, PER should be institutionalized within the MoHFW. However, this would be challenging for MoHFW. Nevertheless, the departments and relevant bodies of MoHFW should be encouraged to disaggregate various expenditures rather than lumping up into broad categories. A disaggregated breakdown of sources of funding, functions, providers are also desirable for the accountability and transparency of the system. The MoHFW should strengthen FMAU and HEU to preserve such requisite information with suggested disaggregation for consecutive years.

Section I: Introduction

1.1 Background

Public Expenditure Review (PER) is the expenditure analysis of the government by function, by provider and by source of funding relating to a specified period, usually covering one financial year from July to June. It provides the government, stakeholders, and different development partners information regarding the efficiency and transparency of the planned government expenditure in terms of appropriateness, timeliness, and relevance of resource allocation to different functionaries. From the moral point of view PER tells about the transparency of the money and the productivity viewpoint that gives the government recognition of efficiency.

In the past years, Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MoHFW) undertook the task of conducting PERs from the beginning of Health and Population Sector Program (HPSP). So far five PERs have been done. The last PER was done in 2002 during HPSP. HPSP period ended in 2003 and Health Nutrition and Population Sector Program (HNPSPP) was initiated in July 2003.

1.2 Overview of Health Situation and Public Health care Provisions in Bangladesh

Since independence, the Government of Bangladesh has invested substantially in the institutionalization and strengthening of health and family planning (FP) services, with special attention to rural areas. Over the last three decades Bangladesh has achieved a significant improvement in the health sector. Life expectancy at birth has increased from 49 in 1980 to 62.8 in 2003 (UNDP, 2005). Total fertility rate (TFR) has decreased from 6.3 in 1975 to 3.0 in 2004. Moreover, contraceptive prevalence rate has increased significantly in Bangladesh from 7.7 percent in 1975 to 58.1 percent in 2004, with an average of 2 percent increase per year (NIPORT, 2005). Despite these improvements, much still remains to be done. Mortality rates, especially infant and maternal mortality, continue to be unacceptably high. The quality of life of the general population is still very low. Low calorie intake continues to result in malnutrition, particularly in women and children. Communicable and poverty-related diseases still dominate the top ten causes of morbidity (WHO, 2004). Considering the existing situation, the government's endeavor is to provide quality health care services responsive to the needs of the people, especially those of children, women, elderly and the poor through implementing an integrated Health, Nutrition and Population Sector Program (HNPSPP).

However, the health care system in Bangladesh is pluralistic with extensive public health care programs and services, non-governmental organization's (NGO's) health services, and a growing private sector (MoHFW, 2003). The Ministry of Health and Family Welfare (MoHFW) is the largest provider of health care services in the country. It operates a nationwide system of facilities and health care programs under three levels - primary, secondary and tertiary level facilities (DGHS, 2001). Table 1 provides the provision of Government health care facilities in Bangladesh.

Table 1: Public Health care Facilities in Bangladesh

Level of care	Health facility	Number
Tertiary	Specialized Hospital	30
	Medical College Hospital	13
Secondary	District Hospital	59
Primary	Upazila (Thana) Health Complexes	397
	Rural Health Center	16
	Urban Dispensaries	35
	Union Sub-centers	1,362
	Community Clinic	3,375

Source: DGHS, 2001, Health and Population Statistical Report 1999-2000.

Recently, Government has planned to send graduate doctors in all Union Health and Family Welfare Centers (UHFWC) by phases. Moreover, in every month “satellite clinics” and “EPI Sessions” are organized at ward and community levels all over the country to aim at bringing the service facility at the door step of the people to deliver antenatal care, Family Planning (FP) services, health education and EPI services. Besides, about 23 thousand Family Welfare Assistants (FWA) and 15 thousand Health Assistants (HA) are working at the grass root level for providing basic health and FP services. In addition, Bangladesh railway, Police, BDR and Armed Forces also maintain hospitals especially for the treatment of their own employees.

1.3 Existing Method of Allocation of MoHFW Resources

In Bangladesh, Government budget allocation on health is centrally determined. Resources are allocated primarily according to capacity of public healthcare facilities and historically determined normatives rather than based on health needs. Moreover, resources allocation is subject to specific line items (such as food, medicines, medical supplies) and variation between line items is apparently not possible.

However, the procedure for allocating budgetary resources to a large number of diverse types of facilities is not well documented. No written documentation is attempted by MoHFW or at the levels of Director General (DG) Health and DG Family Welfare, the focal points of such allocations. Ensor (HEU, 2001) appears to be the only source that provides a comprehensive and fairly up-to-date description of the MoHFW resource allocation procedure. According to Ensor, the MoHFW recurrent expenditures (termed as revenue expenditures) are funded through the revenue budget of the GoB and are divided into the following categories:

- (a) Salary and allowances;
- (b) Contingencies (or operational expenses);
- (c) Medical and Surgical Requisites (MSR) (funded by revenue budget) and Medical and Surgical Supplies (MSS) (funded by development budget);
- (d) Repairs and maintenance; and
- (e) Transfers (grants in aid) to Non Profit Institutions (NPI), including NGOs, and contributions to the United Nations (UN) bodies.

Table 2 illustrates the resource allocation under line items in public health facilities. The table demonstrates little leeway for discretionary adjustments to the line items within the facilities and between them.

Table 2: Allocation of Funding to Public Facilities

Line items	Allocation basis	District	Upazila	Union	Financial and management authority
Food	Per bed-day	Taka 30 per bed-day	Taka 30 per bed-day	Not applicable	Civil Surgeon supervises local tender
Medical and Surgical Requisites	<ul style="list-style-type: none"> Per bed/per facility Top-down decision from DG 	Taka 22,000	Taka 15,000	Taka 75,000	Civil Surgeon supervises local tender
Staff	Staff in post up to the maximum allotment per facility	11 doctors 27 nurses 30 other staff	9 doctors 10 nurses 23 other staff	4 other staff	Director General (DG)
Maintenance, fuel etc. (Taka 1000)	<ul style="list-style-type: none"> Based on historic spending Vehicle capacity Utilization pattern Political importance 	Taka 40,000	Taka 25,000	Not applicable	Civil Surgeon supervises use of budget
Capital Equipment, construction, renovation)	Submissions	Less than contingency fund amount, i.e., about Taka 2,000	Less than contingency fund amount, i.e., about Taka 2,000		Civil Surgeon when met from the contingency fund DG/CMMU/PWD

Source: Health Economics Unit, 2001, Research Paper No. 21

Government allocations in district hospitals and Upazila Health Complexes are dictated by inpatient facilities (number of beds) and staffing, as evidenced in Table 3. Consequently, this leads to wide differences in districts' per capita allocations in both the revenue and development (government) budget.

Moreover, Medical and Surgical Requisites (MSR) are classified into eight subgroups to allocate among primary (Upazila Health Complex), secondary (District Hospital) and tertiary (Medical College Hospital) facilities. The percentage distribution of total MSR allocation is demonstrated in Table 3.

Table 3: Allocation of MSR by Subgroups and Among Facilities

Subgroups of MSR	Upazila Health Complex	District Hospital	Medical College
Group A: drugs	51-75%	51-70%	51-60%
Group B: equipment	10-20%	12-20%	15-20%
Group C: bandage	5-8%	5-8%	6-8%
Group D: linen	4-8%	4-8%	6-8%
Group E: oxygen	1-5%	3-5%	5%
Group F: reagents	2-5%	3-5%	5%
Group G: furniture	2%	2%	2%
Group H: supplies	1%	1%	1%
Total of all sub groups	100%	100%	100%

Source: Health Economics Unit, 2001, Research Paper No. 21, page 39

1.4 MoHFW's Mission and Core Activities

The Health, Nutrition and Population Sector Program (HNPS) 2003-10 provides the vision and agenda for MoHFW. According to the framework, the vision of the Ministry is to create an enabling environment for the provision of sustainable quality health care that is acceptable, affordable and accessible to all the citizens especially to the poor. To this end, for encouraging the poor to use the public health care facilities, user fees have been abolished at the Upazila Health Complex (UHC) and below level facilities and poor are exempted from payment while seeking services at these facilities. At district and tertiary level facilities, a system of discretionary exemption exists (MoHFW, 2003). These adjustments are viewed to be pro-poor, and in conformity with the overall national policy goals of the Poverty Reduction Strategy Paper (PRSP). Moreover, for the Government of Bangladesh (GoB), meeting health-related Millennium Development Goals (MDGs) is another area of priority (MoHFW, 2004). In order to meet the MDGs and to contribute to poverty reduction through human capital development, the MoHFW is committed to:

- Monitor the performance of HNPS and introduce an efficient way of delivering HNP services
- Recognize the diversified nature of service provision and patterns of utilization by the people and develop stronger strategic partnership with private and non-government providers to deliver health care services where appropriate
- Create closer and fully operational linkages with other sector programs and activities. The priority sectors are: environment, water and sanitation, social welfare and social protection, education, women's rights and sustainable livelihoods
- Ensure participation and representation of the poor in local-level planning and stakeholder consultations
- Develop effective organisational mechanisms to mainstream gender equity and poverty reduction, ensure accountability and be responsive to citizens' voice and
- Monitor and address the prevailing trends in health inequalities through benefit incidence and related target setting.

1.5 Objectives

According to the Terms of Reference (ToR), the theme of the PER 2003-04 is to analyze the MoHFW expenditure with especial focus on the equity and gender. However, the specific objectives of the PER are to:

- a. Track MoHFW expenditures according to sources of funding as well as function and providers of health care services. It also considers geographical categories by division and urban-rural locations.
- b. Examine the current resource allocation system and link the existing system with poverty and health needs by geographic locations.
- c. Analysis of MoHFW expenditures with special emphasis on equity analysis of expenditure, efficiency of health sector and gender analysis.
- d. Evaluate the planning and management efficiency in terms of implementing the projects undertaken within a specified period and meeting audit objections by MoHFW.
- e. Examine the future resource envelope available to the GoB, in general, and to the health and population sectors, in particular.

1.6 Study Team

The core team of consultants of PER 2003-04 consists of (a) Mohammed Nazmul Huq, Assistant Professor, Department of Statistics, Jahangirnagar University, (b) Abu Hena Reza Hasan, Associate Professor, Department of Management Studies, University of Dhaka, and (c) Sheik Mohammed Abdul Amin, Program Officer, RTM International (formerly JSI Bangladesh). Dr. A K M Ghulam Rabbani, a leading statistician and financial analyst of the country, guided the team with his immense expertise.

In addition to the consultants in the core team, organizational, logistics and other necessary supports to the consultants were provided by the partner organizations. Mr. Habibur Rahman, an ex-Secretary to the Government of Bangladesh, who has long experience of working in the Ministry of Finance (MoF) and who was recently a member of the Public Expenditure Review Commission, provided necessary assistance to the team on behalf of Centre for Development Studies (CDS), one of the partner organizations. On behalf of RTM International, Mr. Jamil H Chowdhury, Director, Research and Evaluation, constantly coordinated with the HEU and the consultants and monitored the progress of the task.

1.7 Organization of the Report

This report is arranged into seven sections. Section I describes the background and objectives of PER 2003-04. It also provides an overview of existing health situation and provision in Bangladesh with the existing resource allocation technique as well as core mission and activities of MoHFW. Following the brief introduction, Section II provides an analysis of MoHFW expenditures during 1995-96 to 2003-04 with an in-depth analysis for 2003-04 for which the PER is being conducted. It also discusses the analysis of MoHFW expenditures by geographical regions as well as components of ESD. Section III puts forward an attempt to analyze the existing resource allocation of MoHFW and assess whether the existing allocation is based on poverty and the health needs by districts. The key findings of equity in health care finance and delivery are presented in section IV. The efficiency of MoHFW is also assessed and presented in Section V. Besides, Section VI projects the future resources available to the GoB. Finally, Section VII summarizes the main findings and comments having policy implications.

Section II: Expenditure Tracking of MoHFW

2.1 MoHFW Expenditure – The Framework

The MoHFW operates as a financial intermediary of the Government of Bangladesh (GoB) obtaining funds from the Ministry of Finance (MoF) and disburses them to its healthcare providing units. It also provides regular annual transfers or grants-in-aids to health and family planning welfare NGOs. As in other government ministries in Bangladesh, MoHFW expenditures are funded from and classified under two GoB budget categories:

- (i) Revenue Budget and
- (ii) Development Budget or the Annual Development Program (ADP)

The Revenue Budget is financed by the GoB by its tax and non-tax revenues including borrowing from the domestic market and self-financing by GoB owned autonomous corporations. The ADP is primarily financed by the GoB revenue surpluses. ADP also relies on development partner assistance in the form of development grants and loans.

In order to highlight the key roles played by the MoHFW in policy and management, an extensive analysis of MoHFW expenditure has been performed. The MoHFW expenditure has been classified according to the following categories:

- Sources of funding of healthcare expenditures – where does the money come from?
- Providers of healthcare services and goods – where does the money go?
- Functions of healthcare – what types of goods and services are purchased?

Data Sources

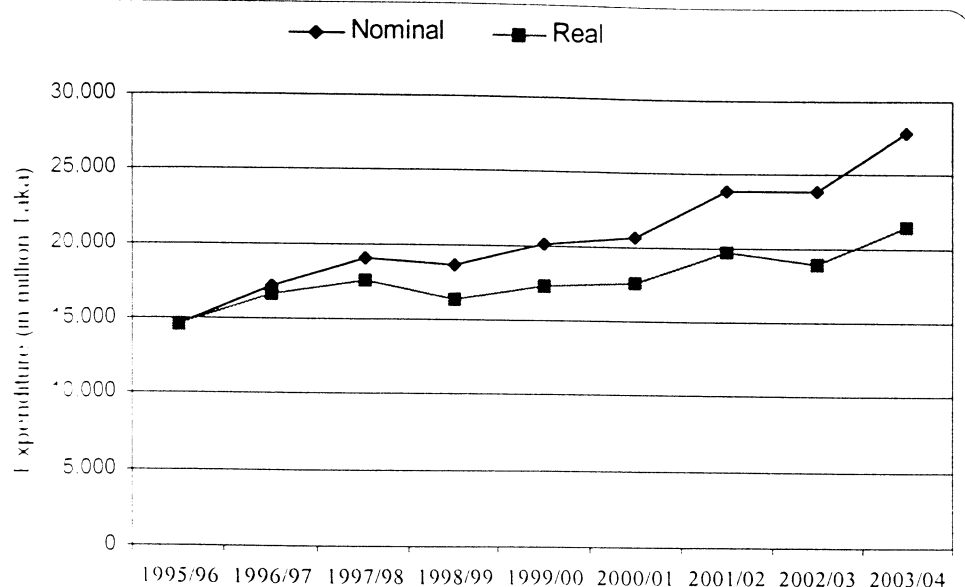
The major data sources for the analysis of MoHFW expenditure comprises (a) Central Data Processing Unit (CDPU) of Controller General of Accounts (CGA), Ministry of Finance, (b) Annual Budgets for relevant years, Government of the People's Republic of Bangladesh, and (c) other requisite secondary information from different published sources including NHA 1999-2001 and previous PERs provided by HEU.

Results

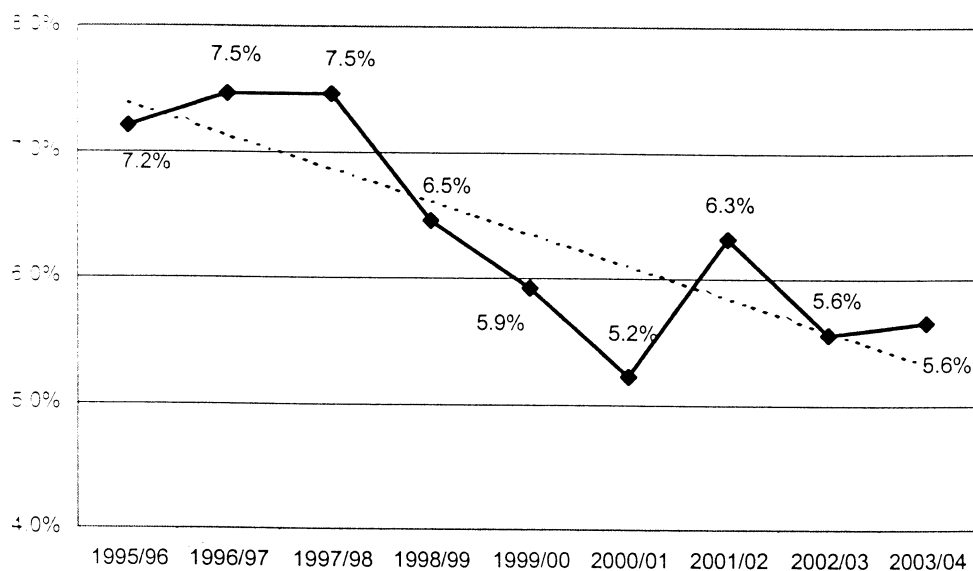
The Health, Nutrition and Population Sector Program (HNPSP) has completed its first year in the financial year 2003-04. This task has made an extensive analysis of the resource allocation for the HNPSP activities for the year 2003-04 as well as looks back to compare the performance of MoHFW in terms of resource allocation.

2.1.1 Trend of Overall Spending

In financial year 2003-04, MoHFW spent Taka 27,861 million for HNPSP, which is only 1.83 percent of the GDP. Overall, MoHFW's expenditure has shown an increasing trend during 1995-96 to 2003-04 both in nominal as well as real terms. In nominal terms MoHFW's expenditure has almost doubled during the period with an exponential growth of 8.1 percent per annum. In contrast, the MoHFW's expenditure, in real terms, has increased by 48 percent with an annual growth of 4.8 percent, which is less sharp than the trend in nominal terms (Figure 1 and Annex Table B1).

Figure 1: Overall Spending of MoHFW during 1995-96 to 2003-04

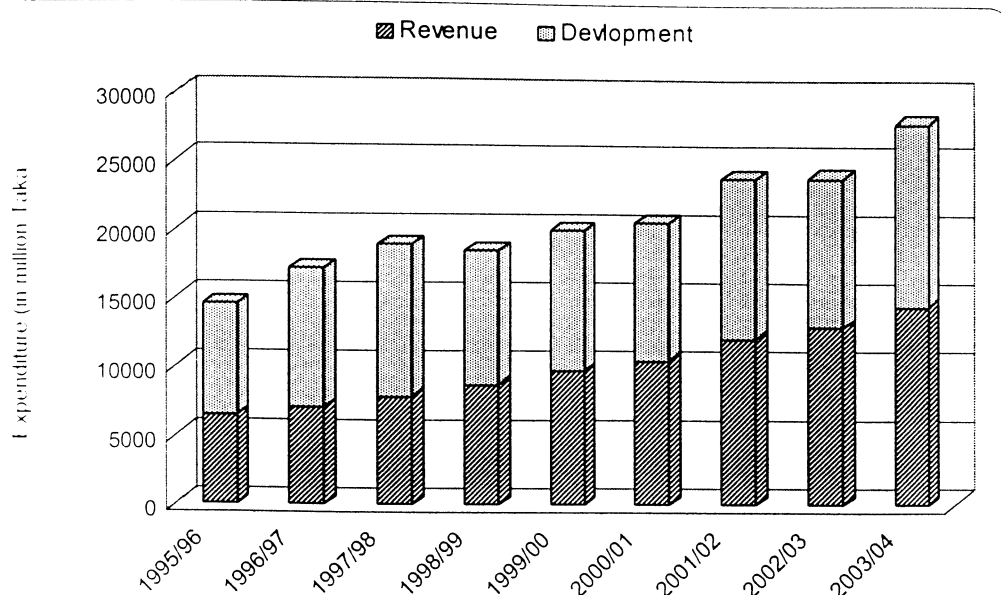
While comparing MoHFW's expenditure with the overall GoB expenditure it is revealed that in 2003-04 MoHFW spends only 5.6 percent of the overall GoB spending. In comparison, MoHFW's share to total GoB spending was 7.2 percent in the year 1995-96 representing approximately 3 percent fall per annum (Figure 2). However, the declined share of MoHFW in overall GoB spending indicates that less priority has been given to the health sector when the health needs of the country are pressing.

Figure 2: Trend of MoHFW Expenditure as Percentage of GoB

The analysis of the trend of MoHFW spending by revenue and development categories shows a steady increase during the period of 1995-96 to 2003-04 (Figure 3). The revenue spending has turned more than double from Taka 6,470 million in 1995-96 to Taka 14,478 million in 2003-04 with an annual growth of 10.1 percent. In contrast, the development share of total

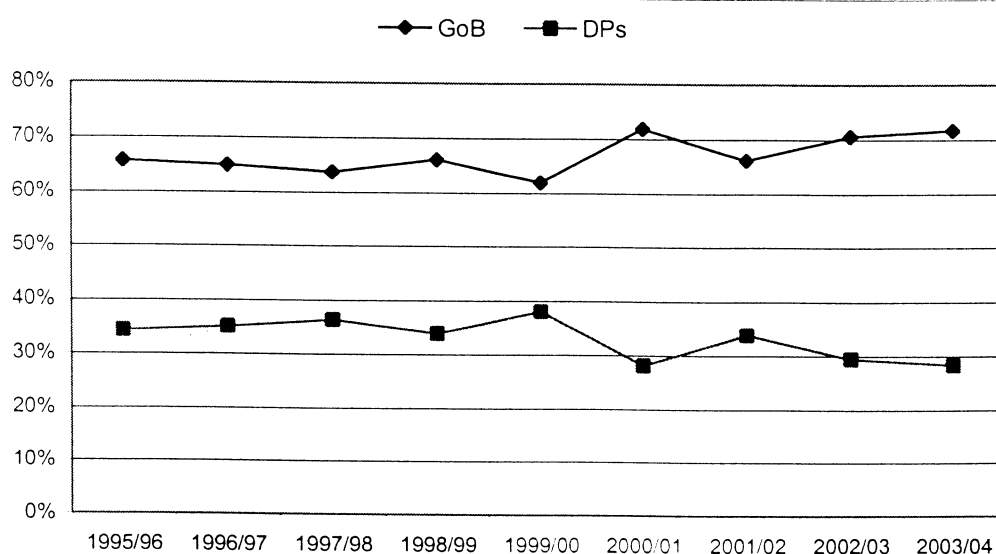
spending has fluctuated over the same period with a lower increase rate of 6.2 percent per annum.

Figure 3: Trend of Spending under Revenue and Development Expenditures



The Development Partners (DPs) have been providing significant support to the MoHFW expenditures. The DPs' share to MoHFW expenditure shows a steady increase between 1995-96 and 1999-2000. After that DPs' share experienced a dramatic decline since 2000-01 (Figure 4). Much of this decline is due to higher levels of under spending on the Program Aid (PA) budget (HEU, 2002). On the other hand, the GoB's share to the total MoHFW expenditure has shown an increasing trend during 2001-2002 to 2003-04. In nominal terms GoB's contribution, between 1995-96 and 2003-04, has doubled with an annual growth of 9.1 percent (Annex B).

Figure 4: Trend of Government and DPs' Share in total Expenditure



2.1.2 Expenditure by Geographical Location

The geographical distribution of MoHFW expenditures for the year 2003-04 disaggregated the total expenditures by six administrative divisions as well as by rural-urban categories. The divisional distribution of MoHFW expenditures suggests that almost one-third is spent in Dhaka division followed by Rajshahi (22 percent), Chittagong (18 percent), Khulna (11 percent), Barisal and Sylhet both 8 percent (Table 4). Although Sylhet and Barisal divisions received lesser share of total MoHFW resources but in terms of per capita Sylhet received the highest public health care resources (Taka 236 per capita). Moreover, a typical Bangladeshi received Taka 205 from the public resources assigned to the health sector.

Table 4: MoHFW Expenditures by Division

Division	2003-04		
	Expenditure (million Taka)	Percent	Per capita
Barisal	2,277	8	224
Chittagong	5,008	18	179
Dhaka	9,273	33	220
Khulna	3,095	11	206
Rajshahi	6,057	22	191
Sylhet	2,149	8	236
Total Expenditure	27,861	100	205

Note: Apportioned based on Bangladesh National Health Accounts 1999-2001.

An attempt is also made to disaggregate MoHFW expenditures according to the sources of funding as well as rural and urban areas. The analysis of the findings reveals that both rural and urban areas received more resources from development source (Table 5). Although rural areas received approximately two-third of the total resources, in per capita terms, they receive significantly lower resources as compared to their urban counterparts.

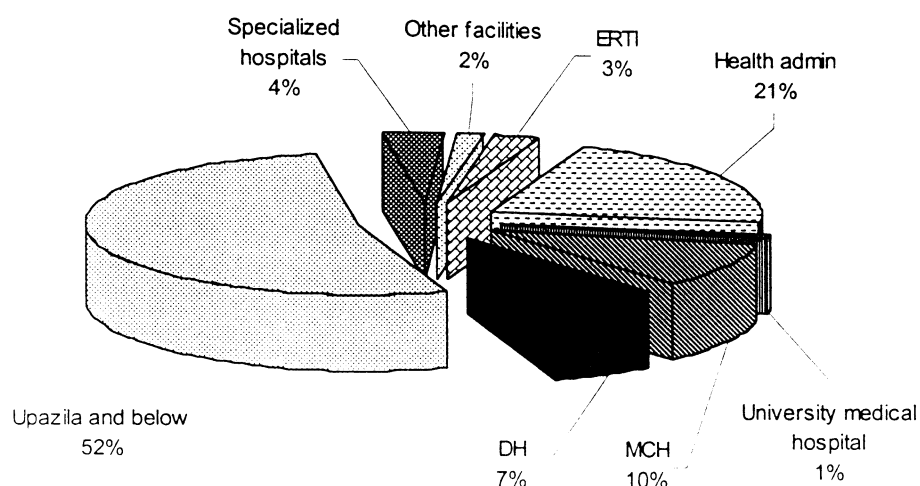
Table 5: MoHFW Expenditures by Rural-Urban, 2003-04

Location	Expenditure (million Taka)			Per capita
	Rev.	Dev.	Total	
Rural	9,080	9,661	18,741	172
Urban	5,398	3,722	9,120	338
Total Expenditure	14,478	13,383	27,861	205

Note: Assuming all Thana and below level facilities at rural areas.

2.1.3 Expenditure by Source, Provider and Function

The MoHFW allocates the funds to its healthcare providing units as presented in Figure 5. The Upazila and below level facilities receive approximately half of the MoHFW resources most of which serves at the grass-root level. The second but distant providers are Medical College Hospitals (MCH) – 10 percent, District Hospitals - 7 percent followed by Specialized Hospitals (SH) - 4 percent, Education, Research and Training Institutes (ERTI) - 3 percent, University Medical Hospital (UMH) – 1 percent and other facilities – 2 percent. Nevertheless, the health administration receives almost one-fifth of the total MoHFW resources.

Figure 5: MoHFW Expenditures by Provider, 2003-04

The functional classification with ICHA codes of MoHFW expenditures for the year 2003-04 is also presented in Table 6. The analysis of MoHFW expenditures by functions indicates that services of curative care accounts for one-third of the total expenditure. The other dominating health care functions are health administration – 22 percent, capital formation – 20 percent and maternal & child health; FP and counselling – 17 percent. It is noteworthy to mention that the curative cares are mainly funded from the revenue sources. In contrast, the government's share of the capital expenditure comes from the development sources.

Table 6: MoHFW Expenditures by Functions and Sources, 2003-04

ICHA code	Functions of Healthcare	Expenditure (million Taka)			Percentage
		Rev.	Dev.	Total	
HC 1	Services of curative care	7,377	1,981	9,359	34
HC 2	Services of rehabilitative care	752	227	979	4
HC 6.1	Maternal & Child Health; FP and Counseling	2,343	2,355	4,697	17
HC 6.2	School health	12	-	12	0
HC 6.3	Prevention of communicable disease	-	63	63	0
HC 6.5	Occupational healthcare	-	0.2	0.2	0
HC 6.9	Miscellaneous public health services	-	279	279	1
HC 7.1.1	Health administration	3,114	2,881	5,995	22
HCR 1	Capital formation	414	5,287	5,701	20
HCR 2 & HCR 3	Education, Research and training	465	310	775	3
Total Expenditure		14,478	13,383	27,861	100

The economic classification of MoHFW expenditures by sources points out that the pay and allowances accounts for more than one-third of the total expenditures in 2003-04 followed by supplies and services – 27 percent, capital formation – 20 percent, grants in aid – 10 percent and the rest – 7 percent (Table 7). The pay and allowances, repair and maintenance and block allocations are mainly funded from revenue sources. On the other hand,

development expenditures are the major source of supplies and services, grants in aid and capital expenditure.

Table 7: Economic Classification of MoHFW Expenditures, 2003-04

Economic classification	Expenditure (million Taka)			Percent
	Rev	Dev	Total	
Pay of Officers	1,062	50	1,112	4
Pay of Establishment	3,912	490	4,402	16
Allowances	4,044	422	4,466	16
Supplies & Services	2,527	4,873	7,400	27
Repair and Maintenance	819	95	914	3
Grants in Aid	659	2,163	2,822	10
Contributions to International Organizations	3	-	3	0
Block Allocation	1,038	3	1,041	4
Capital Expenditure	414	5,287	5,701	20
Total	14,478	13,383	27,861	100

2.2 Expenditure on ESD

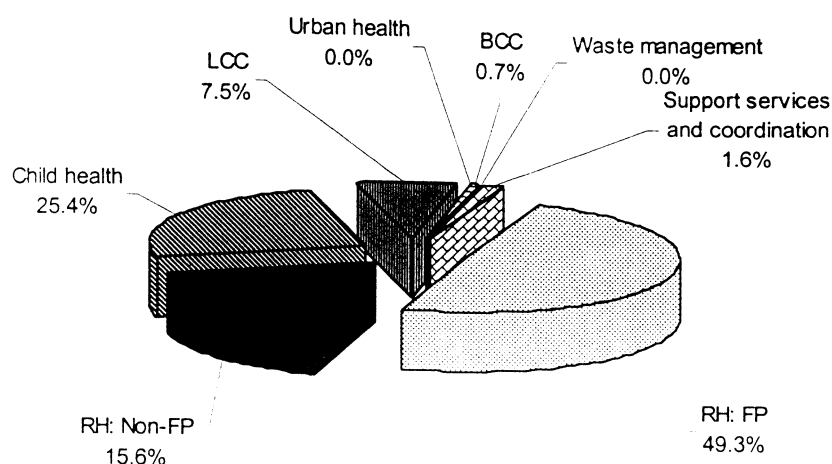
Government of Bangladesh has adopted HNPSF for the year 2003-10, which is proposed to continue with the earlier sector-wide approach, the Essential Service Delivery (ESD) previously known as Essential Services Package (ESP) and the client-centred focus on a service delivery system while bringing in some modifications. The new program restored domiciliary services, included nutritional aspects of the health of mothers and children in the ESP package and introduced the provision of urban primary health care services (PC, 2005).

The main strategy for HNPSF is to deliver a revised ESP at the Upazila level and below with appropriate domiciliary services and a functioning referral system. The main components of essential service delivery (ESD) are reproductive health services, including family planning and maternal and adolescent nutrition, child health care and nutrition, limited curative care, urban health services, health care waste management and support services & coordination. Behaviour Change Communication (BCC) is a cross-cutting issue and is of high priority for ESD, is also essential for other levels of care (MoHFW, 2005). It also introduced a Bangladesh Integrated Nutrition Program (BINP) to address malnutrition among children under two, as well as pregnant and lactating mothers, through the provision of food supplements, nutrition and health counselling.

However, provision of the ESD is of key policy relevance in Bangladesh. It can be functionally identified as a sub-set of prevention and public health services including a limited level of curative care.

ESD facilities are primarily delivered in rural Bangladesh. Upazila and below level facilities are the major providers of ESD (HEU, 2002). MoHFW spent Taka 14,870 million for ESD in 2003-04, which is approximately 53 percent of its total expenditure (Annex Table B4). The distribution of MoHFW expenditures by ESD components is presented in Figure 6.

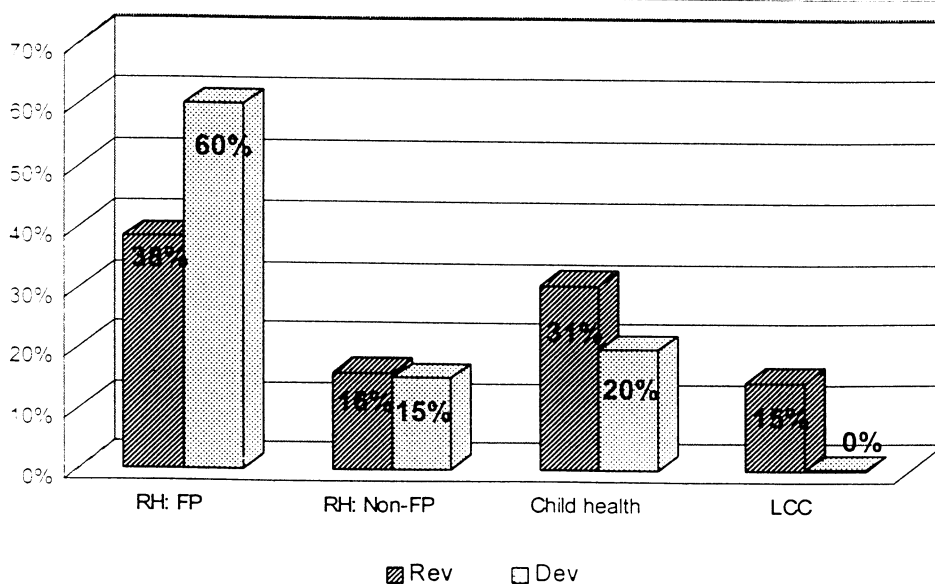
Figure 6: MoHFW Expenditures on ESD Components, 2003-04



The largest component of ESD, in terms of spending, is the Family Planning (FP) constituting approximately half of the ESD expenditure (Figure 6). Moreover, child health (CH) is one of the other important components accounting for 25 percent of total ESD expenditures followed by reproductive health (Non-FP) - 16 percent, Limited Curative Care (LCC) - 8 percent, support service and coordination - 2 percent and Behaviour Change Communication (BCC) - 1 percent.

Figure 7 analyses ESD components by sources of funding for the major selected components. It is observed that development budget is the major source of funding for FP programs. In contrast, revenue budget is a major source for child health. It is worth-mentioning that the LCC is entirely funded from the revenue source. The significant portion of other important ESD components such as CH and FP are also funded from the development budgets.

Figure 7: MoHFW Expenditures on ESD by Sources, 2003-04



Section III: Need Based Resource Allocation

3.1 The Context

The allocation of MoHFW resources across districts and lower level facilities, as represented by budget and actual expenditures, has little relation to either the size of the population or the number of patients treated when measured by number of admissions and out-patient consultations (Ensor et. al, 2001). This chapter provides an overview of the MoHFW's existing resource allocation technique across the administrative districts and assess whether these are equitably based on health needs as well as poverty status of the districts.

3.2 Resource Allocation: Need Vs. Actual

The need based resource allocation has been set as one of the top priorities both in MDG and ERSP goals, which is also one of the main objectives of HNPS. For allocating public resources to a typical district, the total target allocation is obtained as the product of need and cost factors (WB, 2005). The formula for obtaining need based resource allocation at the district level is defined as:

District target allocation: $T = Per\ Cap \times POP\ district \times (1 + a) \times (1 + n) \times (1 + c)$

Where:

Per Cap - the MoHFW total budget divided by the total national population,

POP district - the population of the district

'a' is the district age/gender adjustment factor -- proxy by burden population

'n' is the need adjustment factor -- proxy by standardized mortality rate, severe malnutrition and population density

'c' is the cost adjustor -- proxy by poverty Head Count Ratio

Feasible Allocation: As an alternative, an administratively feasible allocation by district has also been derived. The administratively feasible allocation provides minimum additional funds to the poorer districts in such a way that they are at par with the rest on equity consideration. Under feasible allocation the non-poor districts would continue to receive existing allocation although their actual need is less and poorer districts would receive additional resources.

Data Sources and Assumptions

The analysis of need based resource allocation is primarily based on data available from TDPU, CGA for the year 2003-04. The resource allocation formula principally aims at allocating the recurrent element of the budget - both revenue and development. Allocation of funding for capital development is more complex and thus capital allocation is kept separate from the formula allocation (WB, 2005).

In addition, while conducting actual allocation, Dhaka, Chittagong and three other districts of Chittagong Hill Tracts are excluded. People from other districts travel to Dhaka and Chittagong to receive treatment at the Medical College Hospitals (MCH) and other specialized facilities concentrated in the metropolitan area. Per capita allocation to these two districts are several times larger than the national average. From policy consideration their allocation needs to be separately determined. The allocations to other three hilly districts of Chittagong are also needed to be done separately because these areas have already got more facilities and hence receive more resources as compared to their actual needs.

Findings

The distribution of per capita resource allocation across districts reveals that the current allocation system is neither based on health needs nor on poverty status of the districts (Table 8). For instance, Kishoreganj, a very poor district receives Taka 83 per capita, which deserves Taka 236 per capita when needs are considered. In contrast, a non-poor district Sylhet currently receives Taka 182 per capita, where the need is Taka 29 per capita only. As a result, under the need based resource allocation the relatively poor districts with high incidence of morbidity would be eligible for higher per capita allocation. Moreover, assuming the fact that no additional resources at the national level are available, districts with better health and less poverty indicators would thereby receive less resource.

Table 8: Resource Allocation by District: Actual Vs. Need and Feasible Allocation

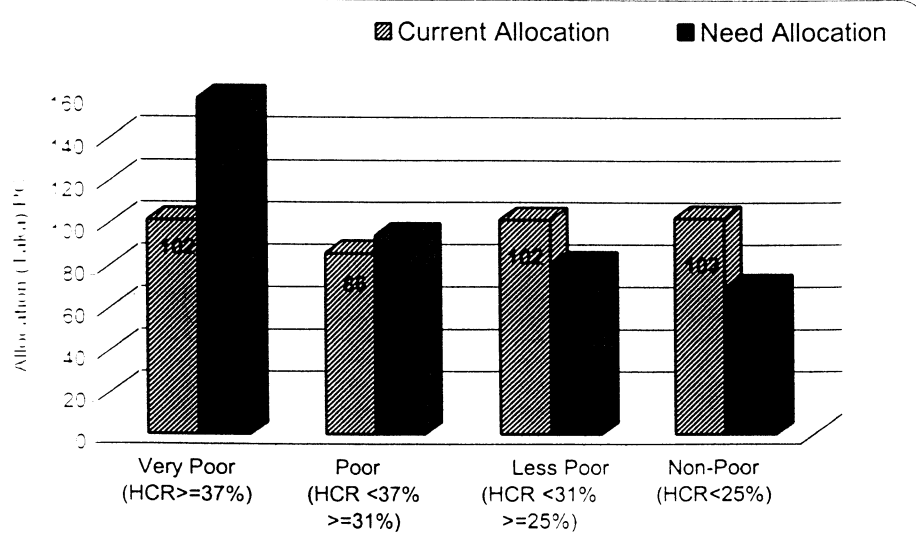
Division	District	Poverty Status	Current allocation (PC)	Need based allocation (PC)	Feasible allocation (PC)
Bangladesh	Barguna	Less Poor	105	16	105
Bangladesh	Barisal	Less Poor	186	156	186
Bangladesh	Bhola	Very poor	70	181	181
Bangladesh	Jhalokati	Non-poor	102	46	102
Bangladesh	Patuakhali	Poor	92	53	92
Bangladesh	Pirojpur	Less Poor	102	45	102
Chittagong	Brahmanbaria	Less Poor	66	152	152
Chittagong	Chandpur	Non-poor	74	70	74
Chittagong	Chittagong	Non-poor	107	202	202
Chittagong	Comilla	Non-poor	112	101	112
Chittagong	Cox's Bazar	Poor	67	72	72
Chittagong	Feni	Non-poor	87	75	87
Chittagong	Lakshmipur	Non-poor	73	98	98
Chittagong	Noakhali	Non-poor	75	185	185
Dhaka	Faridpur	Less Poor	165	124	165
Dhaka	Gazipur	Non-poor	61	38	61
Dhaka	Gopalganj	Non-poor	107	89	107
Dhaka	Jamalpur	Poor	81	170	170
Dhaka	Kishoreganj	Poor	83	236	236
Dhaka	Madaripur	Less Poor	85	24	85
Dhaka	Manikganj	Less Poor	106	25	106
Dhaka	Munshiganj	Non-poor	98	21	98
Dhaka	Mymensingh	Very poor	127	248	248
Dhaka	Narayanganj	Non-poor	73	58	73
Dhaka	Narsingdi	Less Poor	73	168	168
Dhaka	Netrokona	Very poor	83	87	87
Dhaka	Rajbari	Less Poor	92	40	92
Dhaka	Shariatpur	Less Poor	87	102	102
Dhaka	Sherpur	Poor	74	73	74
Dhaka	Tangail	Less Poor	83	47	83
Khulna	Bagerhat	Non-poor	114	21	114
Khulna	Chuadanga	Less Poor	75	46	75
Khulna	Jessore	Non-poor	87	97	97
Khulna	Jhenaidaha	Less Poor	78	44	78
Khulna	Khulna	Non-poor	171	25	171
Khulna	Kushtia	Less Poor	171	65	171
Khulna	Magura	Poor	101	43	101

Division	District	Poverty Status	Current allocation (PC)	Need based allocation (PC)	Feasible allocation (PC)
Dhaka	Meherpur	Non-poor	81	20	81
Dhaka	Narail	Less Poor	103	35	103
Dhaka	Satkhira	Less Poor	74	16	74
Barisal	Bogra	Less Poor	119	94	119
Barisal	Dinajpur	Poor	95	75	95
Barisal	Gaibandha	Very poor	76	151	151
Barisal	Joypurhat	Poor	101	14	101
Barisal	Kurigram	Very poor	79	113	113
Barisal	Lalmonirhat	Poor	73	23	73
Barisal	Naogaon	Very poor	77	118	118
Barisal	Natore	Very poor	74	107	107
Barisal	Nawabganj	Very poor	70	114	114
Barisal	Nilphamari	Very poor	77	117	117
Barisal	Pabna	Poor	98	46	98
Barisal	Panchagarh	Poor	87	39	87
Barisal	Rajshahi	Very poor	199	99	199
Barisal	Rangpur	Very poor	162	258	258
Barisal	Sirajganj	Very poor	69	197	197
Barisal	Thakurgaon	Very poor	77	76	77
Chittagong	Habiganj	Less Poor	69	47	69
Chittagong	Moulvibazar	Non-poor	72	23	72
Chittagong	Sunamganj	Less Poor	70	115	115
Chittagong	Sylhet	Non-poor	182	29	182

(i) District level resource allocation should be interpreted as actual expenditure, (ii) Poverty status is classified as very poor, poor, less poor, non-poor on the basis of "Targeting Resources for the Poor in Bangladesh" – a WB study 2005.

The per capita resource allocation is also analysed according to the poverty status. It is observed that on an average a very poor district receives Taka 102 per capita only where its actual need is Taka 159 per capita (Figure 8). On the other hand, a non-poor district, on an average, receives more resources (Taka 103 per capita) as compared to its actual need allocated at Taka 70 per capita.

Figure 8: Current Vs. Need Based Resource Allocation (Taka Per capita)



The analysis of the need based resource allocation reveals that the non-poor districts require less resource than the existing allocation. However, reduction of government funds to existing facilities is administratively and politically very difficult, at least in the short run. As a result, an administratively feasible allocation pattern by district has also been derived and presented in the last column of Table 6. In order to implement the administratively feasible allocation, additional resources would be required. As a result, the GoB should increase its HNP sector resources to ensure the equity.

3.3 Implications

In recent years, the Government of Bangladesh has attempted to make a structural shift in resource allocation by focusing more on primary health care service delivery rather than on secondary and tertiary public health service. Presently, MoHFW spends almost half of its total budget on primary health care under Essential Services Delivery (ESD). In order to increase the utilization of public health care facilities by the poor, no fees are charged at the upazila health complex and lower level facilities. At district and tertiary level facilities, a discretionary payment exemption system exists where poor are exempted from the user fees. But, MoHFW's resource allocation for the year 2003-04 is neither based on health needs nor considers the poverty status of different geographical locations/districts. There is a clear need for improved allocation system based on equity considerations. It is estimated that if needs are considered the per capita allocation would then increase from Taka 95 to Taka 123.

However, this is important to note that the proposed formula approach does not allow for the special or transitory needs of a district that arise from excessive flooding or the onset of a particular epidemic. This is currently done through the block allocation method, which should not be encouraged in a sector-wide approach (WB, 2005). A better approach should be to work out to allocate specific elements of the budget in case of special urgent needs. This could be done by keeping a part of the annual budget reserved and distributed differently from the main formula approach.

Section IV: Equity in Health care Finance and Delivery

4.1 The Context

Although, the Government of Bangladesh (GoB) is committed to provide quality healthcare services to all, especially to the poor and the vast majority of people living in rural areas through implementing free or subsidised user fees at all its facility levels, the utilization of public services is still low - only 12 percent people visited public facilities for healthcare when they reported sick (Huq M N, 2005). As a consequence, the people, particularly the poor, have to pay more for their healthcare. In such a context, the progressivity analysis has been performed to examine the pattern of the distribution of payments for healthcare in terms of gender, location and living standards.

Although the constitution of Bangladesh assures equal access to good healthcare to all, public resources devoted to this task are limited. MoHFW spent only 0.83 percent of Gross Domestic Product (GDP) on health care in 2003-2004. The meagre allocation warrants an appraisal of target efficiency of the public spending committed to healthcare services. Benefit Incidence Analysis (BIA) assesses the target efficiency of the MoHFW.

Moreover, gender analysis also assesses the gender disparity in the health sector in terms of examining the OOP payments for healthcare when they reported sick. The analysis of beneficiaries of public healthcare expenditure by gender is also performed and discussed in the subsequent sections.

4.2 Who Pays for Healthcare?

The distribution of healthcare payments in the form of Out of Pocket Payments (OOP) allows for an examination of the pattern of distribution of payments for healthcare. Progressivity analysis establishes the extent to which the costs of healthcare are proportional to ability to pay and hence provides the measure of equity in the health sector. The detailed methodology has been explained in Annex C.

Database and Assumption

The progressivity analysis is performed based on Household Income Expenditure Survey (HIES) conducted by Bangladesh Bureau of Statistics (BBS). Since the current available version of HIES was conducted in 2000, we have to rely on the database with the assumption that no significant changes have taken place in the distribution of OOP payments for healthcare. Since changes in the country's healthcare expenditure in the following subsequent years are observed to be gradual, results of the progressivity analysis for 2003-04 are likely to be similar to 1999-2000. However, utilizing the HIES survey for the year 1999-2000, restricted the scope of the progressivity analysis.

Results

In per capita terms, on an average, a Bangladeshi spends Taka 398 annually for purchasing health care services. However, the per capita distribution of OOP payments for healthcare by gender reveals equal sharing of healthcare payments among the male and female populations (Table 9). A significant variation of health care payments has been observed when disaggregated by broad age groups. For the boys aged under 14 years the per capita healthcare expenditures seem to be higher as compared to their girl counterparts. In contrast, in reproductive age group the per capita expenditure is significantly higher for females as

compared to the males of the same age group. Moreover, the per capita expenditure is notable for the elderly males as compared to the elderly women. All these indicate the existence of gender disparity in the healthcare system of Bangladesh, especially for younger as well as for elderly people.

Table 9: Out of Pocket Payment per capita (in Taka) by Age, Sex and Location

Age	Gender		Location		Overall
	Male	Female	Rural	Urban	
Below 1 year	574	545	437	1,066	560
1-4	377	307	328	411	342
5-14	201	162	163	268	182
15-44	294	415	333	430	355
45-64	671	737	638	966	702
65-74	1,623	1,302	1,395	1,981	1,495
75-84	2,054	492	1,468	1,167	1,419
85+	2,292	1,500	1,237	4,679	1,944
Overall	398	398	367	523	398

The per capita expenditure for urban residents (Taka 523) is significantly higher as compared to their rural counterparts (Taka 367). Table 9 also indicates the existence of significant differences of healthcare payments among the urban and rural people when disaggregated by broad age groups. It is noteworthy to mention that the per capita healthcare expenditures for the urban infants (aged below 1 year) as well as for the elderly (aged 85+ years) are more than twice as compared to their rural counterparts.

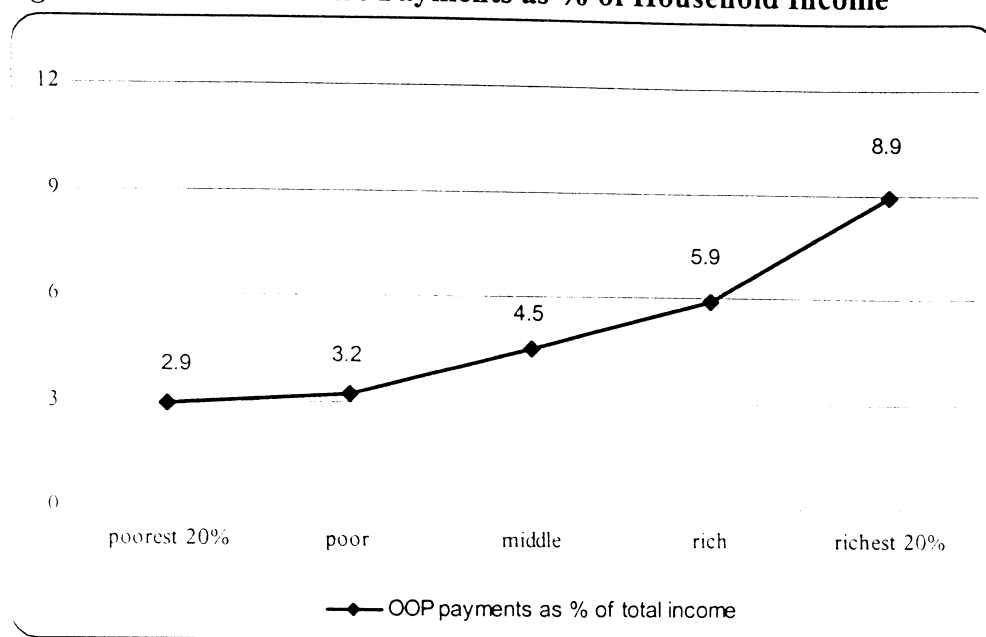
While examining the distribution of OOP payments for healthcare by income quintiles, it is observed that the poorest 20 percent population who contributed 8.5 percent in income distribution spent approximately 3 percent of their total income for healthcare (Table 10 & Figure 9). In contrast, the richest 20 percent of the population who hold almost half of the income spent only 9 percent of their income for purchasing healthcare services.

Table 10: Quintile Shares of Income and Health care Payments

Quintile	Living standards	OOP	OOP as % of total income
poorest 20%	8.5	3.6	2.9
poor	12.1	5.9	3.2
middle	15.5	10.8	4.5
rich	20.8	19.5	5.9
richest 20%	43.1	60.2	8.9
Total	100%	100%	5.1
Concentration Index	0.34	0.56	
Kakwani Index	-	0.22	

Source: Van Doorslaer, E., O. O'Donnell, M N Huq, et al., 2005. Paying Out-of-pocket for Healthcare in Asia: Catastrophic and Poverty Impact. EQUITAP Working Paper#2, Erasmus University, Rotterdam and IPS, Colombo.

Judged by the Concentration Index (CI) as well as Kakwani index it is revealed that poor spend smaller share of their income for healthcare as compared to the rich. The OOP payment for healthcare as percentage of the total household income is also presented in Figure 9.

Figure 9: OOP Healthcare Payments as % of Household Income

4.3 Who Benefits from Public Spending?

The objective of the Benefit Incidence Analysis (BIA) is to identify whether public health care subsidies are well targeted to the poor. BIA evaluates the efficiency of the public health care facilities. It also describes the distribution of health sector subsidies across individuals ranked by their living standards (expenditure). Utilization of public facilities has been considered as the key for conducting BIA. The detailed methodology has been explained in Annex D.

Database and Assumptions

The BIA is primarily based on Health and Demographic Survey (HDS) 2000 conducted by BBS. Since changes in the country's healthcare expenditure in the following subsequent years are observed to be gradual, results of the beneficiary analysis for 2003-04 are likely to be similar to 1999-2000. Under this assumption the MoHFW health care subsidy for the year 2003-04 is apportioned to the HDS households according to the utilization of public facilities. However, utilizing HDS survey for the year 2000 limits the scope of the beneficiary analysis.

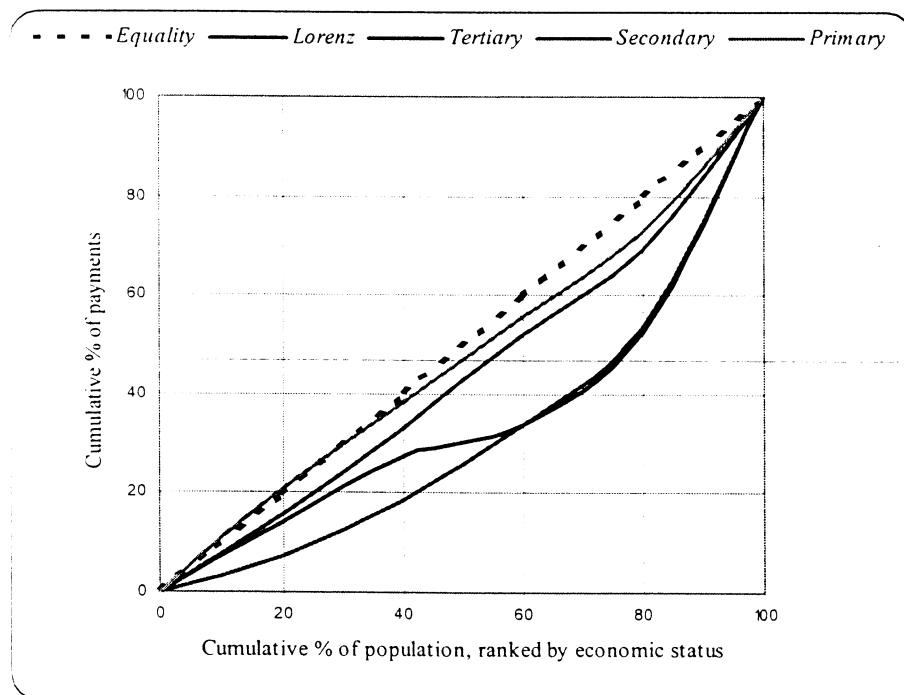
Results

The efficiency as well as the accountability of the service providers at public facilities is assessed by investigating "who gets benefits from public healthcare subsidies?". Table 11 reveals that the poor are particularly disadvantaged, receiving less public resources devoted to health as compared to the rich people of the country. The poorest 20 percent of the population receive only 19.1 percent of the total public healthcare subsidy and the richest 20 percent receive approximately one third of the total subsidy. While investigating efficiency of the different levels of public facilities, it is observed that the subsidy distribution is roughly proportional where the poor receive subsidies in proportion to their income. The primary healthcare facilities seem to be more pro-poor as compared to the tertiary level facilities.

Table 11: Living Standards and Public Health care Subsidy

Quintile	Living Standards	Tertiary	Secondary	Primary	Total Subsidy
poorest 20%	7.4	14.2	15.9	21.0	19.1
poor	11.3	13.0	17.2	17.1	16.3
middle	15.2	6.8	19.0	17.3	15.3
rich	19.8	18.6	17.4	17.5	17.7
richest 20%	46.3	47.4	30.5	27.1	31.6
Total	100%	100%	100%	100%	100%
CI	0.38	0.32	0.12	0.04	0.12
Kakwani Index		-0.06	-0.26	-0.34	-0.26

The analysis of Concentration as well as Kakwani indices reveals that all the public facilities seem to be proportional and hence benefiting the poor to some extent where the primary facilities are relatively more pro-poor. Figure 10 also demonstrates the situation. However, in order to benefit the poor more it is imperative to introduce an efficient targeting mechanism so that the poor can get more benefits from the limited public resources owed to the health sector.

Figure 10: Lorenz and Concentration Curves of Public Health care Subsidy

But, the question comes up - why do the poor have less access to public health resources? This is due to the fact that many of the poor do not utilize the public facilities due to lack of accessibility as well as poor quality of the services. Moreover, those who utilize public healthcare facilities are not getting benefits satisfactorily. The rules of public resource allocation across regions are not conducive to delivering health subsidies to the poor. Although, fees charged in government facilities do not represent a large burden for poor households, but informal fees required in the same are comparable or even higher than the official ones (WB, 2001).

The per capita distribution of MoHFW health care subsidy is also estimated by rural-urban location and gender and disaggregated by their living standards. It is observed that, on an average, people from the poorest 20 percent segment of the population receive on average only Taka 145 as health care subsidy, while the same for the people from the richest 20 percent segment is Taka 241 (Table 12). Moreover, the per capita subsidy for rural people is Taka 161 and the same for the urban people is Taka 117 which indicates that rural people receive more benefits as compared to their urban counterparts.

Table 12: Distribution of Per capita Subsidy by Location, Sex and Living Standards

Quintile	Rural			Urban			Overall
	Male	Female	Total	Male	Female	Total	
poorest 20%	154	132	143	265	94	176	145
poor	124	131	128	98	105	102	125
middle	109	111	110	184	101	143	115
rich	168	146	158	83	60	72	137
richest 20%	296	374	334	92	162	126	241
Overall	160	163	161	116	119	117	153

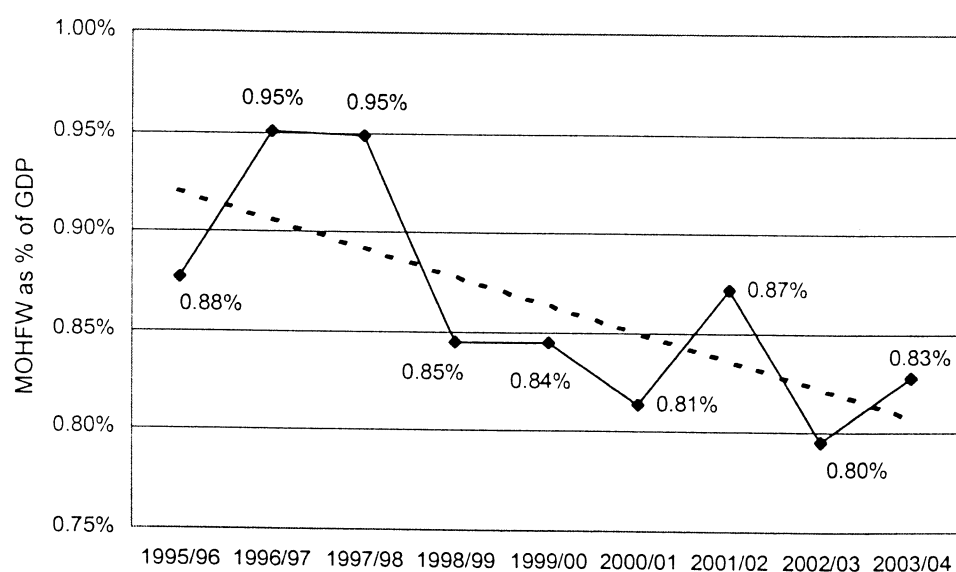
Although, both the male and female in rural as well as urban areas receive roughly the same subsidies devoted to healthcare, there exist gender differentials in terms of receiving health subsidy when disaggregated by their living standards. The per capita subsidy for very poor urban-women is Taka 94, which is significantly lower as compared to their male counterpart -- Taka 265. Similar difference is apparent in rural areas as well. In contrast, among the richest 20 percent of the population, females receive more benefits from public health care spending both in rural and urban areas.

Section V: Efficiency of MoHFW

All public expenditure derives its authority from budget grants. The total allocation in the revised Development Budget for 2003-04 was Taka 18,476 million, whereas the total actual expenditure is Taka 13,383 million. It shows that the achievement is 72.4 percent. In the Non-Development Budget the revised allocation was Taka 14,967 million and the actual expenditure was Taka 14,478 million, the achievement being 96.7 percent. In contrast, it is also observed that expenditure in many cases have exceeded the budget provision. For example, the revised allocation for the project "Strengthening BCC Unit to support Advocacy Activity" was Taka 23 million whereas the actual expenditure is Taka 37 million. In the cases of some projects such as "Upgradation of 50 Bedded Burn Unit to 100 Bed", "Establishment of 5 Nursing Institute", UN Joint Initiative on Safe motherhood" no expenditure has been incurred.

Furthermore, the allocation to the HNP sector as share of GDP also shows a decreasing trend indicating inefficiency of the performance of the HNP sector. The following Figure 11 presents the share of MoHFW expenditure as percentage of GDP.

Figure 11: Trend of MoHFW Expenditure as Percentage of GDP



For the efficient implementation of the projects MoHFW may reflect on the following:

- Projects should be identified and selected in accordance with the objectives of "Unlocking the Potential, National Strategy for Accelerated Poverty Reduction".
- For the proper implementation of development projects, orders and instructions issued from Finance Division and Planning Commission must properly be followed. In the very beginning of the project implementation, a consolidated Physical Program should be prepared and at the beginning of every year the Program should be updated. Annual realistic Implementation Plan (both physical and financial) must be prepared and action to be taken accordingly.

- For the creation and retention of posts, recruitment of manpower, procurement and purchase, constructions, repair and maintenance and all other expenses under development budget, actions are to be taken in accordance with the power delegated to the ministry vide Finance Division memo No. MF/FD/DB-1/Misc-76/02/838 dated 22/12/04.
- Similarly for the expenditure under Non-development budget, actions are to be taken according to the powers delegated to the administrative ministry /division vide Finance Division memo No. MF/FD/(EC-1)/DP-1/2000/13 dated 03/02/2005.
- In respect of project implementation, proper monitoring plays an important role. IMED and the concerned ministry are responsible for monitoring the expenditure and the progress of development projects. Timely monitoring report can provide necessary feedback so that the Government may detect financial flaws and design appropriate intervention whenever necessary.
- The project authority has the primary responsibility of project monitoring. Both the volume and quality of work will come under its purview.
- Where the implementation of the operation plan/project will be delayed abnormally, the relevant project director/line director will inform the ministry/ head of the organisation in details. In such cases, the project director will send the copies of report regarding the abnormal delay directly to the sponsoring ministry/division. This report is reviewed in detail in the monthly review meeting of the ministry/division and the concerned ministry/division will take necessary steps to solve those problems on urgent basis.
- The monitoring at ministry level should look into the problems in the way of project implementation such as land acquisition, contractor selection and other physical and financial problems and proper measures to solve those problem. The problems identified by the IMED inspections and their recommendations to solve those problems should be discussed in the monthly review meeting held in the ministry and appropriate actions to be taken to solve those problems.
- The ministry and the Project/Line Director should ensure that all the activities of projects are done within program approved in the ADP and no change in the ADP allocation is made.
- Maintenance of accounts and accounting record should be improved. FMAU is not properly functioning. The ministry should take proper steps to strengthen FMAU.

The efficiency and transparency of public expenditure in any ministry/department/agency depend on the efficient and transparent use of budget grants. In order to make the efficient and transparent use of budget allocation, the MoHFW should take following steps:

- The ministry should set up its objectives, target, strategy and priorities. Budget Estimates should be prepared in accordance with the priority and strategy to fulfill the objectives and targets keeping in view the scarcity of resources.
- Budget is effective right from the 1st of July. So necessary steps are to be taken from the 1st of July to start execution of budget grants which includes the following actions:
 - (a) Distribution of budget grants: In respect of Non-development allocation no formal release order is necessary. In the beginning of the financial year the Ministry of Health and Family Welfare and its departments will distribute funds among its attached and subordinate offices without waiting for any formal approval from the

- Finance Division. Placement of fund, where necessary, should be made to respective controlling/disbursing officer in the beginning of the year;
- (b) Release of funds: Fund release is required for the project allocation. In this respect instructions contained in Finance Division memo of 29/12/2004 should be followed; Release orders are to be issued by the ministry where they are empowered to do so. Before issuing release order the ministry must issue break up order. Timely release of funds is a must for the efficient execution of the projects. For on going projects settlement of previous year accounts takes a considerable time and the release of fund is delayed. With the end of the financial year, the accounts must be settled promptly and the delay in releasing funds must be avoided;
 - (c) Another problem associated with the release of fund is the adjustment of the special account funds such as SAFE, CONTASA, Imprest etc. Under this special account system funds are directly transferred to the project account. After the spending by the project authority, the administrative ministry has to issue adjustment order. Very often this is delayed resulting in the delay in timely transfer of funds to the project account;
 - (d) In respect reimbursable project aid another major problem encountered is the submission of reimbursable claim. If the reimbursable claim is not placed immediately after the spending, GOB suffers from the loss of foreign exchange as the exchange rates appreciate. The ministry of Health and FW should take care in the timely submission of reimbursable claim;
 - (e) Expenditure Plan: Before incurring expenditure from the budget grants, the ministry should prepare an annual expenditure Plan for its Non-development and Development allocations. Throughout the year they should incur expenditure according to the plan.
- Expenditure: As a general rule no authority shall incur any expenditure or enter into any liability involving expenditure from public funds until the expenditure has been sanctioned by the general or special order by the Government or by an authority to which powers have been duly delegated in this behalf and the expenditure has been provided for in the authorized grants and appropriations for the year. General principles required to be adhered to in respect of using resources provided for in the budget are:
 - (a) No expenditure can be incurred for the item for which no budgetary allocation exists;
 - (b) Funds allocated must be spent for the purpose for which they are allocated;
 - (c) Funds allocated must be spent in accordance with financial rules and regulations and the expenditure is not, *prima facie*, more than the occasion demands and that every Government servant should exercise the same vigilance in respect of expenditure incurred from Public Funds as a person of ordinary prudence would exercise in respect of expenditure of his own money;
 - (d) The expenditure must not exceed the sanctioned budget allocation made for the respective item/purposes;
 - (e) No expenditure is incurred in anticipation of Supplementary Grants without prior concurrence of Finance Division;
 - (f) All payments and receipts are correctly classified under appropriate codes of Classification Chart and the departmental accounts are reconciled every month with figures communicated by CGA and CAO.
 - Care must be taken to settle audit objections promptly and regularly. It is observed that a good number of audit objections relating to the FY 2003-04 are still pending.

Section VI: Future Resource Envelope Available to GoB

6.1 The Context

The successful implementation of Health, Nutrition and Population Sector Program (HNPS) depends on the availability of the adequate resources during the entire planning period. The Public Expenditure Review (PER) 2003-04 is intended for the first year of HNPS that has a planning horizon of 2003-10. Hence, projecting availability of resources at this very early stage may be important for effective management of the entire program. This section tries to estimate availability of resources for the period of 2004-2005 to 2009-2010 using historical time series data of fiscal performance of the country. The sources of data are the publications of the Government of Bangladesh and international agencies. The analysis starts with analysis of resource requirements as explained in the program document of HNPS and then compares it with expected availability of resources to identify possible resource gap/surpluses. It also forecasts on the alternative sources of financing health expenditure of the country.

6.2 Methodology and Assumptions

Analysis of data shows the fact that the fiscal allocations of the Government of Bangladesh (GoB) do not have any trend and the ratio of these allocations to total public expenditures vary from year to year around the mean. Estimation of trend is considered unnecessary for the fiscal allocations. Average ratio for the period 1993-04 has been used as yardstick for resource allocation for projection period. However, 95 percent confidence interval ($\alpha = 0.05$) is used to estimate the upper and lower limits of possible allocations. The upper limit is the optimistic scenario and lower limit is the pessimistic scenario, while mean is the base or most likely scenario for future resource availability.

In this analysis the average of nominal growth rate of GDP is used and then the data for inflation adjusted. GDP for future periods are estimated using the following formula where g is nominal average annual growth rate of GDP, i is average rate of inflation, and t is year.

$$GDP_{t+1} = GDP_t + GDP_t \times (g - i) \quad [1]$$

In this analysis public expenditure has been considered as function of GDP and health expenditure as function of public expenditure. Hence, if the ratio of public expenditure to GDP is P and ratio of health expenditure to public expenditure is M , the availability of resources for HNPS from Government financing should be the following.

$$HE_{Gov} = GDP \times P \times M \quad [2]$$

The realization of promised contribution of development partners (DP) to the HNPS is dependent on the Government's ability to negotiate with them. Here we assume that financing from DPs are constant as explained in the HNPS. Therefore, future availability of resources for total health expenditure (THE) should be the following.

$$THE_{projection} = HE_{Gov} + HE_{DP} \quad [3]$$

The resource gap for implementation of the HNPS will be as following.

$$GAP = THE_{projection} - THE_{budget} \quad [4]$$

Estimation of Parameters for Projection

Mean values of parameters and their variability are calculated using fiscal and monetary data available from Bangladesh Bureau of Statistics (BBS), Bangladesh Bank (BB) and Bangladesh Economic Review 2004. The data analysis period is 1993-94 to 2003-04 (11 years). The sample size is small so t-distribution has been used to estimate range of variability of data. The estimates are as follows.

- Annual mean GDP growth rate, g is 0.094 ± 0.039 .
- Public expenditure as percentage of annual GDP, P is 0.143 ± 0.016 .
- Health expenditure as percentage of public expenditure, M is 0.060 ± 0.018 .
- Public revenue as percentage of annual GDP is 0.096 ± 0.014
- Tax revenue as percentage of GDP is 0.077 ± 0.011
- Mean Inflation rate for the period 1996-97 to 2003-04 is 0.0468 or 4.68%.

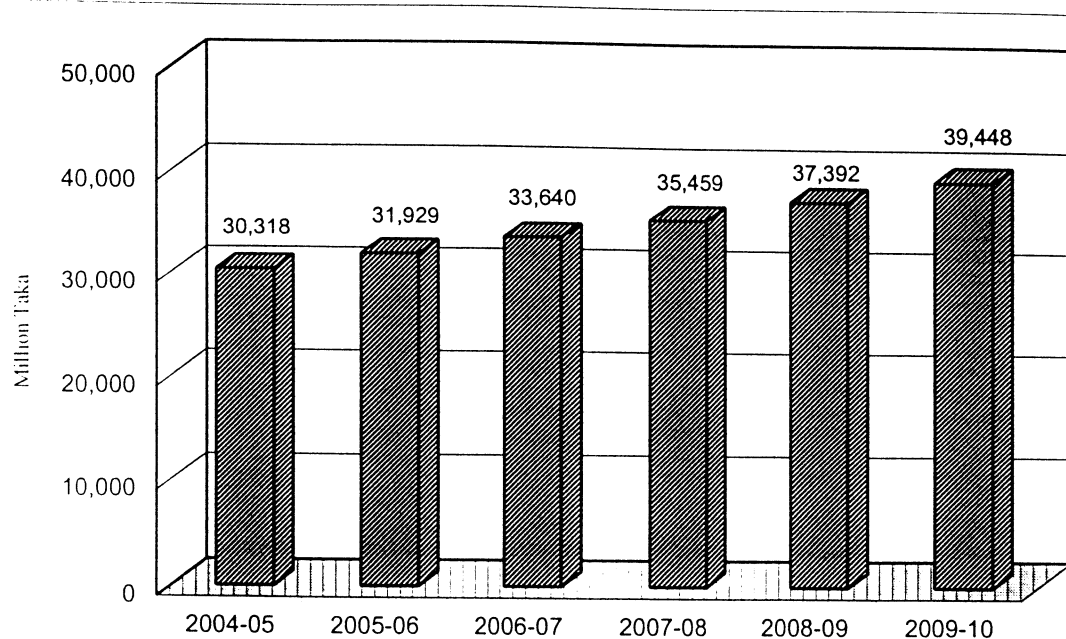
6.3 Expected Resource Projection for HNPS

Resources for HNPS come from two sources – GoB and development partners. It is very difficult to forecast the availability of actual funding from the DPs. Table 11 shows possible financing from the GoB for HNPS. There are three levels of projections - base or most likely scenario, optimistic scenario and pessimistic scenario. According to the fluctuations in GDP growths and allocation of resources, the gap between optimistic and pessimistic projections is significant. For example, in fiscal year of 2005-06, pessimistic projection is only 58.2 percent of base projection, while optimistic projection is 154.6 percent of base projection. Optimistic projection is 2.7 times of the pessimistic projection. Using the three estimates, the expected¹ projection has been calculated and shown in the Figure 13. Growth trend is 0.053.

Table 13: Projection of GoB health expenditure and other financing variables for 2004-10 (million Taka)

Scenario	Resource Heads	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
<i>Base or Most Likely Scenario</i>	GDP	3,487,905	3,653,593	3,827,151	4,008,955	4,199,394	4,398,880
	Total Revenue	335,061	350,977	367,650	385,115	403,409	422,572
	Tax Revenue	267,617	280,330	293,647	307,596	322,208	337,514
	Public Expenditure	497,375	521,002	545,752	571,677	598,834	627,280
	Health Expenditure	29,843	31,260	32,745	34,301	35,930	37,637
<i>Optimistic Scenario</i>	GDP	3,616,901	3,928,837	4,267,676	4,635,738	5,035,543	5,469,829
	Total Revenue	398,479	432,845	470,176	510,726	554,773	602,619
	Tax Revenue	318,867	346,367	376,239	408,688	443,935	482,221
	Public Expenditure	573,453	622,910	676,632	734,988	798,376	867,231
	Health Expenditure	44,500	48,338	52,507	57,035	61,954	67,297
<i>Pessimistic Scenario</i>	GDP	3,358,909	3,388,343	3,418,035	3,447,987	3,478,202	3,508,681
	Total Revenue	275,282	277,695	280,128	282,583	285,059	287,557
	Tax Revenue	219,318	221,240	223,178	225,134	227,107	229,097
	Public Expenditure	425,412	429,140	432,900	436,694	440,521	444,381
	Health Expenditure	18,038	18,196	18,355	18,516	18,678	18,842

¹ Expected finance = [(Optimistic + 4* Most Likely + Pessimistic) / 6]

Figure 12: Expected Health Expenditure of GoB

6.4 Budget Requirements for HNPSP and Resource Financing Gap

The revised PIP of HNPSP of November 2005, has estimated total financing need of this program at Taka. 324,503 million of which DPs would provide 33.3 percent of expenditures. Table 14 presents the required finance for this program and financing gaps. We initially assume partners' assistances (PA) for HNPSP is confirmed and analyze the future scenario for three situations. With confirmed PA and assuming existing trend will follow in case of government allocations of resources for Ministry of Health and Family Welfare (MoHFW), most likely scenario is that the total availability of resources may be about 98 percent of actual requirements for HNPSP by the end of program period in 2010. Total amount of resource shortage may be around Taka 5,326 million.

In optimistic situation, when expected PAs are received, economy of the country enjoys higher GDP growth and GoB allocates higher resources, there may be about Taka 109931 million of excess resources. This excess resource is about 33.9 percent of actual resource requirements for HNPSP. It indicates the potential that GoB may provide necessary resources for HNPSP by increasing allocations in its fiscal budgets without asking for additional financing from DPs. About 0.2 percent more allocations for MoHFW from GoB may be sufficient to cover up resource gap in case of most likely scenario.

However, there is a worst scenario when there may be a shortage of about Taka 84613 million in pessimistic analysis. This is about 26.1 percent resource gap for the implementation of HNPSP. The GoB allocation for HNPSP may drop to about 73 percent of required public expenditures for the program. It is not unlikely because in case of HPSP final contribution of GoB through public expenditures was 68.7 percent.

Table 14: Budget requirements and resource gaps for implementation of HNPSP (million Taka)

Resource Source	2003-05	2005-06	2006-07	2007-08	2008-10	Total
GoB Contribution	37,581	31,022	34,515	37,201	76,248	216,568
DP Contribution	11,316	21,338	19,063	21,018	35,200	107,935
Total budget requirement	48,897	52,360	53,579	58,219	111,448	324,503
Resource Gap for most likely scenario	1,788	238	(1,770)	(2,901)	(2,682)	(5,326)
Resource Gap for optimistic scenario	1,788	17,316	17,991	19,833	53,002	109,931
Resource Gap for pessimistic scenario	1,788	(12,826)	(16,160)	(18,686)	(38,728)	(84,613)

*2003-05 resource gap is actual. Figures in parentheses are negative.

6.5 Short-fall of Partners Assistances and Resource Financing Gap

The DPs provided about 75 percent of their promised assistances in case of HPSP. It may happen in case of HNPSP as well. Considering fluctuation of PAs, the possible impacts are analysed to evaluate resource-financing gaps. In this case, only most likely scenario of public expenditures for HNPSP has been considered. The possible resource envelope in case of varying DP assistances is shown in Table 15. As in the earlier section we observed that 100 percent availability of PA would help to achieve almost 99 percent of required resources. However, if PA drops to HPSP level, the available resources may be about 91 percent of total requirements. In that situation total financing deficit may be about Taka 29481 million. If PA falls to 75 percent level and GoB tries to finance the gap, there may be need to increase allocation by 1.03 percent for MoHFW from total public expenditure.

Table 15: Financing gap for HNPSP in case of reduced PA (million Taka)

Resource Source	2003-05	2005-06	2006-07	2007-08	2008-10	Total	Financing Gap
GoB Contribution	37,581	31,022	34,515	37,201	76,248	216,568	
DP Contribution	11,316	21,338	19,063	21,018	35,200	107,935	
Total budget requirement	48,897	52,360	53,579	58,219	111,448	324,503	
DP Contribution							
PA 100%	50,685	52,599	51,808	55,318	108,767	319,177	(5,326)
PA 90%	50,685	50,465	49,902	53,217	105,247	309,515	(14,988)
PA 80%	50,685	48,331	47,996	51,115	101,727	299,853	(24,650)
PA 75%	50,685	47,264	47,043	50,064	99,967	295,022	(29,481)

Note: Figures in parentheses are negative.

6.6 Sensitivity of GoB and DP Funding for HNPSP

The following tables show sensitivity of two sources of funding for HNPSP expected budget. In Tables 16 to 18 current percentage of resources may be available for HNPSP in case a percentage of funding is available from GoB and another percentage of funding is available from DP. There are three scenarios, most likely, optimistic and pessimistic. In case of HPSP final funding contributions of GoB and DP were about 69 percent and 76 percents respectively. If

that scenario repeats for HNPSP, then most likely expected funding may be about 72 percent of the required amount. In case of optimistic scenario it will be about 97 percent and in case of pessimistic scenario it will be about 55 percent. Hence, in all three scenarios, there will be shortage of funding if resource availability remains like the previous program (HPSP 1998-2003).

Table 16: Sensitivity of HNPSP to GoB and DP funding in most likely or base scenario (percentage)

	Percentage of Expected GoB Funding for HNPSP										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Percentage of Expected DP Funding for HNPSP	10%	9.8	16.7	23.6	30.4	37.3	44.1	51.0	57.8	64.7	71.6
	20%	12.8	19.7	26.5	33.4	40.2	47.1	54.0	60.8	67.7	74.5
	30%	15.8	22.6	29.5	36.4	43.2	50.1	56.9	63.8	70.7	77.5
	40%	18.8	25.6	32.5	39.3	46.2	53.1	59.9	66.8	73.6	80.5
	50%	21.7	28.6	35.5	42.3	49.2	56.0	62.9	69.8	76.6	83.5
	60%	24.7	31.6	38.4	45.3	52.2	59.0	65.9	72.7	79.6	86.4
	70%	27.7	34.6	41.4	48.3	55.1	62.0	68.9	75.7	82.6	89.4
	80%	30.7	37.5	44.4	51.3	58.1	65.0	71.8	78.7	85.5	92.4
	90%	33.7	40.5	47.4	54.2	61.1	67.9	74.8	81.7	88.5	95.4
	100%	36.6	43.5	50.3	57.2	64.1	70.9	77.8	84.6	91.5	98.4

Table 17: Sensitivity of HNPSP to GoB and DP funding in optimistic scenario (percentage)

	Percentage of Expected GoB Funding for HNPSP										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Percentage of Expected DP Funding for HNPSP	10%	13.4	23.8	34.2	44.6	55.0	65.4	75.8	86.3	96.7	107.1
	20%	16.4	26.8	37.2	47.6	58.0	68.4	78.8	89.2	99.6	110.1
	30%	19.3	29.8	40.2	50.6	61.0	71.4	81.8	92.2	102.6	113.0
	40%	22.3	32.7	43.1	53.6	64.0	74.4	84.8	95.2	105.6	116.0
	50%	25.3	35.7	46.1	56.5	66.9	77.3	87.8	98.2	108.6	119.0
	60%	28.3	38.7	49.1	59.5	69.9	80.3	90.7	101.1	111.6	122.0
	70%	31.3	41.7	52.1	62.5	72.9	83.3	93.7	104.1	114.5	124.9
	80%	34.2	44.6	55.1	65.5	75.9	86.3	96.7	107.1	117.5	127.9
	90%	37.2	47.6	58.0	68.4	78.8	89.3	99.7	110.1	120.5	130.9
	100%	40.2	50.6	61.0	71.4	81.8	92.2	102.6	113.1	123.5	133.9

Table 18: Sensitivity of HNPSP to GoB and DP funding in pessimistic scenario (percentage)

	Percentage of Expected GoB Funding for HNPSP										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Percentage of Expected DP Funding for HNPSP	10%	7.4	11.8	16.2	20.6	25.1	29.5	33.9	38.3	42.7	47.1
	20%	10.4	14.8	19.2	23.6	28.0	32.4	36.9	41.3	45.7	50.1
	30%	13.3	17.8	22.2	26.6	31.0	35.4	39.8	44.3	48.7	53.1
	40%	16.3	20.7	25.2	29.6	34.0	38.4	42.8	47.2	51.6	56.1
	50%	19.3	23.7	28.1	32.5	37.0	41.4	45.8	50.2	54.6	59.0
	60%	22.3	26.7	31.1	35.5	39.9	44.4	48.8	53.2	57.6	62.0
	70%	25.3	29.7	34.1	38.5	42.9	47.3	51.7	56.2	60.6	65.0
	80%	28.2	32.6	37.1	41.5	45.9	50.3	54.7	59.1	63.6	68.0
	90%	31.2	35.6	40.0	44.5	48.9	53.3	57.7	62.1	66.5	70.9
	100%	34.2	38.6	43.0	47.4	51.9	56.3	60.7	65.1	69.5	73.9

6.7 Alternative Financing Sources

The planning document of HNPSp has identified GOB expenditure and DP assistances as major sources of funding. However, it is now necessary to think about some other alternative sources for funding health sector programs. Some of these sources may be user fees, social insurance and community insurance.

User Fees

User fees may be a direct source of financing for healthcare services because most of the people have been receiving health services through out-of-pocket expenses. However, it is also true that a huge chunk of poverty stricken citizens of this country can not use health facilities because of their inability to buy healthcare. User fee as a source of finance has potentiality as well as pitfalls. Imposing user fees in health facilities may be interpreted as the desire of government to exclude poor people from public health services. It is politically a very sensitive issue for a democratic government of a poor country. Still the GOB has been introducing user fees for many curative services where public back-lash may be limited. The PER 2000/01 of the health and population sector program had forecast expected funding from user fees at about Taka 570 millions by 2006-07. Here, we believe that this level of user fees may be realized annually during the HNPSp period and expansion of this may be difficult due to political sensitivity.

Social Insurance

The social insurance programs may be another effective source of health care financing as the country is moving towards industrialization and formal employment has been increasing gradually. The labour force survey of 1996 estimated formal employments were 5.3 percent of total population. That was 13 percent of working population. Formal employment should grow at 4.4 percent rate and by 2006 it should be around 20 percent and in 2010 about 25 percent of formal employment. The PER 2000/01 of the health and population sector program, using data of the labour force survey 1996, had developed a forecast of expected contribution from social insurance for the period of 2000 to 2006. Using that time series of expected revenues from social insurance, this report has estimated and presented social insurance revenues in the following table.

In the table, data for 2000-2006 are adopted from PER 2000/01 and remaining three years are estimated using quadratic time series forecasting². It is noticeable that there is excellent potential to get revenues from social insurance schemes that may be about Taka 9352 millions by 2009-10 fiscal year. However, it is also important to understand that social insurance yet to take formal system in Bangladesh. The HNPSp programme may not use it as a significant source of financing.

² $S = -1 - 21.9t + 11.6t^2$; here, S is social insurance in millions taka, and t is year.

Table 19: Expected revenue from social insurance

Year	Formal employment as percent of total employment	Expected revenue from social insurance (Millions Taka)
2000-01	16.1	0
2001-02	16.8	0
2002-03	17.6	0
2003-04	18.3	1140
2004-05	19.2	1930
2005-06	20.0	2890
2006-07	20.9	4010
2007-08	21.8	5631
2008-09	22.8	7376
2009-10	23.8	9352

Community Insurance

According to NHA 1996/97, the per capita expenditure for secondary level healthcare in Bangladesh was Taka 220. The PER 2000/01 of the health and population sector program estimated that if household premium for individual household member was Taka 220, about 89 percent of urban and 19 percent rural population would buy community health insurance. The report also estimated that if premium rate was decreased, more population in rural areas would purchase community insurance. That report estimated expected revenue from community insurance scheme separately for urban and rural population. The premium rate for urban area was Taka 220 per household member. In rural areas, the premium rate was Taka 120. This review has followed the methodology explained in the previous review and estimates possible revenues from community insurance schemes using time series linear forecasting method³ and shown in the following table. Revenue data for the period of 2003-07 adopted from the PER 2000/01 and remaining three years forecast using that time series.

Table 20 Expected revenues from community insurance (millions taka)

Year	Urban Area	Rural Area	Total
2003-04	138	149	287
2004-05	192	208	400
2005-06	257	278	535
2006-07	315	342	657
2007-08	354.2	385.1	739.3
2008-09	405.1	440.7	845.8
2009-10	456	496.3	952.3

³ $C_u = -53.0 + 50.9t$
 $C_r = -59.7 + 55.6t$; C_u is community insurance urban area; C_r is community insurance rural area; t is year

Section VII: Conclusions and Recommendations

7.1 Conclusions

The Public Expenditure Review (PER) 2003-04 is aimed to track the MoHFW expenditure under the guideline of HNPSP. In addition, the special focus of this PER is set on the gender and the equity issues linked with the health sector. However, the important findings as well as the policy implications of PER 2003-04 are highlighted below:

Pattern of MoHFW Expenditure

In the financial year 2003-04, MoHFW spent Taka 27,861 million in the form of revenue and development expenditure for HNPSP, which is 0.83 percent of the GDP for the same year. Overall, MoHFW's expenditure has shown an increasing trend during 1995-96 to 2003-04. In nominal term MoHFW's expenditure has roughly doubled during the period with an annual growth of 8.1 percent.

In 2003-04 MoHFW spent only 5.6 percent of the overall GoB spending. MoHFW's share of total GoB spending was 7.2 percent in 1995-96 representing approximately 3 percent fall per annum. The declined share of MoHFW in overall GoB spending indicates that this sector has been given less priority when the health needs are pressing.

The Development Partners (DPs) have been providing significant support to MoHFW expenditures. DPs' share to total MoHFW expenditure shows a steady increase between 1995-96 and 1999-2000 but experienced a dramatic decline afterwards. Much of this decline is due to higher levels of under spending on the Program Aid (PA) budget. In contrast, the GoB's share to the total MoHFW expenditure has shown an increasing trend during 2001-2002 to 2003-04. In nominal terms GoB's contribution, between 1995-96 and 2003-04, has doubled with an annual growth of 9.1 percent.

ESD facilities are primarily delivered in rural Bangladesh. Upazila and below level facilities are the major providers of ESD. MoHFW spent Taka 14,870 million for ESD in 2003-04, which is approximately 53 percent of its total expenditure. The largest component of ESD, in terms of spending, is Family Planning (FP) constituting almost half of the ESD expenditure, while child health accounts for 25 percent of the ESD.

Need Based Resource Allocation

The need based resource allocation has been set as one of the top priorities both in MDG and PRSP goals, which is also one of the main objectives of HNPSP. But, the current resource allocation system is not based on poverty as well as health needs by geographic locations. It is observed that on an average the very poor districts receive Taka 102 per capita only where their actual need is Taka 159 per capita. On the other hand, the non-poor districts, on an average, receive more resources (Taka 103 per capita) as compared to their actual need estimated at Taka 70 per capita.

Equity in Healthcare Finance and Delivery

Although, the per capita distribution of OOP payments for healthcare by gender reveals equal sharing of healthcare payments but, a significant variation of healthcare payments has been observed when disaggregated by broad age groups. The analysis of the findings reveals the

existence of gender disparity in health care spending, especially for younger and for elderly people. Furthermore, the poorest 20 percent population who contributed 8.5 percent in income distribution spent approximately 3 percent of their total income for healthcare. In contrast, the richest 20 percent of the population who hold almost half of the income spent only 9 percent of their income for purchasing healthcare services.

Although poor spend less of their income for healthcare yet these tiny fractions might have greater opportunity cost. A well-off household can finance medical expenses from savings, or by cutting back on luxury items of consumption. But, a less well-off household is forced to cut back on necessities and may be pushed into poverty. Households that are already poor may be pushed further below the poverty. As a result, OOP healthcare expenditure can be sufficiently costly for the people of a developing country like Bangladesh, where a significant population subsist below the poverty line.

On an average, people from the poorest 20 percent segment of the population receive only Taka 145 as health care subsidy, while the same for richest 20 percent segment is Taka 241. Although, both males and females in rural as well as urban areas receive roughly the same subsidies devoted to healthcare, there exist gender differentials in terms of receiving health subsidy when disaggregated by their living standards. The per capita subsidy for very poor urban-women receive significantly lower subsidy (Taka 94 per capita) as compared to their male counterpart – Taka 265. Similar difference is apparent in rural areas as well. In contrast, among the richest 20 percent population, females receive more benefits from public health care spending both in rural and urban areas. Further investigating “who gets benefits from public healthcare subsidies?” by different levels of facilities, it is observed that all the public facilities i.e. tertiary, secondary and primary facilities seem to be proportional and benefiting the poor to some extent.

Efficiency of MoHFW

The efficiency and transparency of public expenditure in any ministry/department/agency depend on the efficient and transparent use of budget grants. However, the total allocation in the revised Development Budget for 2003-04 was Taka 18,476 million, whereas the total actual expenditure is Taka 13,383 million. It shows that the achievement is 72.44%. In the Non-Development Budget the revised allocation was Tk.14,967 million and the actual expenditure was Taka 14,478 million, the achievement being 73.48%. Furthermore, it is observed that expenditure in many cases had exceeded the budget provision. For example, the revised allocation for the project "Strengthening BCC Unit to support Advocacy Activity" was Taka 23 million whereas the actual expenditure is Taka 37 million. In the cases of some projects such as "Upgradation of 50 Bedded Burn Unit to 100 Bed", "Establishment of 5 (Five) Nursing Institute", UN Joint Initiative on Safe motherhood" no expenditure has been incurred. These indicate the lack of efficiency in use of budget grants. Furthermore, the declining trend of the GoB allocation to the HNP sector as share of GDP also indicates the inefficiency of the performance of the HNP sector.

Future Resource Envelope Available to GoB

Analysis of future resource availability for a program or a project is vital for its successful management. Projects often fail to achieve objectives because of resource shortages. In many cases resource shortages occur because management had no idea of possibility of that situation. Keeping in mind this phenomenon, future resource envelope for HNPSp has been analysed. The analysis shows that most likely scenario is that HNPSp should suffer resource

shortage at the end of program period. This may happen when 100 percent development partners' assistances received and GoB continues the present trend of resource allocations. If partners' assistances drop below promised level, resource scarcity may become acute for this program. In that case only additional resources from GoB allocations will rescue HNPSP. It would be then necessary to think about some other alternative sources for funding health sector programs. Some of these sources may be user fees, social insurance and community insurance. But, these also need more critical inspection before implementation. Despite the fact that the resource generation from other sources are available, but these will not be able to mitigate the resource gaps in HNPSP if adequate GoB allocations are not available. In case resource flows are like previous Health and Population Sector Programme (HPSP), availability of resources for HNPSP may be between 97 percent and 55 percent. Therefore, for successful implementation of HNPSP, proactive lobbying for additional resources is essential. We suggest that officials in charge of HNPSP implementation should try to convince GoB to increase budgetary resource allocation by about 1 percent for MoHFW. If they become successful to get additional resources from GoB budgets, it may be possible to complete HNPSP effectively.

7.2 Recommendations

The specific recommendations of the Public Expenditure Review (PER) 2003-04 are as follows:

1. PER shows that the current capacity of MOHFW to absorb GOB funds has remained stagnant for several years at less than 75% of the allocations and is acting as a serious constraint to raising the overall absorptive capacity of the ministry. MOHFW should seriously investigate and remove the constraints to progressively raise its effective absorptive capacity of suing GOB and other resources.
2. The technical efficiency of MOHFW could not be explored due to lack of facility based cost and other data. A facility based efficiency survey is essential for the purpose. It is recommended that HEU ensures undertaking such a survey on a representative basis (from the perspective of MOHEW facilities) so that data are available before the next PER and other policy relate analysis.
3. The existing method of resource allocation of MoHFW is primarily based on the capacity of public healthcare facilities and historically determined normatives. As a result, there is a clear need for improved allocation system based on equity considerations. Resources should be allocated according to health need and priority. Moreover, MoHFW should develop a guideline that would be strictly used for resource allocation of HNP sector.
4. The current practice of capacity based resource allocation should be revised to adopt to pro-poor allocation so that poor districts receive more resources to maximize equity. The allocation should be made in such a way that the poorer districts receive more while allocation to non-poor districts remain unchanged. In order to improve the overall performance of HNP sector, it is also imperative to increase the resource allocation to the HNP sector.

5. Successful implementation of HNPSp may become difficult for expected shortage of resources. Hence, ensuring adequate resource for the program should be the primary focus of the concerned authority. Their proactive role is expected in obtaining necessary GoB budget allocations and DPs' contributions.
6. Other than GoB budget allocations and DP assistances, social insurance and community insurance schemes have potential to become alternative sources of financing. However, these insurance schemes are still in very immature stage in Bangladesh. Concerned authority should move fast to formulate policies and implementation framework for these schemes in the country.
7. A study should be initiated to measure technical efficiency of health sector programs. This should provide necessary information to estimate, if any, resource wastages in HNPSp. Identification of possible areas of resource wastages may help to save scarce resources and should increase future resource availability for HNPSp.
8. Comparing the existing performance of public health care provisions with the pro-poor policy as stated in the HNPSp and PRSP it is observed that the failure in benefiting the poor is primarily due to inefficient service delivery. Proper monitoring as well as supervision of the service providers should be ensured. Moreover, the providers should be provided with adequate training for delivering quality of care.
9. In order to benefit the poor more it is also imperative to introduce an efficient targeting mechanism so that poor can get more benefits from the limited public resources owed to the health sector.
10. Expenditure should be incurred in accordance with the rules, regulation and instructions issued from the Ministry of Finance relating to delegation of authority, utilization of funds and implementation of projects, keeping of accounts, settlement of audit objections etc.
11. In order to make the efficient and transparent use of budget allocation, the MoHFW should prepare the budget estimates in accordance with the priority and strategy to fulfil the objectives and targets keeping in view of the scarcity of resources.
12. Necessary steps need to be taken from the 1st of July to start execution of budget grants to achieve the target. Moreover, no expenditure shall be incurred for the item for which no budget provision exists and a competent authority must sanction the expenditure.
13. In order to increase the transparency, efficiency and information availability of MoHFW, it is imperative to improve and update the entire database system. HEU should ensure that the comprehensive data base on government expenditure maintained by the Controller General of Accounts are accessible and timely available for the PER exercise. It is also important to make FMAU database functional as early as possible. It is also crucial to conduct nationally representative household surveys, particularly the health and demographic survey periodically at regular time intervals. Moreover, it is recommended to ensure the greater accessibility to the database for researchers and policy makers for better policy prescriptions.

14. There should be a central policy for inter-ministerial cooperation to access the requisite data. To this end, a *National Databank* should be developed. The HEU of MoHFW should take lead in setting up such a databank where all the relevant documents and the databases, which are crucial for deriving national policies, will be gathered.

Finally, PER should be conducted regularly and should be institutionalised within the MoHFW. HEU and its personnel should be actively associated with the PER exercise. However, this would be challenging for MoHFW. Nevertheless, the departments and relevant bodies of MoHFW should be encouraged to disaggregate various expenditures rather than lumping up into broad categories. A disaggregated breakdown of sources of funding, functions, providers are also desirable for the accountability and transparency of the system. Further disaggregation of information would allow a more objective analysis and possible adjustments in fund allocation that would bring greater benefit to the poor areas. The MoHFW should strengthen FMAU and HEU to preserve such requisite information with suggested disaggregation for consecutive years.

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Annexes

Annex A: Terms of Reference (ToR)

Annex B: Analytical Tables

Annex C: Methodological Notes on Progressivity Analysis

Annex D: Methodological Notes on Benefit Incidence Analysis

Annex A: Terms of Reference (ToR)

Health Economics Unit Ministry of Health and Family Welfare

Terms of Reference for Public Expenditure Review

Background

Public Expenditure review is a government document to provide the evidence for its expenditure incurred in particular timeframe. In reality it is a general document for giving a flavor to government, stakeholders and different development partners. From the moral view point it tells about the transparency of the money and on the productivity viewpoint that gives us a certification of efficiency.

In the past years Health Economics Unit of the Ministry of Health and Family Welfare undertook the task of reviewing the public expenditure review from the beginning of Health and Population Sector Program (HPSP).

So far five PER have been done. The last PER has been done in 2002 during HPSP. HPSP has been completed in 2003 and HNPSP has been implemented since January, 2003. This review will consider the expenditure for the year 2003-2004. So it deserves greater emphasis on the overall issues, which has so far been discussed in the previous PER's. Specific thematic points in the PER which will be highlighted in the review are equity and Gender.

Objectives: The major objective of this PER are to:

1. Aim to account, therefore, the progress made towards stated objectives in the health, nutrition and population sectors. It examines the link between such progress and the funding pattern of investments in each sector.
2. Over all expenditure tracking under the MOHFW with especial emphasis on the analysis the equity of expenditure, efficiency of health sector and Gender analysis. It also considers geographical categories by divisions, urban and rural district.
3. Examines the future resource envelope available to the GOB, in general, and to the health and populations sectors, in particular.
4. Focus operations and investment of GOB and, to some extent, its foreign development partners in the health and population sectors.

Scope of work and methodology:

Scope: The study will concentrate the expenditure under the MOHFW for the year 2003-2004 with emphasis to gender and equity.

Methodology: Secondary data will be collected from FMAU and HIES. Data will be desegregated on the basis of stated objectives.

Implementation: The PER will be implemented directly under the supervision of the HEU, MOHFW.

Qualifications of the team:

- Good knowledge of the health sector in Bangladesh.
- The core research team should have a strong background in relevant subjects like economics, statistics and public health issues.
- Should skills in the interpretation of data, particularly in respect of informing policy developments and decision-making.
- Previous experience in conducting costing studies of similar kind.
- Good written English skills and a capacity to produce clear and informative reports.

Study output:

- A short inception report and consultation exercise covering the method of working, progress in collecting data and the proposed structure of the final report, to be submitted within 2 weeks of contract signing. The inception report should also indicate how the study will inform key policy issues and support the attainment policy goals.
- A draft final report (10 copies) including detailed PER tables, findings and recommendations, for discussion and comments.
- The score data for PER will be made available to HEU in the soft copy.
- For capacity building of the HEU, a training course to be conducted during the study.
- A methodological handbook for use in subsequent training for PER implementation to be prepared

Time frame: 3 months from signing of the contracts.

Annex B: Analytical Tables

Table B1: Trend of MoHFW Expenditure and Its Share to National Budget and GDP

Year	MoHFW Expenditure (nominal million Taka)				Achievement (%)	Total GoB (million Taka)		MoHFW as % of GoB	MoHFW Expenditure (real million Taka)	MoHFW as % of GDP
	Rev.	Dev.	Total	Budget		Budget	Expenditure			
1995-96	6,470	8,119	14,589	15,830	92.2%	210,840	202,570	7.2%	14,589	0.88%
1996-97	7,066	10,104	17,170	16,640	103.2%	233,720	230,230	7.5%	16,655	0.95%
1997-98	7,860	11,120	18,980	19,070	99.5%	274,340	254,320	7.5%	17,488	0.95%
1998-99	8,760	9,810	18,570	21,230	87.5%	284,030	287,180	6.5%	16,350	0.85%
1999-00	9,714	10,315	20,029	23,454	85.4%	354,999	338,622	5.9%	17,313	0.84%
2000-01	10,497	10,130	20,627	25,585	80.6%	383,485	394,771	5.2%	17,550	0.81%
2001-02	12,139	11,671	23,810	25,861	92.1%	424,790	376,626	5.6%	19,632	0.87%
2002-03	12,958	10,939	23,897	26,011	91.9%	436,350	429,600	5.6%	18,851	0.80%
2003-04	14,478	13,383	27,861	29,220	95.3%	497,910	493,670	5.6%	21,432	0.83%
Annual growth	10.1%	6.2%	8.1%	7.7%	0.4%	10.7%	11.1%	-3.0%	4.8%	-0.7%

Note: GDP deflator has been used to derive real MoHFW expenditures.

Sources: (i) NHA 1999-2001, MoHFW 2003 (ii) PER 2000/01, HEU 2002 (iii) HNP SIP, Jul 2003 - Jun 2010, MoHFW 2004 (iv) Central Data Processing Unit, CGA, (v) Budget 2003-04, (vi) Statistical Yearbook of Bangladesh 2002 & 2004.

Table B2: MoHFW Expenditures by Providers, 2003-04

Providers of Healthcare	Expenditure (million Taka)		
	Rev.	Dev.	Total
Health Administration	3,114	2,881	5,995
University Medical Hospital	251	4	255
Medical College Hospitals	1,267	1,583	2,850
District Hospitals	1,210	632	1,842
Upazila and Below Level Health Facilities	7,127	7,581	14,708
Specialized Hospitals	752	254	1,006
Other Health Facilities	290	138	437
Education, Research and Training Institutes	465	310	775
Total Expenditure	14,478	13,383	27,870

Sources: (i) Central Data Processing Unit, CGA (ii) HNP SIP, Jul 2003 - Jun 2010, MoHFW, 2004.

Table B3: Expenditures by MoHFW Administration, 2003-04

Administration	2003-04	
	Expenditure (in million Taka)	Percent
Secretariat	4,457	74.3
Directorate of Health	740	12.3
Directorate of Family Planning	369	6.2
Divisional Institutions/Offices	21	0.4
Civil Surgeon Offices	227	3.8
Drug Administration	22	0.4
Directorate of Nursing	133	2.2
National Health Library and Document Storage Center	5	0.1
Transport and Equipment Storage Center	13	0.2
Electro Medical Equipment Maintenance Center	9	0.1
Total Administration	5,995	100

Sources: (i) Central Data Processing Unit, CGA (ii) HNP SIP, Jul 2003 - Jun 2010, MoHFW, 2004.

Table B4: MoHFW Expenditures by ESD Components, 2003-04

Components of ESD	Expenditure (million Taka)		
	Rev.	Dev.	Total
Reproductive Health			
RH: FP	2,836	4,488	7,325
RH: Non-FP	1,184	1,137	2,321
Child health	2,277	1,503	3,780
LCC	1,093	17	1,110
Urban health	-	0	0
BCC	-	102	102
Waste management	-	0.5	0.5
Support services and coordination	-	231	231
Total ESD	7,391	7,479	14,870

Sources: (i) Central Data Processing Unit, CGA, (ii) Revised PIP Jul 2003 - June 2010, MoHFW 2005.

Note: Revenue expenditure on ESD is apportioned based on PER 2000/01, HEU, 2002.

Table B5: Trend of Government and DP's Share in total Expenditure

Year	Expenditure (million Taka)			Share (%)	
	GoB	DPs	Overall	GoB	DPs
1995/96	9,600	5,004	14,604	66	34
1996/97	11,428	6,171	17,599	65	35
1997/98	12,089	6,889	18,978	64	36
1998/99	12,278	6,292	18,570	66	34
1999/00	12,879	7,905	20,784	62	38
2000/01	14,747	5,766	20,513	72	28
2001/02	15,708	8,017	23,725	66	34
2002/03	16,868	7,029	23,897	71	29
2003/04	19,987	7,874	27,861	72	28

Sources: (i) NHA 1999-2001, MoHFW 2003 (ii) PER 2000/01, HEU 2002 (iii) HNP SIP, Jul 2003 - Jun 2010, MoHFW 2004.

Annex C: Methodological Notes on Progressivity Analysis

The distribution of healthcare payments in the form of Out of Pocket Payments (OOP) allows for an examination of the pattern of distribution of payments for healthcare. Poor people in Bangladesh are just as likely to use private providers as rich people, and as a consequence pay a higher proportion of overall private financing¹. Progressivity analysis assesses the health equity existing in the current health sector.

Progressivity analysis establishes the extent to which cost of healthcare is proportional to ability to pay and hence provides the measure of equity in the health sector². The equity could be assessed by using concentration curves, concentration indices as well as Kakwani index. The Kakwani index is defined as twice the area between a payments' concentration curve and the Lorenz curve and is calculated as, $K = C - G$, where C is the cost of healthcare concentration index and G is the Gini coefficient of the living standard variable. The value of K ranges from -2 to 1 . A negative number indicates regressivity; the payments concentration curve lies inside the Lorenz curve as shown in Figure a. A positive number indicates progressivity; the payments concentration curve lies outside the Lorenz curve as shown in Figure b. In the case of proportionality, the concentration coincides with the Lorenz curve and the index is zero³.

Figure a: Curves of regressivity

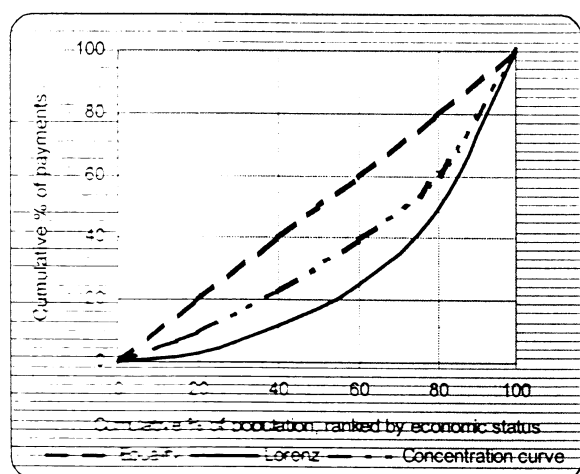
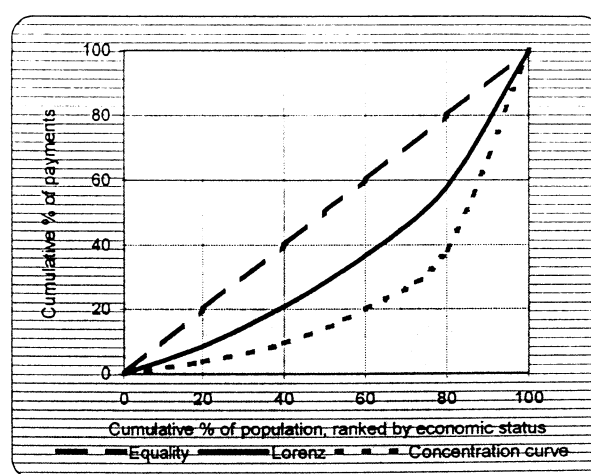


Figure b: Curves of progressivity



Annex D: Methodological Notes on Benefit Incidence Analysis

The purpose of the **Benefit Incidence Analysis (BIA)** is to evaluate the efficiency of health sector. BIA identifies whether the public healthcare subsidies are well targeted to the poor individuals. BIA describes the distribution of health sector subsidies across individuals ranked by their living standards. On the basis of this distribution, one can assess whether healthcare subsidization is consistent with narrowing of the gap between the living standards of the rich and the poor.

In order to perform BIA, utilization of public facilities will be considered. The target efficiency of the BIA could be assessed by estimating concentration index and Kakwani index for public services. A negative value of Kakwani index indicates that government services are well targeted to the poor people of the society. On the contrary, a positive value of the index indicates biasness towards rich people. The set of equations that will be used in target efficiency is:

$$= \frac{(\text{Total Sales} - \text{NVE} - \text{Total visits XY}) \times (\text{Visits iXYZ})}{\text{Total visits XY}}$$

—

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$$X = I_{\text{in}} \cdot \text{inpatient or outpatient, modern or traditional}$$

Y = ~~_____~~ if the _____ (inpatient or outpatient provider)

Z = [REDACTED] (Division)

for any individual (i): $S_{ki} = q_{ki}c_{ki} - f_{ki}$

$$S = \sum_{kl} \alpha_{kl} S_{kl}$$

where c_{ijk} is the unit cost of k in region j where i resides and

~~Re: [REDACTED]~~

3. ~~van Doorslaer, E., & Huq, M. N. (2005). Financing and delivering of health services in Bangladesh, Nepal and Sri Lanka. Institute of Policy Studies, Sri Lanka.~~
4. ~~van Doorslaer, E., & Huq, M. N. (2005). Who Pays for Healthcare in Asia? EQUITAP Working Paper #3, Erasmus University, Rotterdam and IPS, Colombo.~~
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6. O. O'Donnell, Van Doorslaer, E., M N Huq, et al. 2005. Who benefits from public spending on healthcare in Asia? EQUITAP Working Paper #3, Erasmus University, Rotterdam and IPS, Colombo.