PUBLIC EXPENDITURE REVIEW 1997-2014

Health Economics Unit
Ministry of Health and Family Welfare

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List of Acronyms

ADP	Annual Development Programme
APIR	Annual Program Implementation Report
APR	Annual Program Review
BNHA	Bangladesh National Health Accounts
CGA	Controller General of Accounts
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DH	District Hospital
DNS	Directorate of Nursing
DPA	Direct Project Aid
GDP	Gross Domestic Product
GOB	Government of Bangladesh
HCFS	Health Care Financing Strategy
HEU	Health Economics Unit
HNPSP	Health, Nutrition and Population Sector Program
HPN	Health, Population and Nutrition
HPNSDP	Health, Population and Nutrition Sector Development Program
HPSP	Health and Population Sector Program
IMED	Implementation Monitoring and Evaluation Division
LD	Line Director
MCH	Maternal and Child Health
MIS	Management Information System
MOF	Ministry of Finance
MOHFW	Ministry of Health and Family Welfare
MSR	Medical and Surgical Requisites
NCD	Non Communicable Disease
NHA	National Health Accounts
OOP	Out-of-Pocket
OP	Operational Plan
PA	Project Aid
PER	Public Expenditure Review
PIP	Program Implementation Plan
RADP	Revised Annual Development Programme
RPA	Reimbursable Project Aid
SWAp	Sector Wide Approach
THE	Total Health Expenditure
UHC	Universal Health Coverage
UpHC	Upazila Health Complex

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Key Findings

1. ***Low public spending on health:*** Public expenditure on health in Bangladesh as a share of GDP in 2012 was 0.8%, lower than what low-income countries (2.6%) and South Asian countries (1.2%) spent. Moreover, the share is falling and remained below one percent of GDP throughout 1997-2012.

2. ***Decreasing share of public spending on preventive care:*** Share of preventive care in government health spending decreased from 47% to 36% during 1997-2012.

3. ***Increased revised budgetary allocation to the Ministry of Health and Family Welfare (MOHFW[1]):*** Revised budget increased more than sixfold in nominal terms and more than doubled in real terms between 1997 and 2015. However, real annual growth slowed during 2010-2015 to 4% from 6% during 1998-2009.

4. ***Declining share of MOHFW budget in total national budget:*** The share dropped to 4.4% in 2015 from 6.8% in 2000 although the Sixth Five Year Plan envisioned increasing the share to 12% by 2015.

5. ***GDP growth not being translated into more resources for health:*** During 1998-2015 elasticity of MOHFW budget in relation to nominal GDP was 0.89 and 0.60 during 2010-2015, implying 1% increase in GDP is associated with on average 0.89% and 0.60% increase in MOHFW budget.

6. ***Increased external assistance to MOHFW:*** Project Aid had increased more than threefold between 1997 and 2014 in nominal terms. Since 2004 Reimbursable Project Aid (RPA) has been the dominant mode of external assistance, showing increased use of government accounts system for channeling funds by Development Partners.

7. ***Increased MOHFW expenditure:*** MOHFW expenditure increased fivefold in nominal terms and doubled in real terms during 1997-2014. However**,** per capita MOHFW expenditure in real terms has increased by 64% since 1997.

8. ***Decline in share of spending on salaries:*** Share of pay and allowances in MOHFW recurrent spending declined from 70% to 52% (as a share of total MOHFW spending it dropped from 58% to 42%) during 1997-2014, leaving more resources for non-pay recurrent line items.

9. ***Low MOHFW spending on Medical and Surgical Requisites (MSR):*** MOHFW only spend 12% of its spending on this line item. Per capita spending on MSR by MOHFW was only 6% of per capita out-of-pocket (OOP) payment on medicines (Taka 582) in real terms in 2012. Further, inpatient facilities receive MSR allocation per bed but there is no MSR allocation for outpatient units of these inpatient facilities.

[1] MOHFW expenditure accounted for over 90% of the public spending on health during 1997-2012 according to the Bangladesh National Health Accounts (BNHA) 1997-2012 (MOHFW 2015)

10. ***Inadequate spending on repair and maintenance:*** The spending on repair and maintenance is only 3% of MOHFW expenditure. Spending on this line item includes repair and maintenance of buildings, machines, medical equipment, furniture, fixtures, and vehicles including ambulances.

11. ***Significant Unallocated block allocation:*** The unallocated block spending was Tk. 551 crore in 2014, representing 8% of the MOHFW recurrent expenditure. It is difficult to track the reason for such spending.

12. ***No guideline for allocating grants-in-aid***: Grants-in-Aid allocated to autonomous organization and NGOs represented 2% of recurrent spending in 2014. However, there is no policy guideline for this. Also there is no mechanism to monitor the use of these grants.

13. ***Declined spending share to upazila level and below:*** 49% of the MOHFW expenditure in 2012 went to upazila and below although the target is set at 60% by 2016.

14. ***Sector programs have always been aligned with broader national policy goals:*** Maternal and Child Health (MCH) and Family Planning have been a priority area. Accordingly sector allocated a significant share of program budgets. However, resource allocation basis within MOHFW is not always consistent with policy priorities.

15. ***Increased program budgets in successive sector programs:*** The Sector program budget increased fourfold and Development budget increased threefold between HPSP and HPNSDP.

16. ***Improved absorption capacity:*** Execution rate of revised Development budget has been increasing in each successive sector program. The revised Development budget execution rate was recorded at 89% during HPNSDP while it was 76% during HPSP. An increased execution rate of a three time larger budget indicates improved absorption capacity.

17. ***Significant Non-MOHFW spending on some line items:*** Non-MOHFW ministries contributed 28% of spending on medicines, vaccines and medical supplies by all ministries although their share is less than 10% in total government expenditure on health.

18. ***Inefficiency in budgeting and planning:*** Inefficiency is due to a number of reasons that include: bifurcated budget, preparation of two budgets by separate units in different time schedules, financing of some recurrent line items such as MSR, diet, repair and maintenance from both budgets, and facilities receiving MSR budget from multiple sources within each budget. Moreover, Revenue budget is not linked to sectoral priorities, as Operational Plans do not reflect Revenue budget.

19. ***Improved efficiency at upazila health complexes:*** At upazila health complexes the unit cost for admission almost halved while unit cost for outpatient reduced by one-third during 1997-2010.

20. ***Low access to government health services by the poor:*** An analysis based on household survey data shows that 11% of the poorest quintile as opposed to 15% of the richest quintile accessed the government health care services in 2010. Public subsidies going to the poorest quintile is 17% while the richest quintile received 24%.

21. ***Improved equity in public facility utilization:*** The ratio between the poorest and the richest women in using public health facilities for delivery has decreased to 1:2 in 2014 from 1:7 in 2007. Concentration index decreased to 0.119 in 2014 from 0.369 in 2007, implying public facilities to be more pro poor in 2014 than in 2007.

22. ***Poorer divisions received higher share of MOHFW spending:*** Poorer divisions received higher share of public spending on health compared to their respective share in population. However, facilities in poorer areas do not receive higher Revenue budget allocation as allocation is based on staff and bed capacity without considering utilization of services or poverty status of the geographical areas.

Way forward for regular production of PER

- HEU will produce a PER with partial analysis for the latest fiscal year using unaudited data and the analysis will be updated in the subsequent year using audited data.
- PER should be produced before October each year to inform budget preparation and budget revision. Preparatory activities need to start immediately after budget announcement to expedite data collection and clarifications.
- HEU needs to appoint two officials solely for PER with basic skills in Microsoft Excel and provide them with requisite hands-on training.
- Close collaboration between HEU, Financial Management and Audit Unit (FMAU) and Chief Accounts Officer (CAO) Health will ensure regular updating of PER as well as facilitate improvement in data quality.

For making data available and improving data quality

- MOHFW might consider developing own accounting system using open source software to capture DPA and disaggregating the development expenditure into GOB, RPA, and DPA contribution. Open source software will make interface with iBAS (Integrated Budget and Accounts System) feasible once MOF also updates iBAS to capture these data.
- MOHFW needs to upload the detailed revenue (non-development) and Development budget (both original and revised) on its website.
- DGFP MIS needs to report the HNP service utilization data at different tiers of DGFP facilities other than only population services.
- FMAU needs to develop a manual with clear guidelines with adequate examples for expenditure coding in order to improve accuracy in data entry.
- Instead of one code for MSR, separate codes are needed for medicines and for medical and surgical supplies to enable a valid comparison between per capita MOHFW spending on medicines and per capita OOP on medicines.
- DGFP needs a separate function code (or at least operation codes) for different tiers of its facilities, especially for MCWC.

Recommendations are clustered around the strategic objectives of the Health Care financing Strategy.

Strategic objective 1: Generate more resources for effective health services

- The Government of Bangladesh needs to reprioritize health sector within its national budget to increase fiscal space for health towards achieving Universal Health Coverage (UHC).

Strategic objective 2: Improve equity and increase health care access especially for the poor and vulnerable

- MOHFW should immediately implement needs based resource allocation formula reflecting the needs of the population.
- Operational Plans (OP) in the next sector program should clearly indicate how much budget each OP will allocate to different tiers of facilities, especially to upazila level and below.
- Also OPs need to show budget allocation to specific geographical areas (district/upazila). The specification will facilitate allocating more resources to poorer areas as well as facilitate district health system budgeting.
- MSR allocation should be based on the needs of the facilities; for example, MSR for inpatient facilities should also include allocation for outpatients unit. This will help increase the overall stocks of medicines at the facilities leading towards better utilization of health services.

Strategic objective 3: Enhance efficiency in resource allocation and utilization

- Resource allocation for preventive care services, which are also cost effective, should be increased.
- Both Revenue and Development budget should be developed jointly and if possible simultaneously in order to improve efficiency in budgeting and planning.
- Operational Plans in the next sector program need to reflect Revenue budget at least by program components.
- Recurrent line items such as MSR and Diet need to be financed from one budget preferably from the Revenue budget in order to avoid duplication and ensure better transparency as well as predictability.
- In order to improve transparency unallocated block allocation must be reduced to a minimum level.
- In order to advance the UHC agenda effective coordination with other ministries that spend on health is imperative. Particularly, spending by the Ministry of Local Government and Rural Development and Cooperatives, which is responsible for Urban Primary Health Care should be considered in sector program planning and budgeting.

1. Introduction[2]

This review of public expenditure on health is the eleventh review conducted by the Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MOHFW) since its inception in 1995. HEU is mandated to produce Public Expenditure Review (PER) for the health sector and also National Health Accounts (NHA). Each round of the PERs has different focus, which is determined by the prevailing situation or challenges in the health sector or issues that require attention for future policy direction.

Budget and expenditure are key to achieving sectoral policy goals. It is important to examine the policy framework as well as budgetary and expenditure framework, which in turn will help to understand whether budget allocation and expenditure patterns support the strategic priorities in health, population and nutrition (HPN) sector.

1.1 Sectoral policies and priorities

A number of policy and planning documents that laid out the policies and strategies for the HPN sector have been reviewed. This sub-section summarizes broad strategies.

The constitution of Bangladesh has recognized Health Service as one of the fundamental needs of the people of Bangladesh. According to Article 18(1), raising nutritional status level and improving public health of the citizens are among the primary obligation of the state.

The Five Year plans have been the main policy documents that laid out the strategies for the government development programs in different sector since 1973. All Five Year plans place more emphasis on primary health care with a special focus on maternal and child health (MCH). All plans under scored the importance of health sector by increasing sectoral allocation for health. The Sixth Five Year Plan (2011-2015) envisaged 12% of national budget to be allocated for health by 2015.

In 2000, Bangladesh has formulated the first health policy and revised the health policy in 2011. Both the policies put emphasis on primary health care and reproductive health care but the health policy 2011 also highlighted emergency health care, health financing, and establishing gender equity through ensuring women's rights on good physical and mental health at all stages of life. The Health Policy 2011 has set specific strategies to improve fiscal space on health financing through introducing health insurance for the different section of people including those belonging to the formal sector and also to protect poor people from financial hardship in spending on health through introducing Health Card System to give them free health services.

During 1975-1998 four Population and Health projects were implemented in Bangladesh. These four projects were umbrella projects containing a large number of vertical projects. The main focus of these projects was population control, but subsequently they also included maternal and child health in line with Five Year plans.

[2] Suleman Khan and Tahmina Begum contributed to this section

The first sector wide program 'Health Population Sector Program (HPSP)' was implemented during 1998-2003. The Health and Population Sector Strategy (HPSS) formulated strategies to guide the design of HPSP. HPSS envisaged transition from a project driven approach under the Fourth Population and Health Project to a sector wide approach and a number of policy reform measures. The salient features of HPSS included introduction of the Essential Services Package (ESP), replacement of doorstep service delivery by outreach Family Planning field workers with establishment of community clinics at ward level (one clinic for every 6000 population), unification of health and family planning services at the upazila level and below and introduction of local level planning and hospital autonomy.

The second sector wide program Health Nutrition and Population Sector Program (HNPSP) was implemented during 2003-2011. The Strategic Investment Plan (SIP) 2004 guided the HNPSP design and set the priorities in alignment with the National Strategy for Accelerated Poverty Reduction (NSAPR) and Millennium Development Goals (MDG). The SIP laid out broad policy directions that included: allocating more resources to poorer districts, stimulating demand for health service particularly for the poor through demand side financing, diversification of services provision through public private partnership and inter-sectoral collaboration. It had put more emphasis on government's stewardship role.

The third sector wide program is the current 'Health Population and Nutrition Sector Development Program (HPNSDP), 2011-2016. The HPNSDP Strategic Plan laid specific strategies to achieve improved health service and service provision and strengthened health systems. The main strategies include: expanding the access and quality of Maternal, Neonatal and Child Health (MNCH) services, revitalizing family planning interventions, mainstreaming nutrition within the health and family planning services, strengthening prevention and control of Communicable Diseases (CDs) as well as Non Communicable Diseases (NCDs) at all levels, establishing Monitoring and Evaluation (M&E) system, strengthening drug management, etc.

In 2012, MOHFW adopted the Health Care Financing Strategy (HCFS) 2012-2032 towards achieving the Universal Health Coverage (UHC). The HCFS outlined three strategic objectives: (i) generate more resources for effective health services, (ii) improve equity and increase health care access especially for the poor and vulnerable, and (iii) enhance efficiency in resource allocation and utilization.

1.2 Objectives of PER

The objective of this PER is to examine the trends in public spending during 1997-2014 in order to assess performance of health sector particularly the sector wide programs over the period.

This review, in light of the sectoral policies particularly the HCFS, will examine inter alia the following:

- How much does the public sector spend?
  (Public sector includes MOHFW, other Ministries such as Ministry of Defense, Ministry of Home Affairs and so on.)
- How is the health expenditure financed? How much is GOB contribution vis-à-vis that of development partners?
- What is financed/spent by function and inputs (e.g. salary, equipment, drugs, etc.)?
- Are public resources being used efficiently?
- Does public spending ensure equity? Does it reach the poorest group of the population or the poorer districts/upazilas?

1.3 Organization of the report

After a brief introduction on government policies and strategies Section 2 of this report describes the methodology adopted for documentation of this review. Section 3 analyzes the trends in public expenditure in the health, population and nutrition (HPN) sector based on the Bangladesh National Health Accounts (BNHA) 1997-2012 results. MOHFW budget and expenditure is analyzed in Section 4. This section also presents a comparative analysis of Sector Wide Programs in terms of expenditure. Section 5 provides an overview of Non-MOHFW expenditure. Section 6 examines efficiency of public expenditure in HPN sector. Equity of utilization of health service utilization and public expenditure on health is examined in Section 7. Section 8 discusses challenges in conducting regular PER and suggests a way forward. Section 9 concludes with recommendations.

2. Methodology and data sources[3]

2.1 Scope of PER

This review follows the NHA approach, in which public expenditure on health includes spending by MOHFW as well as by other ministries that incurred health related expenditure. These ministries include Ministry of Defense, Home Affairs, Social Welfare, Local Government and Rural Development and so on. This review covers the period between 1997 and 2014.

PER analysis differs from the BNHA in one aspect to MOHFW expenditure analysis. Since BNHA estimates health spending of all sectors (government, households, private firms, NGOs, Development Partners) in order to avoid double counting in BNHA, revenues (including user fees) collected by MOHFW are subtracted from MOHFW expenditure. There is no need for such subtraction as PER analyzes public expenditure only.

2.2 Data Sources

This review used a range of data sources. These include: (i) CGA (Controller General of Accounts), the main source for expenditure analysis. (ii) Line Directors (LD) implementing the sector wide program, (iii) DGHS MIS (iv) DGFP MIS, (v) Implementation Monitoring and Evaluation Division (IMED), (vi) Development Partners (DP) survey conducted for BNHA 1997-2012, (vii) Budget wing of MOF budget, (viii) Budget briefs (www.mof.gov.bd), (ix) MOHFW Revenue budget books, (x) ADP and RADP books, (xi) Bangladesh Health Facility Survey conducted by World Bank, and Facility Efficiency Survey conducted by HEU, and (xii) Poverty mapping of district and upazilas by Bangladesh Bureau of Statistics (BBS) with support from World Food Programme (WFP) and the World Bank[4]. In addition, informal discussions with former senior MOHFW officials provided better insight to help interpret the findings.

2.3 Data explanation

PER analyzes MOHFW spending net of pension expenditure. In order to maintain consistency with earlier years the pension amount has been subtracted from the expenditure since 2006/07 when pension has been included in the line ministry budget. Moreover, BNHA excludes pension from the government spending on health. Throughout the report MOHFW Revenue budget (Non-development), revised Revenue budget and revenue expenditure exclude pension amount.

This PER includes detail expenditure data for MOHFW and other Ministries covering 1997-2012 obtained from the CGA. For 2013 and 2014 expenditure by broad economic classification was collected from the budget wing of the Ministry of Finance (MOF). However, this data is only for MOHFW and

[3] Dr Ahmed Mustafa and Tahmina Begum contributed to this section

[4] source: http://www.bbs.gov.bd/WebTestApplication/userfiles/Image/LatestReports/Bangladesh_ZilaUpazila_pov_est_2010.

lacks provider level information. Hence, MOHFW expenditure by provider and Non-MOHFW health expenditure data could not be analyzed for 2013 and 2014 as this requires detail level data.

CGA data does not include Direct Project Aid (DPA). Therefore, detail analysis of development expenditure is exclusive of DPA. Moreover, development expenditure in CGA data cannot be disaggregated into Reimbursable Project Aid (RPA) and GOB contribution.

All figures relate to the fiscal year i.e. from July 1 to June 30. Throughout the report the mention of a year refers to a fiscal year (e.g. 1997 refers to fiscal year 1996-97).

All figures (except per capita figures) are in crore. Ten million makes one crore and a hundred crore is one billion.

GDP deflator (2005-06 = 100) was used for making adjustments for inflation i.e. converting current Taka into constant Taka.

Data analysis was done using statistical package Stata version 13 and Microsoft Excel version 11. For

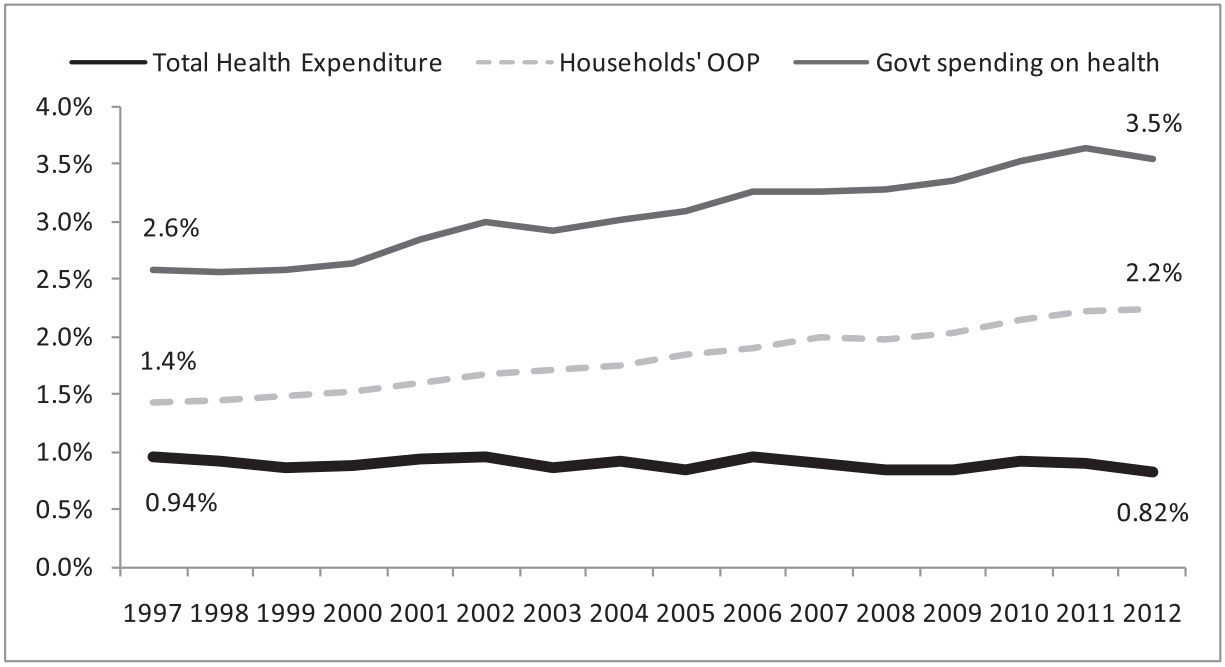
Data Envelopment Analysis (DEA) DEAP 2.1 software was used.

3. Trends in public spending on health[5]

Bangladesh National Health Accounts (BNHA) estimated total health expenditure (THE) from all sources for 1997 - 2012. THE in 2012 was Taka 325 billion accounting for 3.5% of Gross Domestic Product (GDP). In the same year government spending on health was Taka 75 billion representing 23% of THE and 0.82% of GDP (MOHFW 2015).

The general trend in THE as a proportion of GDP during 1997-2012 has been rising and averaged around 3%. In contrast, the government spending as a share of GDP has been falling and remained around less than one percent throughout the period (Figure 1). This is contrary to the international trend for public expenditure on health to increase as a share of GDP as per capita income rises. Clearly, government spending was not responsive to rising income level rather it was the household health spending that contributed to increasing THE.

Figure1: Total Health Expenditure (THE) as ratio to GDP, 1997-2012



Source: BNHA 1997-2012

The Government of Bangladesh (GOB) spent 0.8% of GDP in 2012, which is lower than the average for low income (2.6%) and South Asian countries (1.2%) for the same year (Table 1).

[5] Dr Ahmed Mustafa and Tahmina Begum contributed to this section

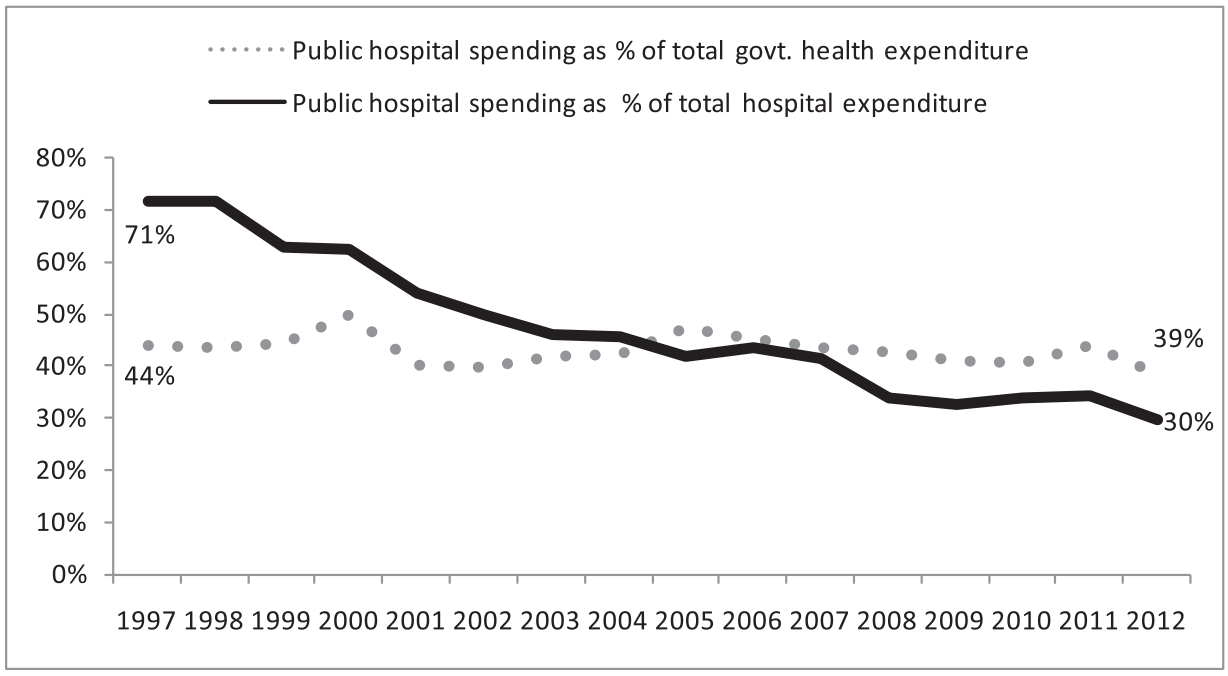
Table 1: Total health expenditure and public spending on health in selected countries, 2012

	Health expenditure per capita (current US$)	Total health expenditure (% of GDP)	Public health expenditure (% of total health expenditure)	Health expenditure, public (% of GDP)
Bangladesh	27	3.5	23.1	0.8
India	58	3.8	30.5	1.2
Myanmar	20	1.8	23.9	0.4
Nepal	36	5.5	39.5	2.2
Pakistan	34	2.8	36.9	1.0
Sri Lanka	88	3.1	39.1	1.2
Low income	35	6.2	41.4	2.6
South Asia	53	3.7	31.2	1.2

Sources: BNHA 1997-2012 (MOHFW 2015) and World Development Indicators 2015 (World Bank 2015)

Government health expenditure was further analyzed by providers. Spending at public hospitals as a share of the total government health expenditure went down from 44% in 1997 to 39% in 2012. Share of public hospital spending in total hospital spending also declined from 71% in 1997 to 30% in 2012 (Figure 2), indicating increasing share of the private sector (including NGOs).

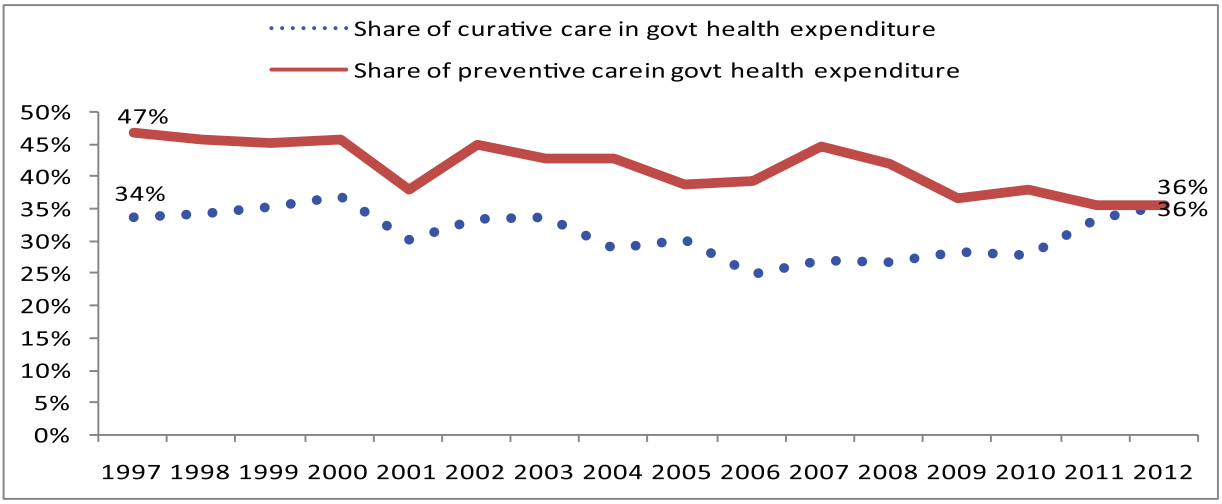
Figure 2 : Share of public hospital spending, 1997-2012



Source: BNHA 1997-2012 (MOHFW 2015)

An examination of the total government health expenditure by function revealed that the proportion of government spending on curative care increased while the share of preventive care decreased. In 1997 their respective share was 34% and 47% of the total government health expenditure. In 2012, the share of curative care increased to 36% while the share of preventive care dropped to 36% (Figure 3).

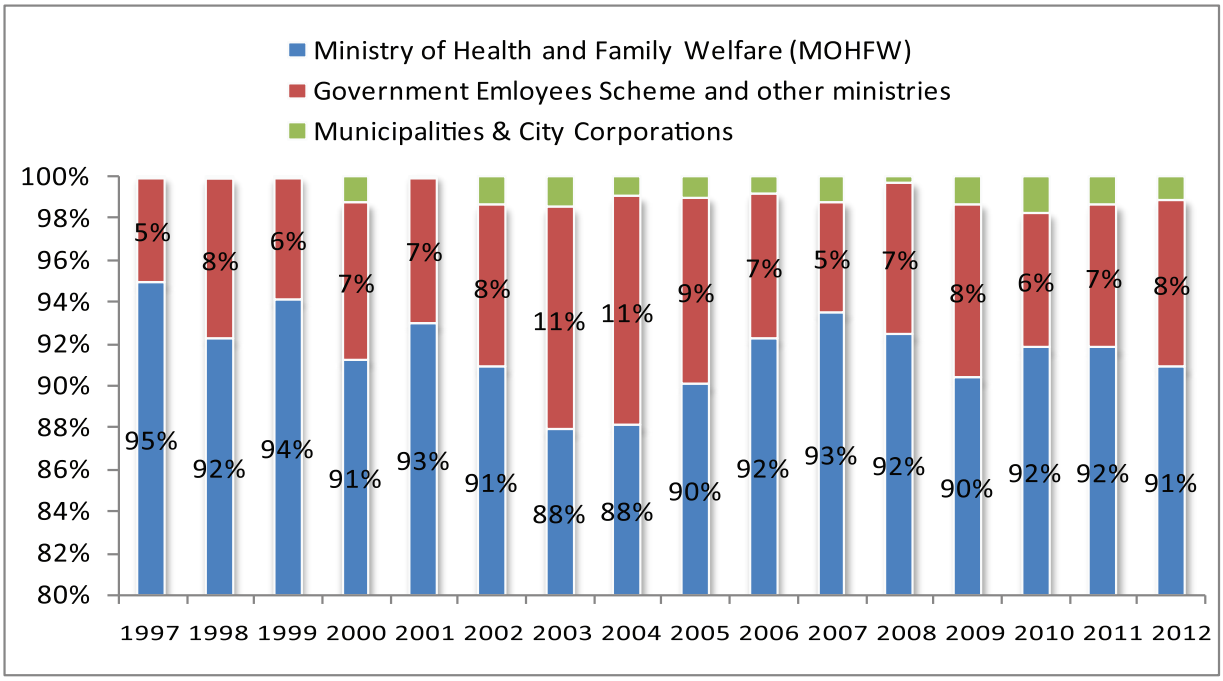
Figure 3: Share of curative and preventive care in Government health expenditure, 1997-2012



Source: BNHA 1997-2012

Government spending on health encompasses spending by the Ministry of Health and Family Welfare (MOHFW) and other ministries such as Defense, Home Affairs, Social Welfare and Local Government. During 1997-2012 MOHFW spending was on average more than 90% of the government spending on health (Figure 4). Therefore, MOHFW expenditure warrants a closer examination.

Figure 4: Distribution of Government Health Financing Scheme in BNHA 1997-2012



Source: BNHA 1997-2012 (MOHFW 2015)

The results from the BNHA 1997-2012 shows that the government's share in the total health expenditure (THE) has been on a declining trend during 1997-2012 and remained below one percent of GDP throughout the period. Further analysis of the government health spending reveals that proportion of the government health expenditure on hospitals has decreased during the same period. Although in 1997 preventive care received higher proportion of the government health expenditure than the curative care, both received equal share in 2012.

4. Trend in MOHFW budget and expenditure[6]

4.1 Trend in MOHFW budget

This section examines MOHFW budget that includes both Revenue (non-development) and Development budget (Annual Development Program or ADP). The Revenue budget is solely financed by the Government of Bangladesh (GOB) while the Development budget is financed by both GOB and Development Partners (DP).

Both Revenue and Development budgets get revised half way through each fiscal year. Hence, original as well as revised budget is also examined.

Budget allocation (excluding pension) to MOHFW increased sixfold in nominal terms since 1998 to Taka 10,440 crore in 2015 (Annex Table 1). In real terms it doubled. During1998-2009 MOHFW budget grew by 6% annually in real terms, which was twice as fastas its growth during 2010-2015.

Revised budget allocation (excluding pension) to MOHFW also increased more than sixfold since 1997 to Taka 10,971 crore in 2015 in nominal terms (Table 2). In real terms it more than doubled.

Table 2: MOHFW revised budget, 1997-2014

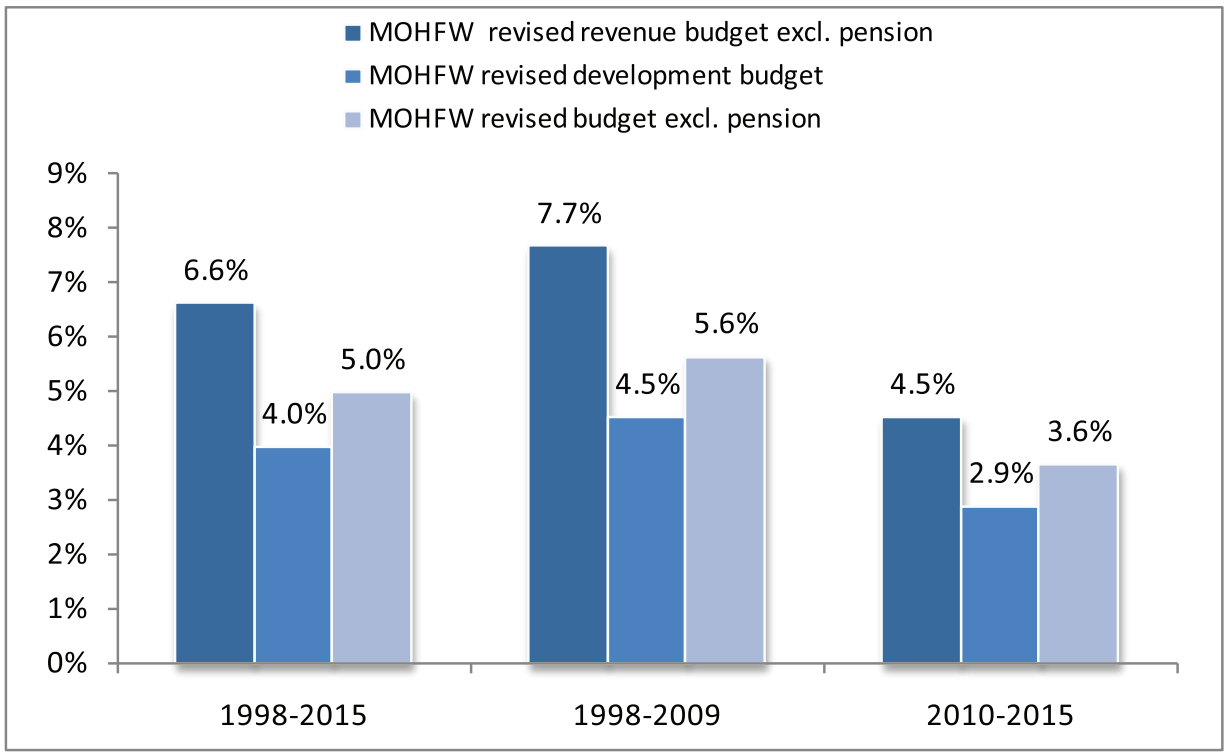
	Current crore Taka			Constant crore Taka (2005-06=100)		
Year	MOHFW revised Revenue budget excl. pension	MOHFW revised Development budget	MOHFW revised budget excl. pension	MOHFW revised Revenue budget excl. pension	MOHFW revised Development budget	MOHFW revised budget excl. pension
1997	769	991	1760	1137	1465	2602
1998	834	1151	1985	1177	1625	2801
1999	894	1193	2087	1216	1622	2837
2000	972	1391	2363	1278	1828	3106
2001	1099	1528	2627	1399	1945	3344
2002	1286	1363	2649	1576	1670	3246
2003	1334	1463	2797	1544	1694	3238
2004	1497	1848	3344	1657	2046	3703
2005	1803	1372	3175	1909	1452	3361
2006	2064	2047	4111	2064	2047	4111
2007	2451	2275	4726	2302	2137	4439
2008	2640	2363	5003	2299	2058	4357
2009	3318	2615	5933	2706	2133	4839
2010	3838	2829	6667	2922	2153	5075
2011	4518	2736	7254	3189	1931	5120
2012	4628	3036	7664	3020	1981	5001
2013	4873	3623	8496	2966	2206	5172
2014	5719	3816	9535	3295	2199	5493
2015	6410	4561	10971	3492	2485	5976

Sources: Budget brief (various years), MOF Budget Wing

[6] Shahabuddin Sarker, Dr Ahmed Mustafa, Shahana Sharmin, Dr Ayesha Afroz and Tahmina Begum contributed to this section

MOHFW revised Revenue budget experienced faster growth than revised Development budget in real terms during 1998-2009. However, growth slowed during 2010-2015 (Figure 5).

Figure 5: Average real growth rate for MOHFW revised budget 1997-2015



Sources: Budget brief (various years), MOF Budget Wing

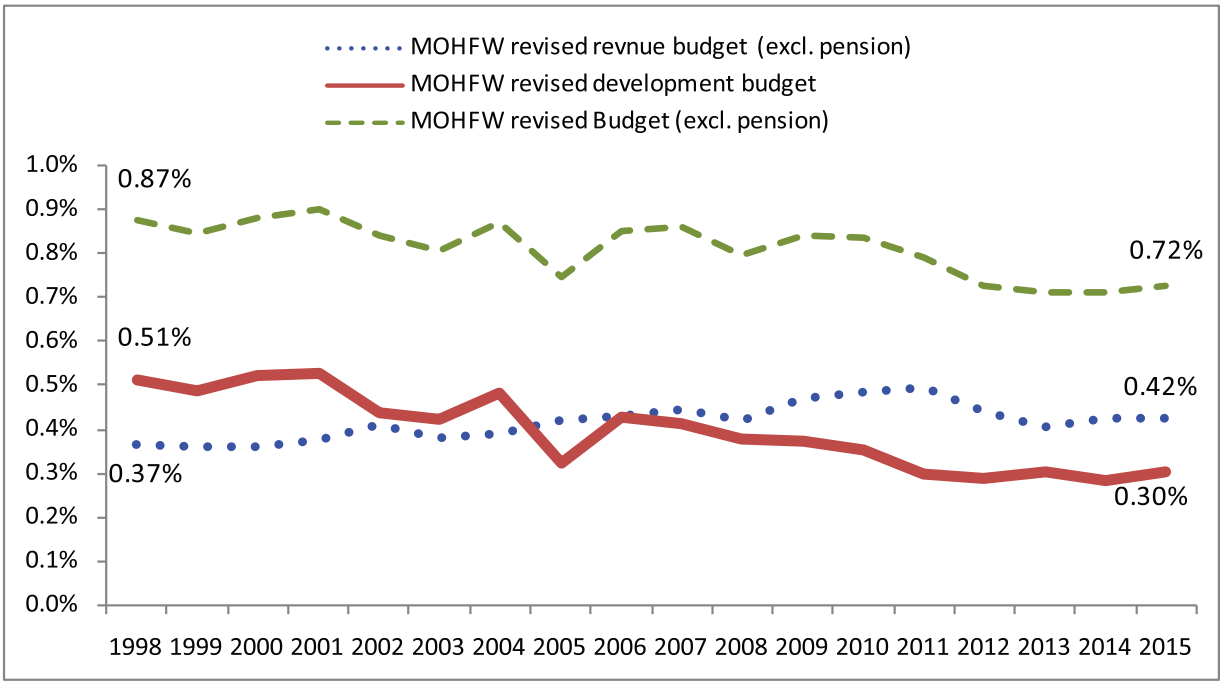
Besides slowing growth both MOHFW budget and revised budget (excluding pension) as a ratio to national budget decreased during FY 2011 - 2015.(Annex Tables 2 and 3). MOHFW budget as a proportion of national budget steadily declined to 4.4% in 2015 from 6.2% in 2011 (Annex Table 2).

Similarly MOHFW revised budget as a proportion of national revised budget dropped to 4.8% in 2015 from 6.2% in 2010 (Annex Table 3). MOHFW revised Revenue budget as a proportion of national revised Revenue budget dropped from 4.9% in 2010 to 4.3% in 2015. For MOHFW revised Development budget the ratio decreased to 6% in 2015 from 9.5% in 2010 (Annex Table 3).

This trend reflects reduced importance of health sector in national budget, which is mainly due to increased growth in interest payment in the national budget, crowding out social sector spending (World Bank 2015).

MOHFW revised budget and revised Development budget as a ratio to GDP have been on declining trend and remained below one percent throughout 1998-2015. In contrast, revised Revenue budget as a proportion of GDP shows a slightly increasing trend (Figure 6). During 1998-2015 elasticity of nominal MOHFW budget in relation to nominal GDP is estimated to be 0.89 implying that a 1% increase in GDP is associated on average 0.89% increase in MOHFW budget. The elasticity decreased to 0.60 during 2010-2015. This means that GDP growth has not been translated into more resource allocation for health.

Figure 6 : MOHFW revised budget as a ratio to GDP, 1998-2014



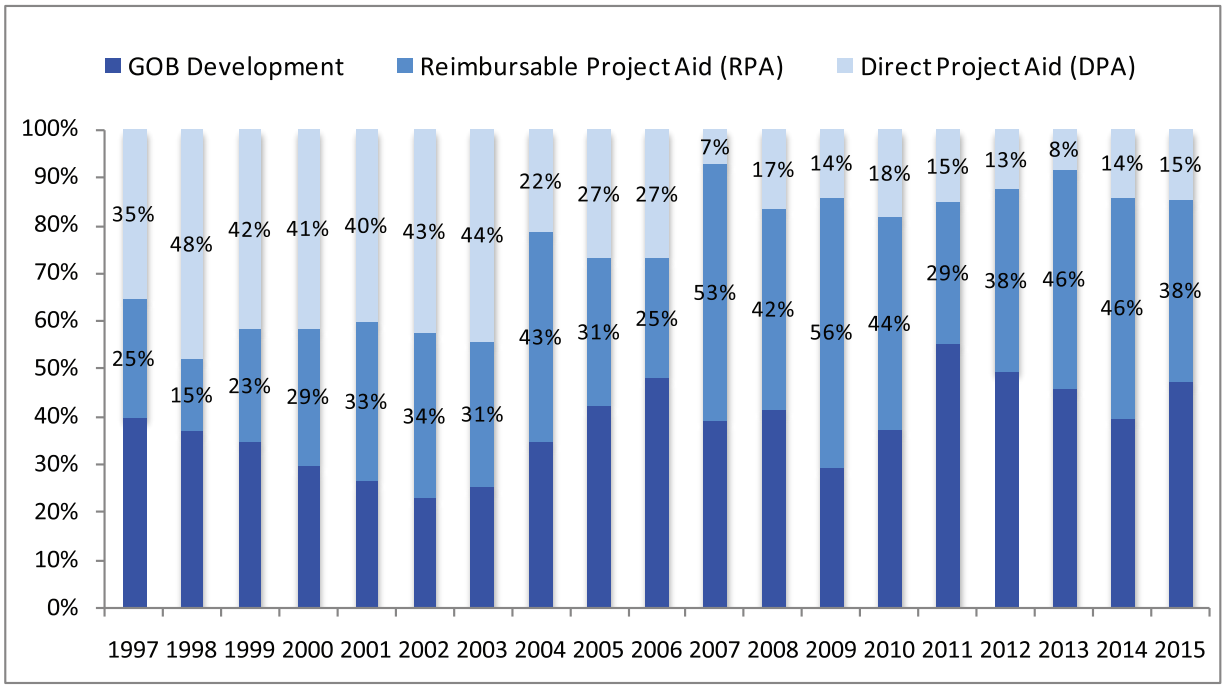
Sources: Budget brief various years, Budget Unit, MOF and National Accounts Statistics 2014-15, BBS

External assistance

As stated earlier that GOB as well as DPs finance Development budget. DP funding in the form of Project Aid (PA) consists of grants and soft loans channeled as Reimbursable Project Aid (RPA) and Direct Project Aid (DPA).

Project Aid in MOHFW Development budget increased more than threefold in nominal terms (about 10% annually) from Taka 686 crore in 1998 to Taka 2,291 crore in 2014, representing more than one third and one quarter of the MOHFW budget respectively. External assistance has been the dominant source of the MOHFW Development budget since 1997 (Figure 7). DPA has been the predominant mode of DP contribution from 1997 (35%) up to 2003 (44%). The situation reversed in 2004 and since then RPA became the principal mode of DP financing (varying between 43% and 38%) implying greater reliance by DPs on using government accounts system.

Figure 7 : Composition of MOHFWDevelopment budget (1997-2015)



Source: Annual Development Programme (ADP), Planning Commission, various years

In summary, external assistance increased more than threefold during 1997-2014. MOHFW budget as well as revised budget is increasing at a slower rate particularly for the last five years. MOHFW revised budget as share of national revised budget is declining and remained below one percent of GDP. The Sixth Five Year Plan envisioned increasing the share to 12% by 2015 while in reality the share in 2015 is one third of the set target. It clearly shows that contrary to the set target, health has not been prioritized as far as the budgetary allocations are concerned.

4.2 Trend in MOHFW expenditure

This section examines MOHFW expenditure during 1997-2014. It also analyses expenditure by major line items.

Table 3 shows that nominal MOHFW expenditure (excluding pension) grew from Taka 1665 crore in 1997 to Taka 8899 crore in 2014, representing a fivefold increase in nominal term and in real term it doubled.

MOHFW expenditure is financed by both Revenue (Non-development) and Development budget. Revenue budget is solely financed by the GOB while Development budget is financed by both GOB and DPs. Share of revenue expenditure has increased over time from 46% in 1997 to 58% in 2010 to 62% in 2014.

Table 3: MOHFW expenditure, 1997-2014

Current crore Taka				Constant crore Taka (2005-06=100)		
Year	MOHFW Revenue	MOHFW Development	MOHFW total expenditure	MOHFW Revenue	MOHFW Development	MOHFW total expenditure
1997	769	896	1665	1137	1324	2461
1998	813	915	1728	1147	1291	2438
1999	891	924	1815	1211	1257	2468
2000	963	943	1907	1266	1240	2506
2001	1041	1152	2193	1325	1466	2791
2002	1205	1192	2398	1477	1461	2938
2003	1298	1047	2345	1503	1212	2715
2004	1448	1338	2786	1603	1482	3085
2005	1704	1136	2839	1S04	1203	3006
2006	1936	1768	3704	1936	1768	3704
2007	2241	1701	3942	2105	1597	3702
2008	2342	1960	4302	2039	1707	3746
2009	2870	1935	4805	2341	1578	3919
2010	3397	2468	5865	2586	lS78	4464
2011	4171	2551	6722	2944	1800	4744
2012	4404	2612	7016	2873	1704	4578
2013	4631	3317	7948	2819	2019	4838
2014	5483	3416	8899	3159	1968	5127

Sources : CGA for 1997-2012 figures and MOF Budget Unit for 2013-2014 figures

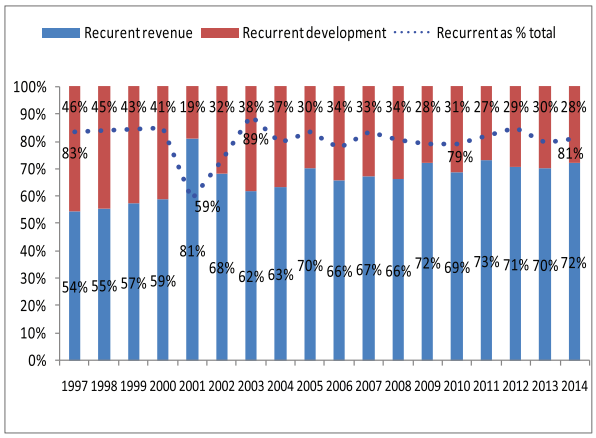
Per capita MOHFW expenditure in real terms has increased by 64% since 1997, to Taka 329 in 2014. In real terms per capita revenue spending more than doubled between 1997 and 2014 while real per capita MOHFW development spending increased by 17% during the same time (Annex Table 4).

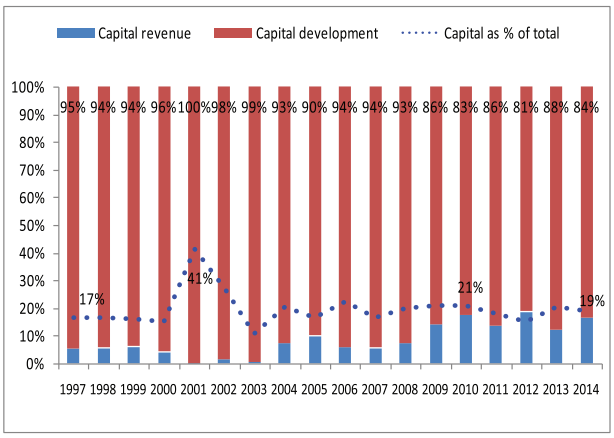
4.2.1 Line item wise expenditure

MOHFW expenditure is categorized into recurrent and capital expenditure. Each in turn is examined by line items. Figure 8 shows the dominance of recurrent expenditure in the total MOHFW expenditure, averaging 80% throughout 1997-2014. Revenue budget has been the dominant source of financing for MOHFW recurrent expenditure. Its share reached the highest point in 2001 (81%) and dropped to 69% in 2010 and increased to 72% in 2014 (Figure 8 and Annex Table 5).

Capital expenditure on average accounted for one fifth of MOHFW spending during the same period. Share of capital in MOHFW expenditure peaked in 2001 (41%) and dipped to an 18 year low (11%) in 2003 (Figure 8). This perhaps was due to two reasons. In 2003 Development Partners suspended funding to HPSP and the new government came into power at that time discontinued community clinic program and related procurement and constructions. Historically, Development budget has been the main source for financing capital expenditure. However, the share of the Revenue budget has consistently been financing over 10% of capital expenditure since 2009 (Figure 8).

Figure 8:Financing and share of recurrent and capital expenditure in MOHFW total spending, 1997-2014





4.2.1.1 Capital expenditure

Spending on two capital line items –medical equipment and construction works is examined further.

Medical equipment

Spending on medical equipment grew from Taka 14 crore in 1997 to Taka 332 crore in 2010 to Taka 700 crore in 2014 in nominal terms, representing 5%, 27% and 42% of MOHFW capital expenditure respectively.

In some years this line item was financed entirely from Development budget. An analysis of MOHFW Revenue budget data from fiscal year 2006 to 2010 revealed that on average less than 50% (varying between 20%-100%) of the Revenue budget for medical equipment was utilized. It shows that procurement is a challenge even if it is financed through Revenue budget. It would be interesting to investigate the reasons for delays in procurement of equipment financed by revenue vis-a-vis Development budget.

Construction works

MOHFW spent Taka 217 crore on construction works in 1997 which increased threefold to Taka 663 crore in 2010 to Taka 680 crore in 2014, representing 78%, 54% and 40% of MOHFW capital expenditure respectively. During 1997-2014 construction expenditure as a proportion of MOHFW capital expenditure dropped from a peak at 80% in 2000 to the lowest 16% in 2001 perhaps due to discontinuation of construction of community clinics. Construction has been an entirely Development budget financed activity since 2001.

4.2.1.2 Recurrent expenditure

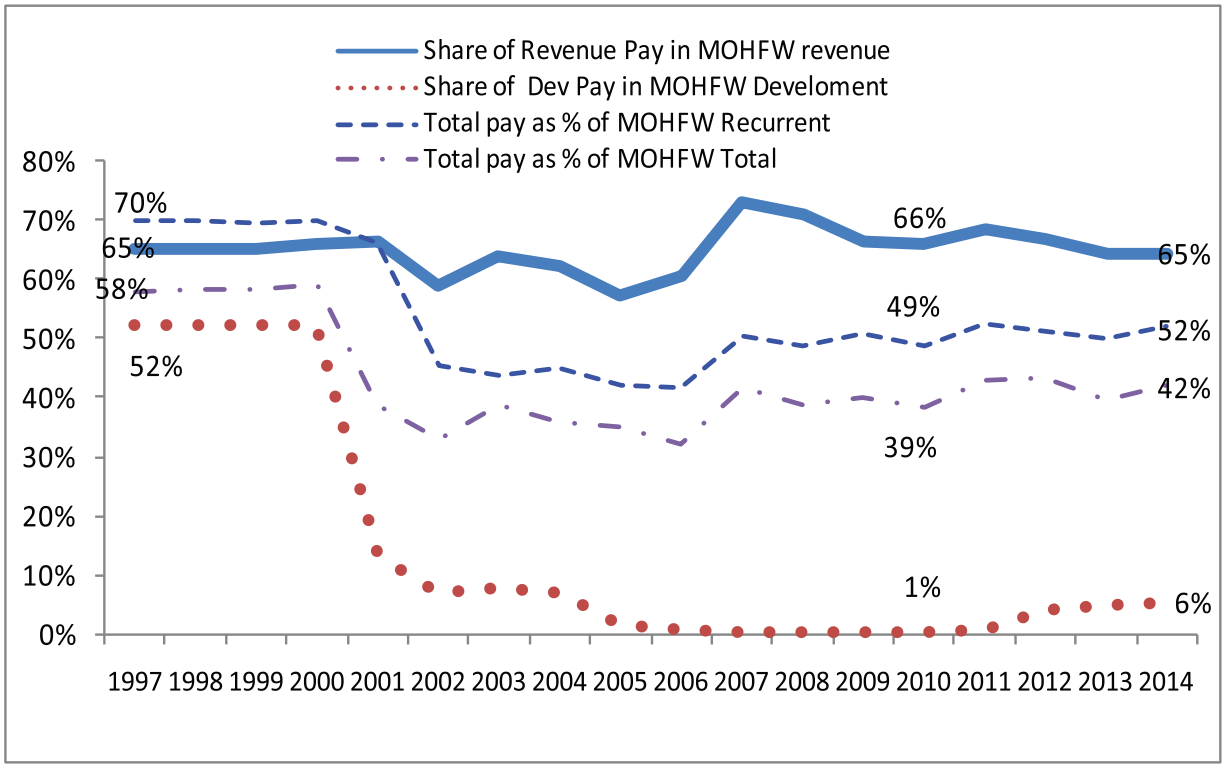
Pay and allowances

The MOHFW expenditure on pay and allowances grew from Taka 969 crore in 1997 to Taka 2260 crore in 2010 to Taka 3736 crore in 2014. Although spending on pay and allowances increased in absolute terms between 1997 and 2014 its share declined both in recurrent as well as in total MOHFW expenditure. In 1997 share of pay and allowances in recurrent spending and total spending was 70%

and 58% respectively. In 2014 its share in the former dropped to 52% while the share in the latter declined to 42% (Figure 9).

In 2014, Revenue budget financed 65% of pay and allowances (Figure 9). Development budget's share in pay and allowances has been 52% throughout 1997-2000. Then it plummeted to 14% in 2001. During 2006-2011 it dropped to 1% or below. This was due to the government decision during HPSP to transfer staff salaries from Development to Revenue budget, reducing the share of Development budget financed pay and allowances to a minimum level. However, it rose to 4% in 2012 and to 6% in 2014 (Figure 9) as the government started recruiting doctors, nurses, community health care providers (CHCP) and other providers.

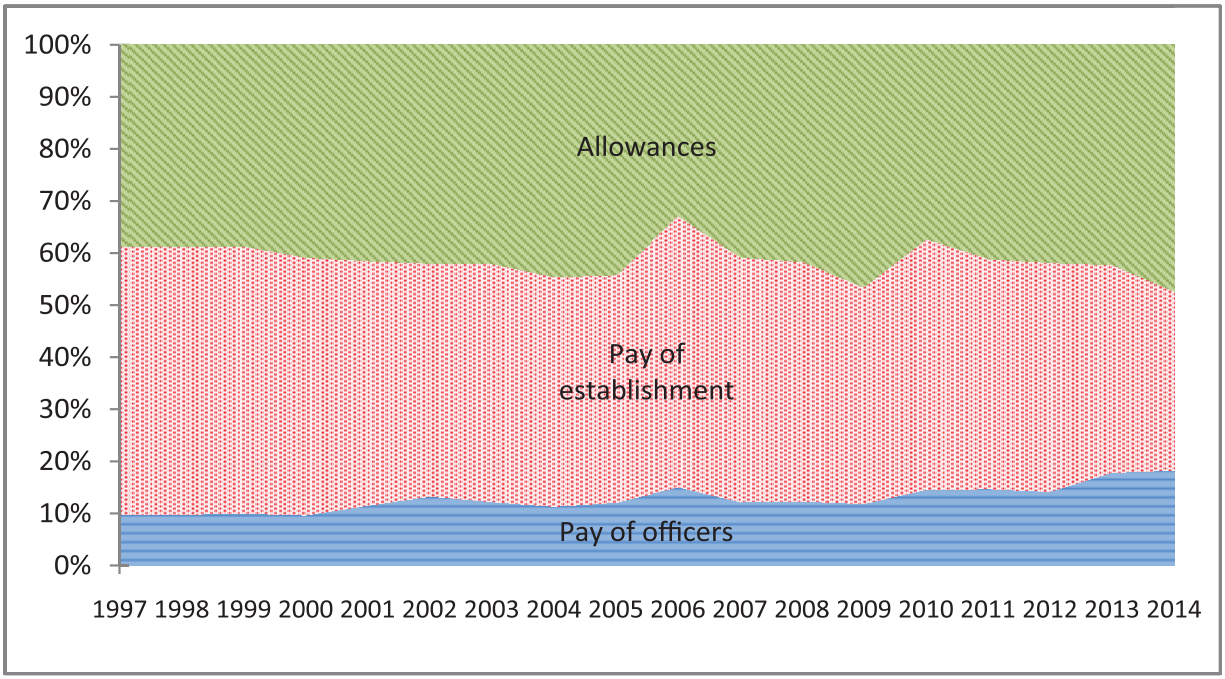
Figure 9 : Share of MOHFW pay and allowances in MOHFW expenditure 1997-2014



It was examined to see whether non-pay recurrent expenditure "recycled" into other HR related expenditure. During 1997-2012 other HR related expenses varied within 2% of MOHFW recurrent expenditure, with an exception in 2005 (5%). Advances to government employees have been over 40% of the other HR related expenditures since 2007.

Share of allowances in total pay and allowances has been substantial and rising, averaging over 40% since 1997 (Figure 10). The government revised the pay scale three times in 1997, 2005 and 2009. New pay scale usually becomes effective in the following fiscal year and full implementation is done in phases, starting with basic pay increase. For example, 2005 pay scale started in 2006 with raising basic pay, which explains spikes in share of pay in 2006 (Figure 10). Then in subsequent fiscal years allowances were increased. This explains increased share of allowances during 2007-2009.

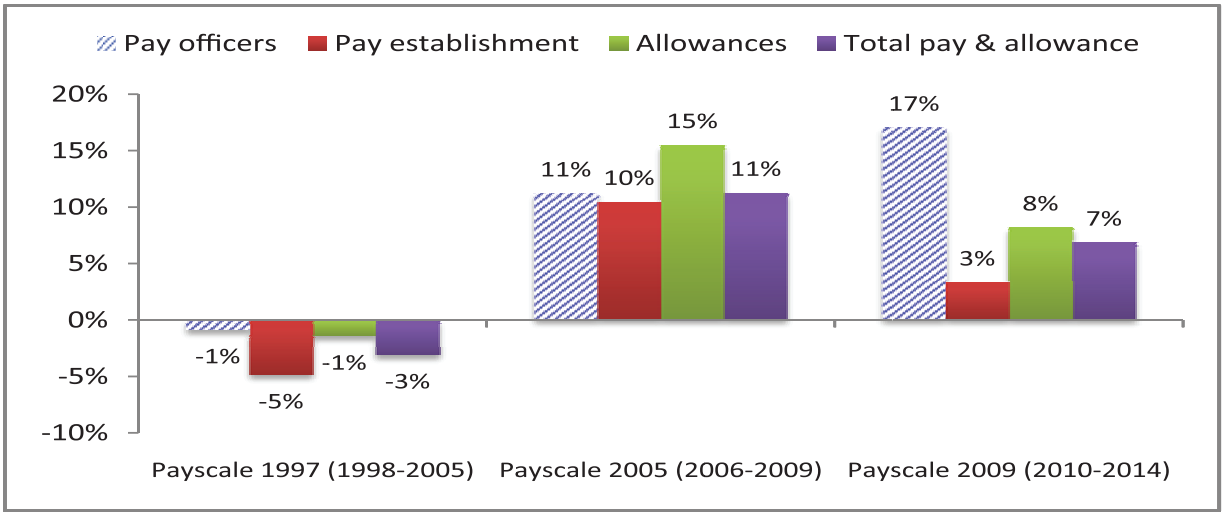
Figure 10 : Composition of pay and allowance, 1997-2014



Notes: Pay of officers includes basic pay for class 1 and 2 officers and Pay of establishment includes basic pay for class 3 and class 4 employees

Average real growth of total pay and allowances was negative between payscale 1997 and 2005 while it was highest between 2005 and 2009 payscale covering 2006-2009. Allowances grew at faster pace than basic pay. Both 2005 and 2009 payscale benefited officers the most (Figure 11).

Figure 11 : Average real growth of pay components between pay scale revisions, 1998-2014



Further analysis of pay and allowances at the facility revealed that its share in total Upazila Health Complex revenue expenditure dropped to 74% in 2012 from 93% in 1997. In case of district hospitals the share dropped to 61% in 2012 from 77% in 1997. It is encouraging to see that now more resources are available for non-pay recurrent expenditure at the facilities at district level and below.

Medicines and medical supplies

In this analysis medicines and medical supplies include Medical and Surgical Requisites (MSR), vaccines and oxygen. MSR (code 4868) includes medicines and medical and non-medical supplies and medicines account for 70% of MSR. MSR is allocated to health facilities as per bed per year and allocation varies between different tiers of facilities. However, no amount is allocated for the outpatient visitors served at the inpatient facilities. Outpatient facilities receive lump sum amount of MSR.

MSR allocation between 1998-2005 increased in nominal terms but reduced in real terms (Table 4), indicating that inflation was not considered while revising the allocation amount. This was highlighted in PER 2006-07 (HEU 2010). However, inflation was considered while making changes in the amount later as evident in Table 4. Between 2005 and 2015 allocation increased both in nominal as well as in real terms.

Table 4: Per bed MSR allocation to district and upazila hospitals

Type of facility	Current Taka			Constant Taka		
	1998	2005	2015	1998	2005	2015
District hospital	22,000	25,000	125,000	28,916	23,481	72,017
Upazila Health Complex	15,000	18,000	75,000	19,093	15,674	43,210

Note: Constant Taka (2005-06=100)

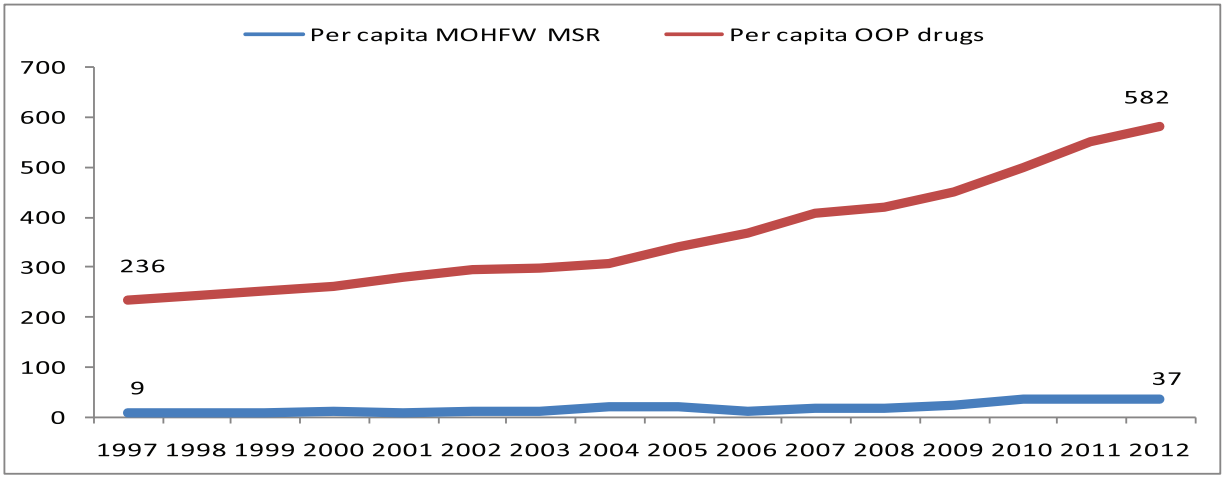
The MOHFW spending on medicines and medical supplies was Taka 1088 crore in 2014, which increased from Taka 76 crore in 1997. During 1997-2003, on average 94% medicines and medical supplies were financed by Revenue budget. From 2004 onward consistently Development budget has been financing a substantial portion (average 44%) of the MOHFW expenditure on medicines and medical supplies.

Since 2010, medicines and medical supplies averaged at 12% of the total MOHFW expenditure. On the other hand households' spending on drugs averaged at 65% of out-of-pocket (OOP) payment[7] (MOHFW 2015) since 2010.

In 1997 MSR spending per capita was only around 4% of per capita households' OOP spending on drugs in real terms and the ratio increased to 6% in 2012 (Figure 12). Between 1997-2012 per capita MSR increased fourfold while per capita OOP on drugs doubled. However, the gap between the two per capita amounts has widened over time (Figure 13).

[7] According to BNHA 1997-2012 estimates, in per capita terms households' OOP was US$ 17 (63.3% of US$ 27 per capita THE) and government spending was US$ 6 (23.1% of THE). .

Figure 12: Real per capita MOHFW MSR spending and OOP on drugs, 1997-2012



Note: Constant (2005-06 = 100)
MSR includes medicines and other medical and non-medical supplies while OOP on drugs include only medicines
Sources: BNHA 1997-2012 (MOHFW 2015) for OOP and CGA for MSR expenditure

Shortage of essential drugs at MOHFW health facilities is substantial. According to the Bangladesh Health Facility Survey 2014 (World Bank 2012), at least six essential medicines[8] were available at 65% of district and upazila level hospitals, 57% union level facilities, and 71% community clinics. Low MOHFW spending on medicines and medical supplies explains the shortages of essential drugs at health facilities[9]. These compel households to spend a large amount on drugs.

Contraceptives

Contraceptives procured include spending on short acting ones such as oral pills and condoms (code 4865) as well as long acting contraceptives such as IUD and Norplant (code 4876). The procurement value of contraceptives increased from Taka 0.39 crore in 1997 to Taka 240 crore in 2010 to Taka 360 crore in 2014. The share of long acting contraceptives varied between 21% and 43% during 2009-2014. Although Development budget is the dominant source of its finance, Revenue budget has financed 10-38% of contraceptive procurement since 2010. This reflects GOB's commitment to the further reduction of TFR using a more sustainable source of finance.

Diet

In 2014, Taka165 crore was spent on procurement of diet for hospital patients in 2014 that increased from Taka 90 crore in 2010 in nominal terms. In 1997, the spending on diet was Taka 22 crore in nominal terms. At the facility level per bed diet allocation is Taka 125 per day (about Taka 42 per meal). However, after food price inflation adjustment daily per bed diet allocation stands at Taka 58 in 2014 bringing down per meal allocation to Taka 19, which is clearly inadequate for three quality meals.

[8] Six essential medicines include amoxicillin tablet/capsule, amoxicillin syrup, cotrimoxazole, paracetamol tablet, paracetamol syrup, iron tablet with or without folic acid, and vitamin A capsule

[9] At MOHFW facilities medicines (if in stock) are provided free to patients

Revenue budget has been the predominant source of financing (ranging from 89%-99%) during 1997-2014. Additional beds due to up-gradation of facilities receive allocation for diet from Development budget through two operation plans - Hospital Services Management and Essential Service Delivery (ESD).

Spending for diet was further analyzed at the facility level especially for Upazila Health Complexes (UpHC). Considering the daily per bed allocation of Taka 125 for diet, UpHCs required Taka 62.8 crore for diet for its patients on occupied beds[10] in 2012. In reality UpHC spent around Taka 30.8 crore[11]in 2012, which is less than half of the required amount. This means either less than three meals were supplied to occupied beds or less than half of the occupied beds were provided with three meals. Either way this has implications for quality of meals provided as well as extra costs for the inpatients at the UpHC.

Cleaning

Spending on cleaning was Taka 26 crore in 2014, which increased from Taka 14.9 crore in 2010 that grew from Taka 0.7 crore in 1997. Cleaning expenditure constituted less than 0.5% of MOHFW recurrent expenditure in 2014 while in 1997 it was 0.05%. Such a small amount of money explains why MOHFW health facilities that include 583 hospitals and more than 13,000 health centers cannot maintain cleanliness. Development budget financed 23% of this recurrent line item in 2014.

Repair and maintenance

Spending on repair and maintenance was Taka 256 crore in 2014, which grew from Taka 188 crore in 2010 that increased from Taka 65 core in 1997. In 2014, the spending on this recurrent line item represented 3% of the total MOHFW expenditure (4% of MOHFW recurrent spending). Spending on this line item includes repair and maintenance of (i) building, (ii) structure, (iii) machineries and equipment, (iv) furniture and fixture, and (v) motor vehicles. MOHFW operates 583 hospitals and more than13,000 health centers besides other offices and institutes. These huge infrastructuresare equipped with 41,655 beds, numerous furniture and fixture, many machineries and equipment, and motor vehicles including ambulances. Only 3% of the MOHFW expenditure for repair and maintenance seems inadequate.

Training

MOHFW spending on training constitutes a very small portion of the overall MOHFW expenditure. During 1997-2014 on an average it represented 1% of the MOHFW recurrent expenditure. In 2013, Taka 13.4 crore from Revenue budget and Taka 195 crore from Development budget was spent on training according to the CGA data. The Annual Program Implementation Report (APIR) 2013 based on the data from LDs reported that Taka186.1 crore was spent on training. Many overseas as well as local training are financed through DPA that has no reflection in the CGA data while LDs report includes DPA. Therefore, the LD reported figure being less than the CGA figure is counterintuitive.

[10]There were 17645 functional beds in 2012 and average bed occupancy was 78% in 2012.

[11]Taka 28.6 crore on diet from Revenue budget allocation and Taka 2.2 crore from the ESD Operational Plan

Seminar and conference

Sometimes training workshops are billed as seminars and conferences. Seminars and conferences have been entirely a Development budget financed activity since 2003. Seminar and workshop spending in 2013 was Taka 69.5 crore as recorded by the CGA data while APIR 2013 reported Taka 72.2 crore. In this case, as expected CGA figure is less than the LD reported figure.

Grants-in-Aid

MOHFW spending on Grants-in-Aid grew from Taka 49 crore in 1997 to Taka 164 crore in 2010 and Taka 132 crore in 2014, representing 4%, 4% and 2% of MOHFW recurrent spending respectively. This recurrent line item is financed by both Revenue and Development budget. This line item refers to government grants to autonomous organizations and NGOs. In 2012, 96% of Grants-in-Aid were allocated for nonspecific categories such as 'Grant-in-Aid General' (64%), 'Other' (31%) and 'Special' (1%). The rest was provided as capital grant, scholarship and stipend grant. There is no policy or guidelines for allocating grants-in-aid to autonomous bodies or NGOs. Also there is no mechanism for monitoring the use of Grants-in Aid by the recipient organizations.

Unallocated block allocation

Unallocated block allocation is entirely financed from Development budget. Prior to 2006, unallocated block allocation was not significant as proportion of development or recurrent spending. MOHFW spent Taka 36 crore as unallocated block allocation in nine years during 1997-2005. However, in 2006 the amount soared to Taka 706 crore then in 2009 it reduced to almost half to Taka 327 crore. In 2014, spending increased to Taka 551 crore representing 8% of recurrent expenditure[12]. From the data it is not possible to track on what activities the amount was spent.

4.2.1.3 Expenditure by provider

Analysis of spending by provider shows administration constituted 16% of MOHFW expenditure while public health program accounted for half as much in 2012. Spending at facilities at upzila and below represented 49% (Table 5) of MOHFW expenditure, which increased from 44% in 2010.

One of the HPNSDP Results Frame Work indicators is 'proportion of MOHFW budget allocated to upazila level or below' and the target is set at 60% by 2016. It is not possible to estimate as Revenue budget is allocated to facilities/institution while Development budget is allocated to Operational Plans (OPs) and OPs do not show allocations to facilities or to geographical locations (i.e. district or upazila). Information received from the Line Directors (as requested by HEU) is incomplete. In 2012, development expenditure up to upazila level could be tracked for 69% of MOHFW development expenditure, which may not be a true portrayal of what was indeed spent at upazila level and below.

[12] However the data from 2012 shows that of the unallocated block allocation spending 90% was incurred by DGHS, 8% by DGFP, and 1% each by Secretariat and Directorate of Nursing.

Table 5 : Proportion of MOHFW expenditure by providers

	2010	2011	2012
Upazila and below level facilities	44%	47%	49%
District level facilities	9%	10%	8%
Medical college hospital	6%	6%	6%
Specialized	3%	5%	4%
Mental health	0%	0%	0%
NGO	1%	1%	1%
Alternate medical care	0%	0%	0%
Education, training and research	4%	5%	5%
Other Outpatient facilities	1%	1%	1%
Public health program	10%	8%	8%
Administration	21%	17%	16%
Autonomous organizations	1%	1%	2%
Other	0%	0%	0%

Sources: CGA data and LDs' data

In summary, the share of medical equipment in MOHFW capital expenditure is growing while share of construction is falling. The share of salary and allowance has dropped leaving more resources for other recurrent line items. Per capita spending on MSR was only around 6% of what households spent on medicines per capita in 2012. Spending on cleaning (0.5%) and repair and maintenance (3%) as a share of MOHFW expenditures seemed inadequate. Diet allocation is not sufficient for three quality meals. Unallocated block allocation since 2006 as been significant and it is difficult to track the reason for such spending. There is no guideline for allocating grants-in-aid to autonomous organizations and NGOs. Both Revenue and Development budget finance recurrent line items such as MSR, diet, etc. raising concerns for duplications and inefficiency.

4.3. Comparative analysis of sector wide programs

This PER on health covers the period spanning from 1997-2014. This period includes two years (1996/97-1997/98) preceding the sector wide program (Pre SWAP), the first sector wide program Health and Population Sector Program (HPSP) spanning from 1999-2003, the second program Health, Nutrition and Population Sector Program (HNPSP) implemented during 2004-2011 and the first three years of third sector program Health, Population and Nutrition Sector Development Program (HPNSDP) covering 2012-2016. This section examines and compares trends and pattern of budget and expenditure between different sector wide programs.

Sector Program budget

Since HPSP the size of program budget has increased about fourfold during HPNSDP (Table 6), each program was revised at least once. The HPSP budget was reduced by 25% while the HPNSDP budget was reduced by 11% during revision. However, the HNPSP budget increased almost fourfold compared to the original budget as program period was extended to 8 years (Table 6).

Although MOHFW was generously funded by DPs, project aid (PA) as a proportion of the total program budget has declined. Share of PA in total revised program budget declined from 39% in HPSP to 27% in HNPSP to 22% in HPNSDP (Table 6). Sector program experienced some uncertainties regarding DP funds. Disbursement of DP funds got delayed or reduced compared to the committed amount. For example, although HNPSP started in July 2003 (FY2003/04) DP funds were

made available in December 2005 (FY2005/06). In the middle of HPNSDP implementation Australia has left the health sector due to change in their policy globally. Therefore, its disbursement is substantially smaller than the commitment.

Table 6 : Sector wide programs' budget allocation and share of GOB contribution

	Taka in crore						Percentage of PA in total	Percentage of PA in Development	Total in USD billion
	Total (Revenue+ Development)	GOB Revenue	Total development	GOB	Project Aid (PA)	Direct Project Aid (DPA)			
HPSP original budget (1999-2003)	15,314	5,491	99,873	5,078	4,795	n.a	31%	49%	3.4
HPSP revised budget (1999-2003)	11,419	5,403	6,016	1,591	4,425	n.a	39%	74%	2.5
HPSP Expenditure (1999 2003)	10,516	5,403	5,113	1,510	3,603	n.a	34%	70%	
HNPSP Original (2003-06)	9,410	4,8 10	4,600	1,400	3,200	n.a.	34%	70%	
HNPSP 2nd revised (2003-11)	37,384	20,818	16,566	6,299	10,267	3.994	27%	62%	5.4
HNPSP Expenditure (2003-2011)			13,541	5,385	8,156			60%	
HPNSDP Original (2011-16)	56,994	34,817	22,177	8,604	13,573	4.875	24%	61%	7.7
HPNSDP revised (2011-16)	50,896	31,357	19,359	8,243	11,297	2,678	37%	58%	6.5

Sources : PIP and Revised PIP (RPIP) of HPSP, HNPSP and HPNSDP

Sector programs have always been aligned with national policy goals and priorities. Sector programs budgets were analyzed to assess whether budget allocation reflects program priorities. Maternal and Child Health (MCH) and family planning received importance in sector programs in alignment with the Five Year Plans and Millennium Development Goals. It is estimated that RMNCAH[13]received around 49% of the HPSP budget while it received 34% and 31% during HNPSP and HPNSDP respectively (for OP wise budget see Annex Tables 6-8).

Nutrition was included in the sector program during HNPSP and received 8% of its budget. Share of nutrition was 5% in the HPSP budget and 7% in the HPNSDP budget. Although physical infrastructure was allocated around 5% in HPSP, its share increased to 23% during HNPSP and slightly dropped to 22% during HPNSDP.

MOHFW budget

Revised revenue allocation to MOHFW as a proportion to national revised Revenue budget has decreased in successive sector wide programs (Figure 13). However, MOHFW revised Development budget as a ratio to national revised Development budget fluctuated and the ratio was highest during HNPSP.

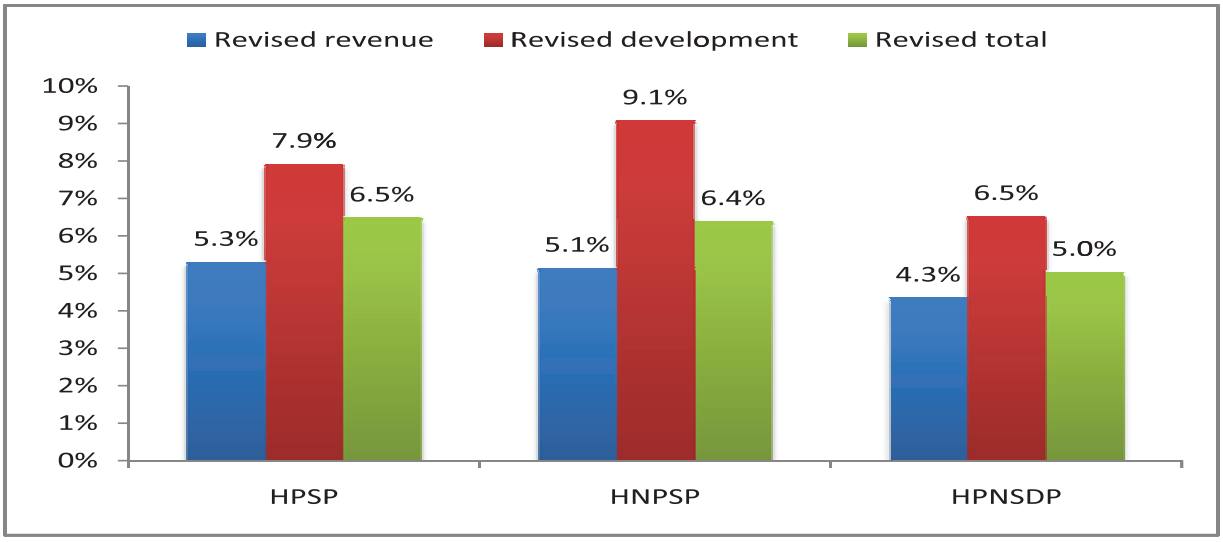
Box1: Proportion of PIP allocation to ESP and ESD

Essential Service Package (ESP) was a major policy reform measure of HPSP and duly received a major share (60%) of the program budget. During HNPSP, ESP was replaced with Essential Service Delivery (ESD). ESP and ESD are not comparable. Even ESD of HNPSP was different from ESD of HPNSDP. Maternal and Child Health (MCH) component was included partly under ESD of HNPSP but was excluded under ESD of HPNSDP. ESD was allocated 17% of the HNPSP budget, whereas only 14% during HPNSDP.

To compare with ESP allocation in HPSP, relevant OPs covering the same areas as ESP (reproductive health care; child health care; communicable disease control; limited curative care; and behavior change Communication) under HNPSP and HPNSDP were combined. The combined OPs received around 46% of the program budget during HNPSP and also during HPNSDP.

[13]MCH and family planning are included in Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCAH)

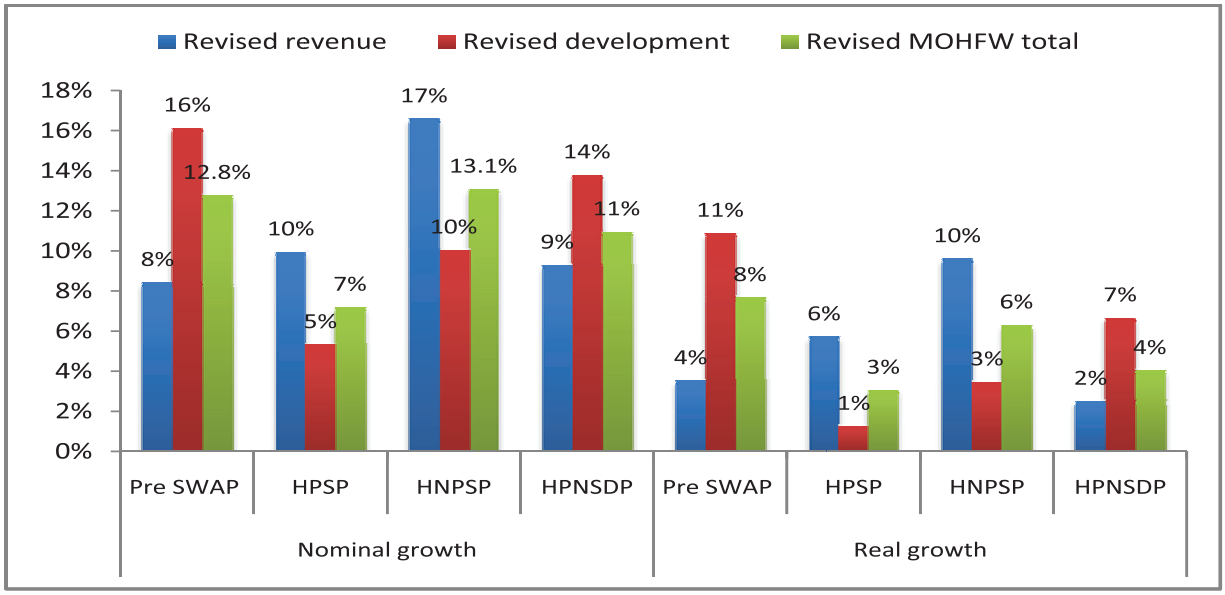
Figure 13 : Share of MOHFW revised in National revised budget, 2000-2014



Note: Both HPSP and HPNSDP include 4 years data

MOHFW revised budget grew at the fastest pace in Pre SWAp period, followed by HNPSP in real terms (Figure 14). Both nominal and real growth rate of revised Revenue budget was highest during HNPSP. In case of Development budget both nominal and real growth was highest in Pre-SWAp period, followed by HPNSDP.

Figure 14 : Average nominal and real growth of MOHFW revised budget

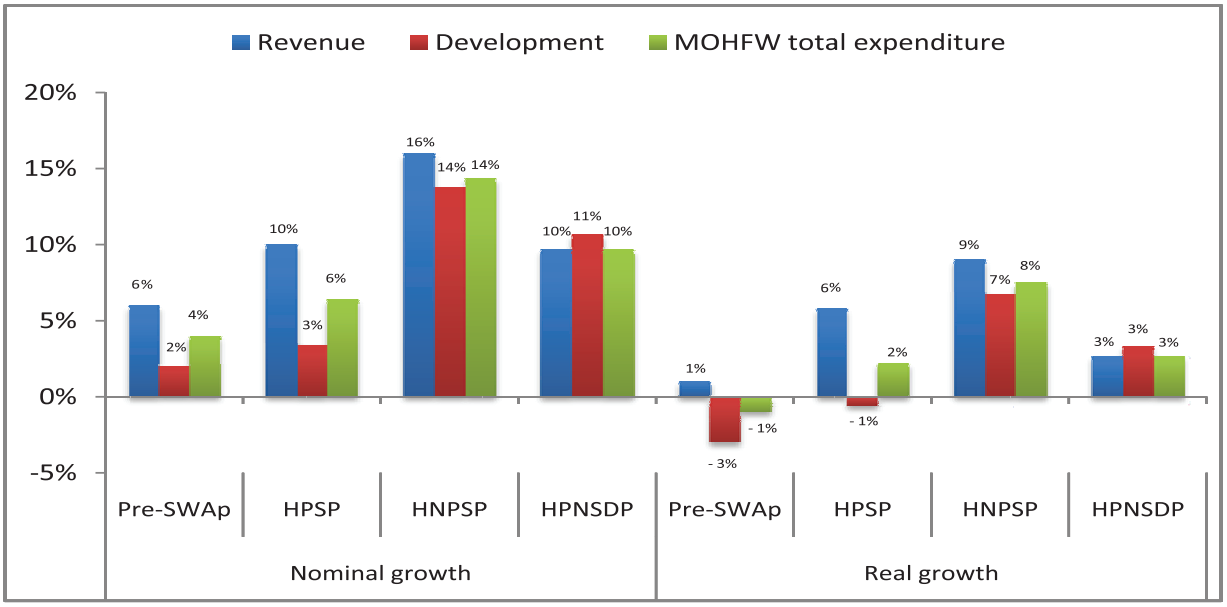


Notes : Revenue budget excludes pension Real growth rate estimated at 2005-06 prices

MOHFW expenditure

HNPSP and HPNSDP experienced positive growth in revenue as well as development expenditure both in nominal and real terms (Figure 15). However, both revenue and development expenditure grew at a faster pace during HNPSP period. Development expenditure experienced a negative growth in real term during Pre-SWAp and HPSP.

Figure 15 : Average nominal and real growth of MOHFW expenditure in the three sector programs



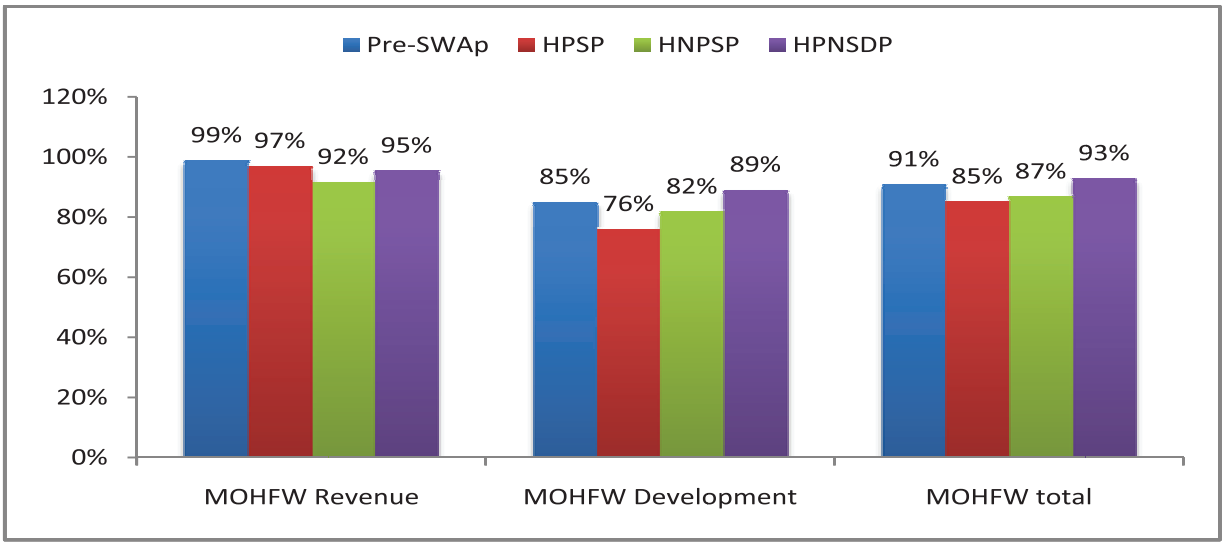
Notes: Revenue expenditure excludes pension

Pre SWAP period include only two years (1997 and 1998) and HPNSDP includes 3 years (2012-2014)

Revised budget execution

Overall revised budget execution rate has been improving in each successive SWAp. HPNSDP recorded highest execution rate (89%) for Development budget (Figure 16). However, the execution rate for revised revenue (95%) still lags behind the Pre SWAp rate (99%)[14]. An increased execution rate of a three time larger budget indicates that absorption capacity has improved.

Figure 16 : Comparison of average MOHFW budget execution rate, 1998-2014



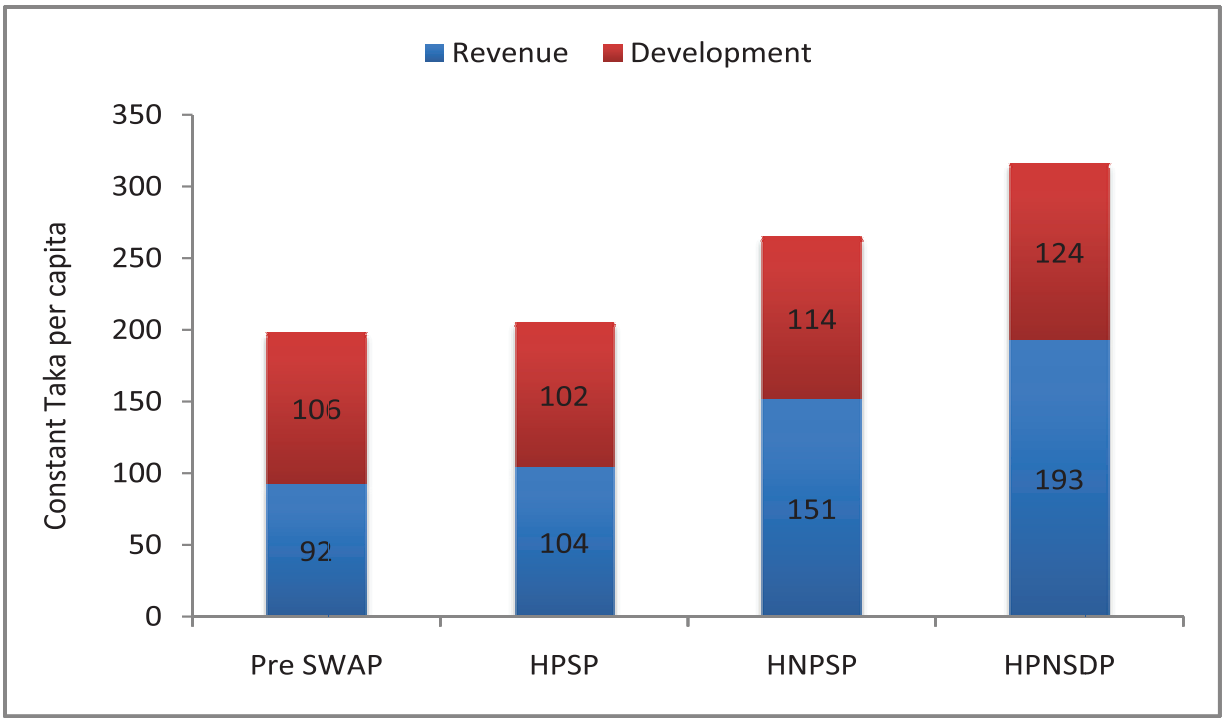
Note : Revenue budget and expenditure both exclude pension

[14] Operational Plans does not include Revenue budget hence Revenue budget execution remains outside the expenditure review process under sector wide program.

Per capita MOHFW spending

Average per capita MOHFW spending in real terms increased in successive sector wide programs (Figure 17). Average per capita revenue spending doubled while average per capita development spending increased by 17% during the period.

Figure17 : Average real per capita spending during 1997-2014



Note : Constant Taka (2005-06 = 100)

Projects outside the sector program are on the rise both in terms of number and size of the budget, contrary to the sector wide approach. In 1999 at the beginning of the HPSP there were no investment projects outside SWAp. However, at the end of the HPSP in 2003 Annual Development Program (ADP) included two investment projects outside the HPSP equivalent to 7% of the HPSP budget. In 2004, HNPSP started with 9 projects outside SWAp and at the end of the HNPSP there were 11 projects representing about 25% of the HNPSP budget. Likewise the current program started with 19 investment projects worth 27% of the HPNSDP budget.

In summary, during sector wide programs although program budget became bigger in absolute terms, sectoral share has been declining. Priority areas such as maternal and child health received greater allocation in all three programs. Revised Development budget execution rate has been improving in successive SWAp, but the rate remained below 90%. An increased execution rate of a larger budget indicates improved absorption capacity. Number of projects outside sector program has been on the rise in successive sector programs, which is contrary to the sector wide approach.

5. Non-MOHFW expenditure[15]

All other ministries excluding the Ministry of Health and Family Welfare (MOHFW) that incurred spending on health are grouped as Non-MOHFW. It is to be noted that Non-MOHFW expenditures are analyzed for 1997-2012 as data for later years is not available.

Among other ministries the Ministry of Defense operates combine military hospitals, medial college and nursing training institutes while the Ministry of Home Affairs runs hospitals for police, border guards and prisons. The Ministry of Social Welfare provides funds mostly to private not-for-profit specialized hospitals for operations, construction, expansion and modernization while the Ministry of Railway operates hospitals for its employees and their families. The Ministry of Local Governments is responsible for providing primary health care in urban areas. This ministry provides primary health care in selected urban areas through contracted NGOs. Local Government Bodies such as City Corporations and Municipalities also spend on health related activities. Some City Corporations operate health facilities.

In 2012, a total of Taka 7512 crore was spent on health by all ministries, of which Non-MOHFW ministries spent Taka 496 crore representing around 7%. Among Non-MOHFW ministries, the Ministry of Defense (2%), the Ministry of Social Welfare (1.5%), the Ministry of Local Government, Rural Development and Cooperatives (1.1%) and the Ministry of Home Affairs (1%) are notable.

Non-MOHFW spending on health was financed from Revenue and Development budget. During 1997-2012 Development budget on average financed 55% of the total Non-MOHFW spending, which is comparable with the average for MOHFW revenue spending (54%). The share of Revenue budget increased to 50% in 2012 from 22% in 1997.

Nominal growth in Non-MOHFW spending on health outpaced nominal growth in MOHFW spending. Non-MOFW revenue spending grew at an average rate of 42% while MOHFW revenue spending grew at an average rate of 12% between 1997 and 2012. Similarly Non-MOHFW development spending grew on average by 27%, which is 3 times faster than MOHFW development spending growth.

Non-MOHFW spends mostly on MSR and vaccines, constructions and grants-in aid[16]. MOHFW and Non-MOHFW health expenditure was combined and examined. Table 7 shows that 28% of spending on MSR and vaccines, 27% of spending on construction, and about one-fifth of grants-in-aid were financed by Non-MOHFW.

[15] Tahmina Begum contributed to this section

[16] Grants-in-aid refers to GOB grants to Autonomous organizations and NGOs

Table 7 : Comparison of MOHFW and Non-MOHFW expenditure on selected line items

	Expenditure in 2012 (current crore Taka)			
	MOHFW	Non-MOHFW	All ministries	Non MOHFW share
Medical and Surgical Requisites (MSR)	572	65	638	10%
Vaccine& medicines	272	60[17]	332	18%
Medical equipment	445	25	470	5%
Constructions	385	145	530	27%
Grants–in–Aid	182	44	226	19%
Training	138	2	140	1%
Diet	99	2	101	2%

Data source: CGA

Non-MOHFW ministries' spending on health makes up less than 10% of the government health spending. However, their contribution to financing of some important line items is significant. Currently, other ministries' expenditure is not taken into consideration during health sector program planning or budgeting.

[17] Vaccines and medicines (code 4862) were procured by Ministry of Defense besides MOHFW.

6. Assessing efficiency in public expenditure[18]

This section examines public expenditure to understand whether public expenditure management helped improve efficiency in service delivery. Efficiency is examined in budget planning and budget execution, efficiency in service delivery at facility level, efficiency in utilizations of inputs (Human resources, medical equipment, etc.) at the district and upazila level facilities.

6.1 Efficiency in budgeting and planning

The original budget gets revised half way through the fiscal year. Even then MOHFW cannot fully utilize its revised budget. There has been a chronic under-spending of the MOHFW revised budget during 1998-2014 (Annex Table 9). Under-spending means missed opportunities for MOHFW to achieve more.

The main reasons for under-spending include delay in fund release[19], lengthy procurement processes, weak capacity in financial management as well as in procurement, etc. These factors have been highlighted in the Annual Program Reviews (APR) in each sector program.

Line item (economic classification) wise budget execution is also examined. Table 8 clearly indicates a weak capacity in budget planning and execution. Predictable recurrent items such as salaries, cleaning, taxes, and training show fluctuations in executing the revised budget. The same line item shows overspending in one year and under-spending in another year.

Table 8: Average Revenue budget execution for selected line items, (FY 2006-2010)

	Trend	2005-06	2006-07	2007-08	2008-09	2009-10	Average budget execution
Salaries and allowances		104%	96%	92%	94%	87%	95%
MSR and vaccines		95%	91%	88%	67%	34%	75%
Training		38%	80%	101%	98%	69%	77%
Diet		89%	84%	89%	58%	50%	74%
Cleaning		106%	107%	97%	86%	57%	90%
Repair and maintenance		96%	94%	71%	82%	14%	71%
Medical equipment		23%	24%	67%	100%	20%	47%
Taxes		57%	48%	53%	35%	21%	43%
Utilities		90%	91%	81%	77%	61%	80%
Fuel (all)		96%	114%	82%	86%	46%	85%

Data source: Budget Wing, MOF

Budgeting has a number of weaknesses. Budget is bifurcated into Revenue and Development which undermines efficiency in budget planning. Revenue budget is allocated to entities/institutions/facilities while Development budget is allocated to programs and projects. Revenue budget is not linked to sectoral strategies and priorities, and remains largely outside the sector program particularly at the

[18] Dr Nasrin Sultana (IHE) and Tahmina Begum contributed to this section

[19] The first quarter fund is released in August or September while the fourth quarter is released after submission of the Statement of Expenditure (SOE) of the second and the third quarter.

Operational Plan (OP) level. OP allocation reflects only Development budget. Unless the Revenue budget included in sector program planning it would be difficult to make budget responsive to needs.

Furthermore, two budgets are prepared by different units at every tier and also at different times of the year (Annex Tables 10-12). Preparation of next year's Revenue budget starts on 31 August while preparation for Development budget (ADP) starts in mid February and preparation of MTBF starts in mid-August. Different timing leaves little time for proper budget planning and coordination at various levels and also impedes joint planning of revenue and Development budget.

Financing of same line items by both budgets

Both Revenue and Development budgets finance several recurrent line items, such as, MSR, diet, repair and maintenance etc. (discussed in Section 4.2). This has implications for efficiency in budgeting.

Health facilities receive MSR from different sources. For example, Upazila Health Complexes (UpHC) in addition to per bed per year MSR allocation from non-Development budget also receives allocation from the Secretariat (MSR block allocation). Secretariat allocates to UpHC Taka 10,500 per bed per year to pay arrear on account of MSR and also Taka 5,000 per bed per year for x-ray and imaging films and chemical reagents. Furthermore, UpHC also receive MSR from Development budget through Operational Plan (OP) "Essential Services Delivery" (ESD). Allocations from Secretariat and OPs to UpHC are not captured against UpHC rather captured against Secretariat and respective OPs.

In order to improve efficiency in budgeting and also in resource utilization the recurrent line items such as MSR and diet need to be financed from the Revenue budget.

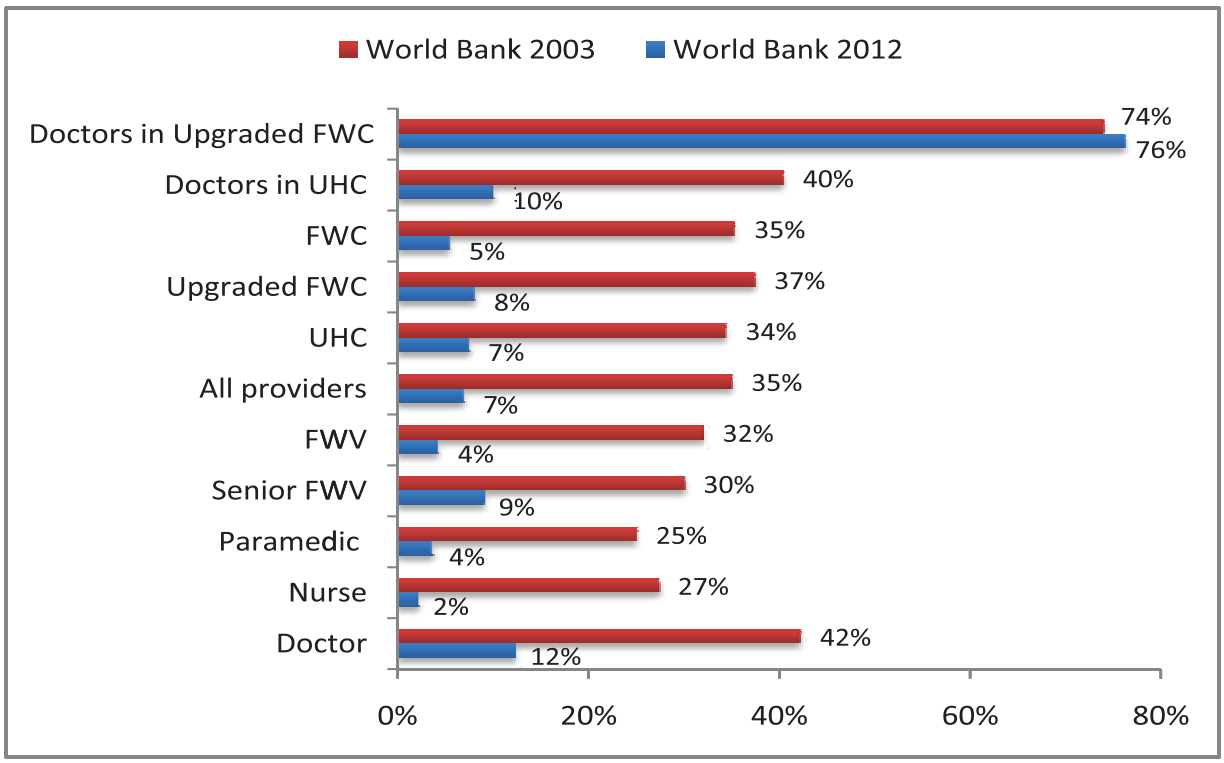
6.2 Efficiency of Inputs

6.2.1 Absenteeism among healthcare providers

Absenteeism is an important issue from efficiency as well as governance perspective. Apparently being absent at workplace is a common practice across all providers and at all level of facilities at upazila and below (World Bank 2003 and World Bank 2012). It is alarming that absenteeism among the doctors is higher than the other providers such as nurses, Family Welfare Visitors (FWV), and paramedics (Figure 18).

The figure of the nex page reveals a noticeable improvement as absenteeism had been reduced across all facilities (at upazila and below) between 2003 and 2012. However, absenteeism among doctors at upgraded FWC in fact increased during the same period. This poses questions about the appropriateness of deploying doctors at union level facilities. Data on attendance of providers at the facility level is not collected regularly.

Figure 18 : Comparisons of absenteeism across providers and facilities



Notes : Paramedics include Sub Assistant Community Medical Officer (SACMO) and Medical Assistant (MA). Upgraded FWC and FWC both are union level outpatient facilities.

Sources : World Bank .2003 and World Bank. 2012.

Salaries and allowances accounted for 75% of the UpHC (UHC in the figure) expenditures. Absenteeism among doctors (10%) and other providers (5%) at UHC was 7.4% according to the Bangladesh Health Facility Survey 2011 (World Bank 2012). Addressing absenteeism among all providers at UpHCs would lead to efficiency gains equivalent to about 4% of UpHC expenditure.

6.2.2 Use of medical equipment

The Bangladesh Medical Equipment Survey reported that between 2008 and 2012 proportion of unutilized equipment dropped from 57% to 46% indicating 11% in efficiency gains (PMMU 2012).

Medical equipment worth of Taka 1,728 crore was procured during 2004-2011. The value of unutilized equipment is estimated to be Taka 1,037 crore assuming unutilized equipment represented 60% of the procurement value. Therefore, efficiency gains of 11% represents Taka 114 crore, which is 9% of capital expenditure and 2% of total MOHFW expenditure in 2011. At present, there is no system to track medical equipment from procurement to installation to utilization.

6.3 Efficiency in service delivery

The largest part of public expenditure on health is on hospitals. Hence efficiency of service delivery at hospitals is analyzed. The upazila health complexes are the first level of hospitals for the rural population and account for almost one half of all patient services. Hence, efficiency was examined for UpHCs.

Rannan-Eliya et al (2012) compared inpatient performance of UpHCs in 1997 with that in 2010 in a Lasso diagram (Figure 19). The Lasso diagram assesses relative performance of the hospitals by plotting the bed turnover rate (i.e., the number of admissions per bed per year in vertical axis) against the bed occupancy rate (horizontal axis). The solid vertical and horizontal lines indicate the mean values for bed occupancy and turnover rates respectively.

Facilities lying along any straight line that passes through the origin have the same average length of stay (ALOS). Facilities above the upper diagonal ray have ALOS shorter than 2.5 days, and those below the lower diagonal ray represent facilities with ALOS longer than 5.4 days. Facilities in between the two rays have ALOS between 2.5 and 5.4 days (Figure 19).

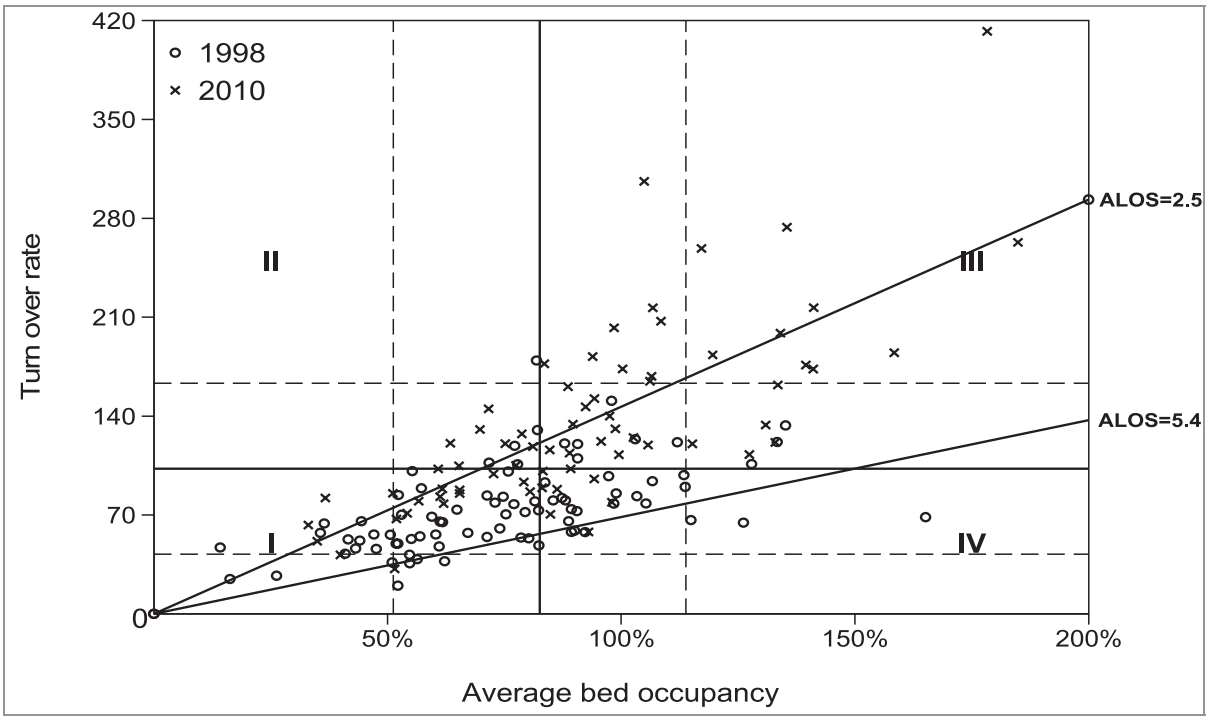
Box 2: Lasso diagram explanation

In Lasso diagram facilities are divided into four quadrants:

- Quadrant I (lower left): These hospitals with low bed turnover and low bed occupancy rate are considered inefficient, indicating a surplus of hospital beds relative to the current level of utilization. This underutilization of hospital beds, whether it is due to low demand as a consequence of individual, household and systemic level barriers or less need for hospitalization or inefficient hospital size, merits further investigation.
- Quadrant II (upper-left): These hospitals with high bed turnover and low bed occupancy rates are not much efficient. ALOS is shorter suggesting unnecessary hospitalizations for minor conditions which might have been managed in outpatient care, an oversupply of beds, or the use of beds for simply observing patients;
- Quadrant III (upper-right): Hospitals with high bed turnover and high bed occupancy rate are considered efficient; ALOS is also shorter.
- Quadrant IV (lower-right): Hospitals with low bed turnover and high bed occupancy rates fall in this quadrant. ALOS is longer in these hospitals, suggesting these either are serving patients with more serious or chronic illnesses or have an unnecessarily long stay.

As (Figure 19) illustrates, more UpHC are in quadrant III in 2010 compared to 1997. This means that both bed turnover and bed occupancy rates increased at UpHCs. Almost one-half are in quadrant III. Average bed turnover rate increased to 119 from 74 in 1997, average bed occupancy rate increased to 90% from 75% and ALOS declined to 2.8 from 3.9 during 1998-2010 (Rannan-Eliya et al 2012). This shows a significant improvement in overall efficiency at UpHCs compared to 1998.

Figure 19 : Inpatient performance of Upazila Health Complexes, 1997-2010



Note : Dotted lines are one standard deviation each from the respective means.

Source : Rannan-Eliya et al (2012) based on Facility Efficiency Study 1998 and 2011

Data Envelopment Analysis (DEA)

Data Envelopment Analysis (DEA) measures relative efficiency of district level hospitals by examining the relationship between inputs (e.g. human resource, medical supplies etc.) and outputs (e.g. outpatient visits, bed occupancy rate, etc.).

The DEA model in this analysis included three inputs (expenditure on salary and allowances, expenditure on MSR and number of beds) and three outputs (total outpatient visits, total inpatient and bed occupancy rate) for district hospitals[20]. The model is designed based on constant return to scale (CRS), and input-oriented TE (technical efficiency) as in health care changing the inputs is much easier and feasible for the managers, than the outputs (Mehrtak et al 2014).

DEA and Lasso Results

As shown in Table 9, DEA reveals that 32% district level hospitals are efficient with technical efficiency score between 0.81 and 1. About 41 % of the district hospitals are relatively efficient; and 27% are entirely inefficient (see Annex Tables 13 for details). According to Lasso model 39% of the district hospitals are efficient being in quadrant III while 42% are inefficient being in quadrant I. A comparison of results of DEA and Pabon Lasso model reveals thatabout 84% of the efficient district hospitals estimated by DEA are also efficient according to Lasso estimation (quadrant III).

[20] A total of 59 hospitals have been included in the analysis for DEA as well as for Lasso.

Table 9 : Range of Technical Efficiency (TE) score of district hospitals using DEA and Lasso Results

Range of TE score	Explanation	DEA Results	Lasso Quadrant	Lasso results
0.81-1	Efficient	32%	Quadrant III	39%
0.6-0.8	Not much efficient	41%	Quadrant II and IV	19%
<0.6	Inefficient	27%	Quadrant I	42%

Note: For explanation of Lasso see Box 1 Data sources: MIS DGHS and CGA data

Table 9 also shows that efficiency improved between 1997 and 2010 at UpHC level in terms of increase utilization of inpatient services. However, quality remains as a major concern.

6.4 Cost efficiency

Table 10 shows that between 1997 and 2010, a number of key efficiency indicators improved at UpHC level. In real terms recurrent expenditure per facility increased by 55% and unit cost of admission has almost halved while unit cost of outpatient visit reduced by one third. This implies that even at current level of expenditure UpHC can substantially increase service delivery if it continues to improve operating efficiency.

Table 10 : Changes in selected indicators at Upazila Heath Complexes, 1997-2010

	1997	2010
Inputs		
Total recurrent expenditures (current Taka million)	6.28	18.23
Total recurrent expenditures (constant Taka million)	11.71	18.23
Doctors	4.3	6.2
Nurses	6.3	9.5
Outputs		
Admission per year	2,347	4,043
Outpatients per year	50,228	81,431
Unit cost		
Cost per admission (current Taka)	1,938	1,962
Cost per outpatient visit (current Taka)	63	79
Cost per admission (constant Taka)	3,617	1,962
Cost per outpatient visit (constant Taka)	118	79

Source: Rannan-Eliya, et al, 2012

In summary, during 1997-2014 there have been efficiency gains in terms of reducing unit cost, increasing utilization of equipment, reduced absenteeism at upazila level. There is room for further improvement and scope for efficiency gain. Improving efficiency contributes in increasing fiscal space for health.

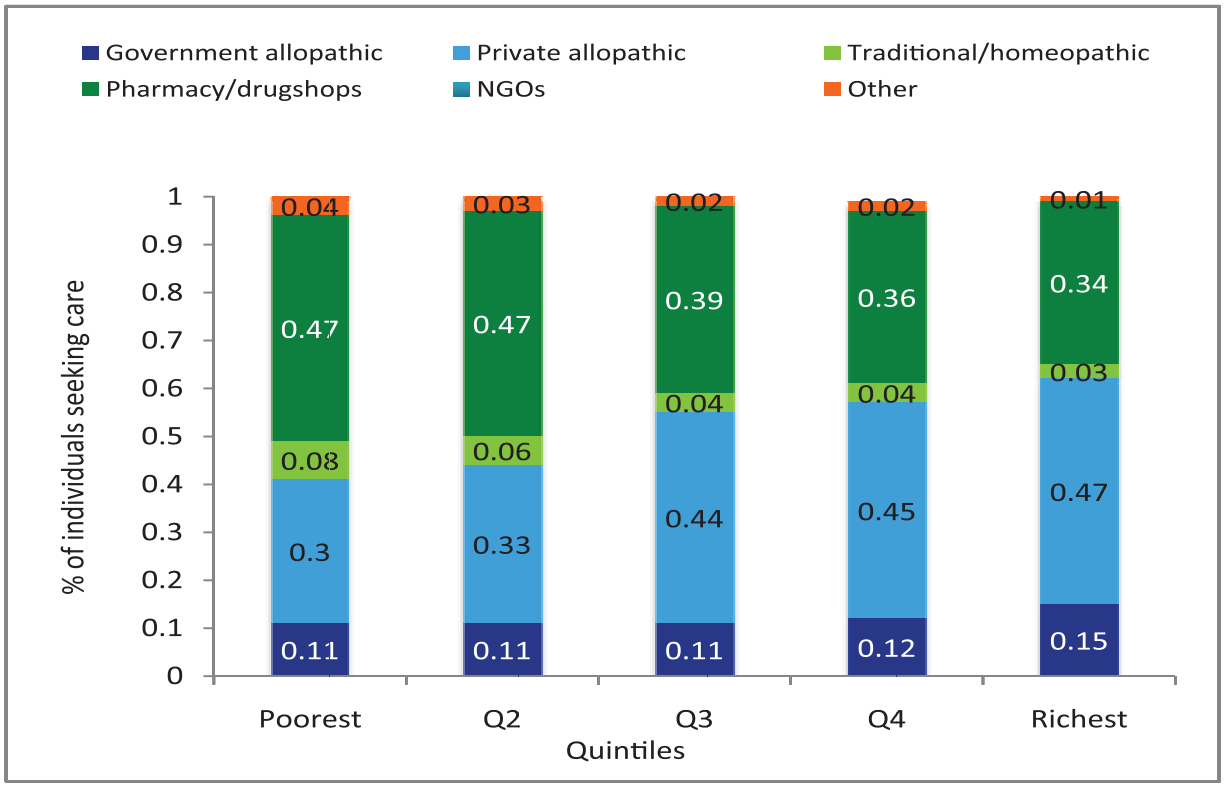
7. Equity in public expenditure[21]

This section examines equity in service utilization and equity in MOHFW expenditure. Gender equity will be analyzed in a separate piece.

7.1 Equity in service utilization

Different household surveys such as Household Income and Expenditure Survey (HIES) and Bangladesh Demographic and Health Survey (BDHS) shows inequity in service utilization. Chandrasiri et al (2012), based on the HIES 2010, showed that only 11% in the poorest quintile sought care from the government providers while 15% in the richest quintile consulted government providers (Figure 20).

Figure 20 : Choice of healthcare providers when individuals are ill by quintiles, 2010



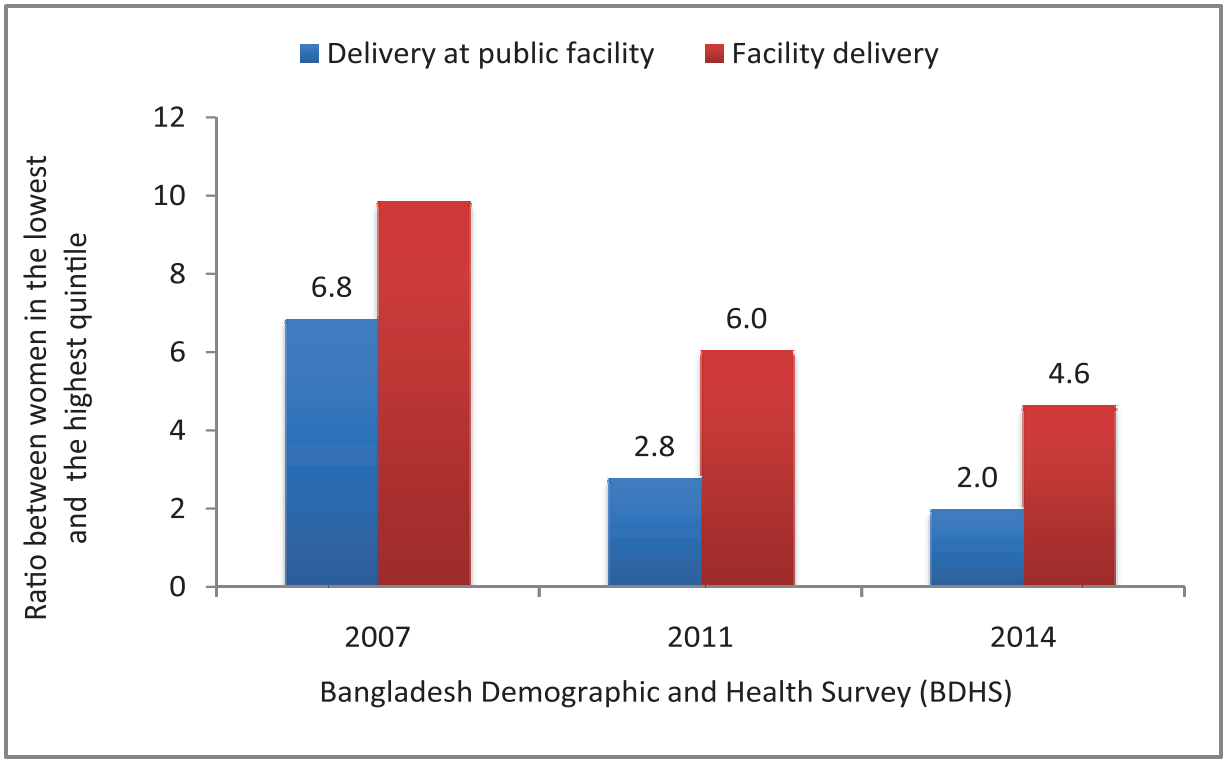
Source: Chandrasiri et al, 2012

All three sector programs placed greater emphasis on maternal and child health services. The Bangladesh Demographic and Health Survey shows inequity in utilization of maternal and child health services. However, some improvements over the years is evident. Figure 21 shows the ratio between women in the lowest and the highest quintile who delivered in any health facility and in a public health facility. The ratio between women in the lowest and the highest quintile dropped from 1:10 in 2007 to 1:5 in 2014. The HPNSDP set the target ratio to less than 1:4. In case of delivery at the public facility the ratio reached the target as it

[21] Dr Mustafa and Tahmina Begum contributed to this section. Special thanks to AFM Azizur Rahman for HIES 2010 quintile analysis and Kibria Nury for the map.

reduced from 1:7 in 2007 to 1:2 in 2014. Concentration index[22] (CI) estimated for 2007 and 2014 also show that public facility delivery was more pro poor in 2014 (CI=0.1194) compared to 2007 (CI=0.3692). CI also shows public facility delivery was relatively pro-poor than overall institutional delivery (CI= 0.2881) in 2014 as well as in 2007 (CI=0.4597).

Figure 21 : Ratio between women in the lowest and the highest quintiles by place of delivery



Sources: Bangladesh Demographic and Health Survey Report 2007, 2011 and 2014

7.2 Equity in public expenditure

A benefit incidence analysis of public subsidies[23] based on HIES 2010 reveals that 17% of the public subsidies were received by the poorest 20% while 24% of the public subsidies went to the richest 20%. This shows public subsidies are not pro poor.

Table 11 : Distribution of public subsidies by quintile

Quintiles	Proportion of public subsidies
Poorest	17%
Second quintile	17%
Third quintile	19%
Fourth quintile	22%
Richest	24%

Data Source: Household Income and Expenditure Survey (HIES) 2010

[22] CI value ranges from a maximum +1 to a minimum -1 and 0 means perfect equity. A negative value is pro-poor, and a positive value is pro-rich in terms of distribution of services. CI is estimated from grouped data without standard deviation.

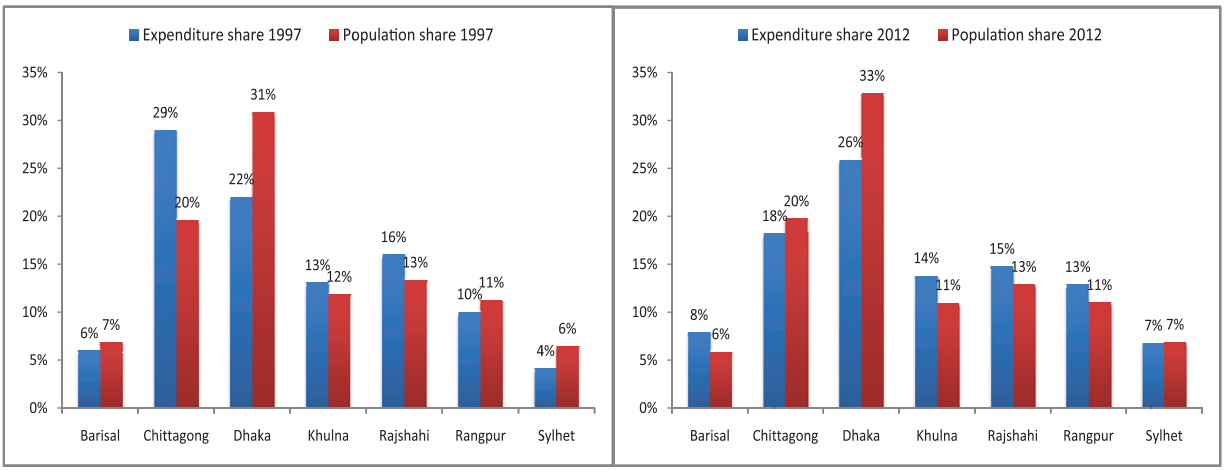
[23] Disaggregation of public subsidies into inpatient and outpatient was not possible due to lack of required data from HIES.

7.3 Equity in MOHFW expenditure

7.3.1 MOHFW expenditure by division

MOHFW expenditure by division during 1997-2012 was compared with the respective share in total population. Figure 27 shows that in 1997 three divisions (Chittagong, Khulna and Rajshahi) received higher share of MOHFW expenditure than their respective share in population. In 2012, Chittagong's share in expenditure was lower than population share while Khulna and Rajshahi continued to have higher share in expenditure compared to their share in population. Position of Barisal and Rangpur improved in 2012 as these two divisions received higher share of expenditure than corresponding population share (Figure 22).

Figure 22 : Division share in MOHFW expenditure and population, 1997 and 2012



Sources: CGA data and BBS Statistical Yearbook various years for divisional population

Per capita MOHFW expenditure in real terms increased more than two fold in Sylhet and Barisal and almost doubled in Rangpur between 1997 and 2012 (Table 12). On the other hand it reduced by 5% in Chittagong during the same period. Chittagong had the lowest incidence of poverty and Rangpur had the highest incidence of poverty, followed by Barisal and Sylhet in 2010 (BBS 2011). Although Revenue budget allocation is human resource and bed capacity driven, it appears that divisional expenditure was to some extent aligned with changes in poverty incidence in division. Perhaps it was due to Development budget allocation as some OPs have given priorities to poorer upazilas while expanding certain activities (e.g. nutrition, maternal voucher etc.).

Table 12: Per capita (constant 2005-06=100) MOHFW expenditure by division, 1997-2012

	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	National
Year/Trend								
1997	176	297	143	222	241	179	128	201
1998	173	290	138	216	235	174	125	195
1999	173	288	136	215	234	173	123	194
2000	234	232	150	203	220	194	207	196
2001	265	220	176	220	241	231	234	214
2002	282	227	182	238	255	222	240	221
2003	253	207	164	209	232	216	217	201
2004	290	231	178	262	257	227	245	225
2005	285	223	169	243	249	232	230	216
2006	346	269	199	280	288	341	277	263
2007	347	264	202	302	299	281	268	260
2008	351	264	209	282	301	282	268	261
2009	359	262	205	301	308	348	275	270
2010	404	291	233	360	353	384	279	304
2011	430	325	242	378	371	362	319	320
2012	411	281	241	383	350	357	301	305

7.3.2 Expenditure by facilities in poorer areas

Revenue expenditures at Upazila Health Complex (crore Taka) for 2005 and 2010 are plotted against the proportion of upazila population living below the lower poverty line 2005 and 2010respectively in Figure 23. A weak negative correlation is found between UpHC revenue expenditure and the proportion of upazila population living below the lower poverty line (-0.156 in 2007, -0.112 in 2010).

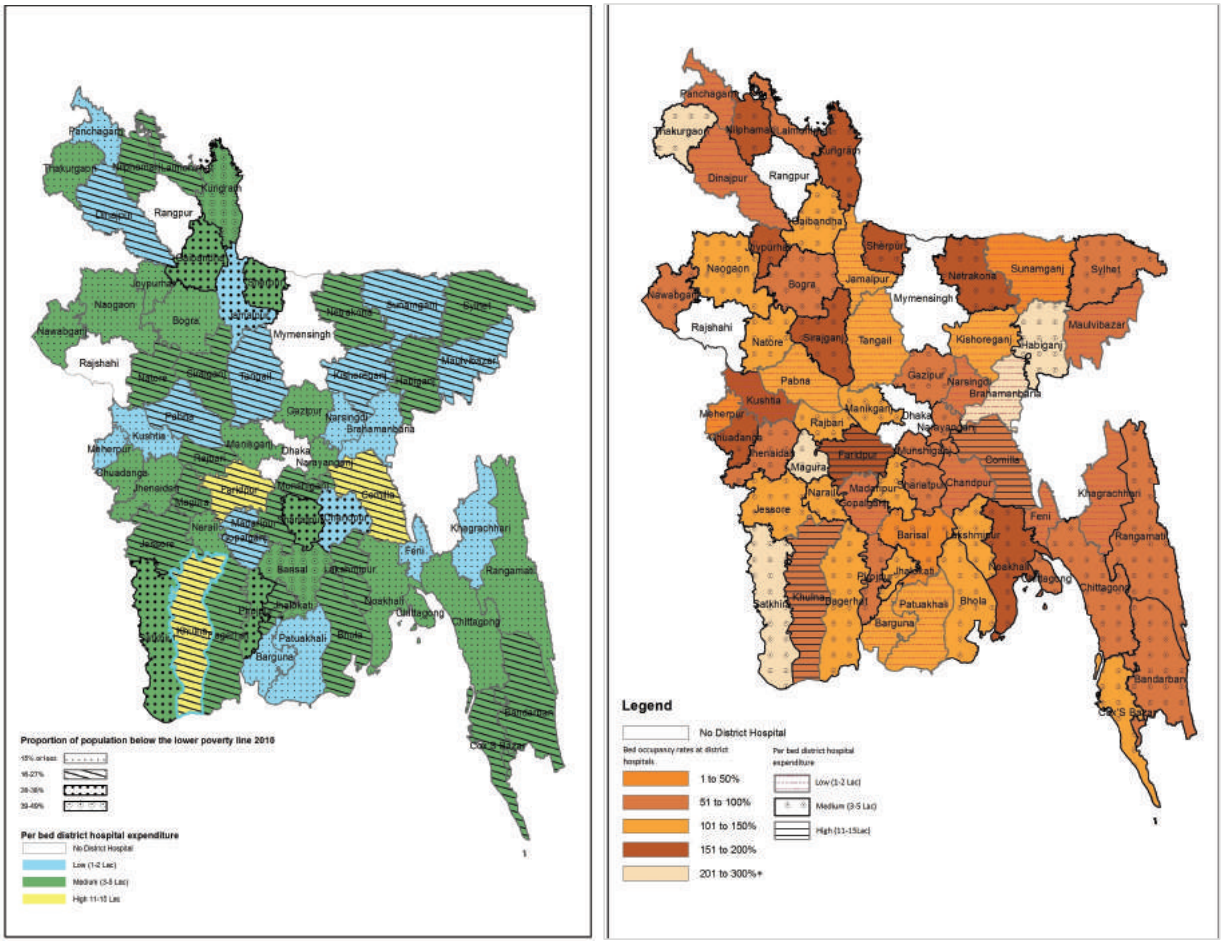
Figure 23 : Revenue expenditure at Upazila Health Complexes in 2005 and 2010 by poverty status of upazilas in 2005 and 2010 respectively

At district hospital per bed revenue expenditure shows higher expenditure level in areas with lower proportion of population living below the lower poverty line and lower bed occupancy rates (Figure 24). This is due to Revenue budget being allocated to facilities according to staff and bed capacity, not based on needs of population.

In summary, equity in service delivery remains a major concern although over the years there had been some improvements. A little over one-tenth in the poorest quintile used the government health care services in 2010. While 17% of the public subsidies went to the poorest quintile, the richest received

24% of the subsidies. Statistic shows that between 2007 and 2014 the gap between the poorest and the richest women using public facilities for child delivery narrowed. The MOHFW budget allocation is not need based. Over the years per capita allocation favored the poorer divisions based on poverty analysis even though district level hospitals in poorer areas do not receive higher Revenue budgetallocation.

Figure 24: Per bed district hospital revenue expenditure by proportion of district population living below lower poverty line, 2010 and by bed occupancy rate.



8. Challenges in conducting PER and way forward[24]

8.1 Limitations and challenges in conducting PER

Conducting a PER for health sector poses a number of challenges mostly related to data availability, reliability and analytical capacity (including breadth and depth). Coordination of data collection and analysis is also a challenge.

Issues related to data

Data not available on time: This is a persistent problem. Although the Controller General of Accounts (CGA) has been very cooperative in providing electronic data to HEU, the detailed data (for the latest fiscal year) is not accessible when needed. Generally it takes one year to finalize the audited accounts report though this time it took more than one year.

Unmatched budget figures: Budget figures for the same fiscal year was found to be different in various budget documents (e.g. Budget Brief and Monthly Fiscal Report of the Ministry of Finance (MOF), MOHFW non-Development budget book, etc) including the iBAS (Integrated Budget and Accounts System) generated report. Perhaps it is due to inclusion or exclusion of some line items code, although it is not mentioned in the documents.

Miscoding and missing code description: Missing codes description as well as miscoding makes classification of expenditure by provider and functions(services/activities) difficult.

Disaggregation of spending by DGFP facilities not possible: Facilities operated by the Directorate General of Family Planning (DGFP) are clustered under a single function code '2789' ('Hospital and Dispensaries') with a single operation code. This code includes facilities ranging from a 375 bed maternity hospital to a 10-20 bed Maternal and Child Welfare Centre (MCWC) and a small MCH Unit.

Spending does not follow allocation: Revenue expenditure allocated for an institution located in a specific geographical area is being spent for another geographical location. For example, in 2012, 20% of Upazila Health Complex expenditure was recorded against central level and district level. This creates difficulties during classification of providers by geographical areas.

Tracking of development expenditure by geographical location not feasible: As explained in Section4.2.1.3 tracking of Development budget spending is not possible as this budget is allocated to Operation Plan (OP) or project, which is located centrally. Also OPs do not show allocation to facilities or geographical location.

Incorrect and absence of reporting: During efficiency analysis the team found inconsistency in collected data on service utilization from Directorate General of Health Services' (DGHS) MIS. Moreover, it was not possible to obtain service utilization data by DGFP facilities from DGFP MIS.

Analytical capacity

HEU lacks adequate data analysis capacity as well as understanding of required supplementary data. Capacity is also weak in terms of interpretation of data.

In addition, coordination among representatives from different partner organizations under the BNHA Cell during data analysis and report writing is also difficult and often not under the direct control of HEU.

[24] Dr Ahmed Mustafa and Tahmina Begum contributed to this section

8.2 Way forward

Many of these challenges discussed above are encountered invariably during every PER. In order to overcome these difficulties a way forward is proposed as follows:

For regular production of PER

1. HEU will produce a PER with partial analysis for the latest fiscal year using unaudited data by broad economic code group in order to overcome the problem related to timely availability of detailed data. At the same time it will also present detailed analysis for the fiscal year for which detailed and audited data by provider level (function code) is available. For example, the current PER provided detailed analysis up to 2012 and partial analysis of 2013 and 2014 for which data is available only by broad economic group. Next PER will update 2013 and 2014 analysis with detailed and audited data.
2. In order to ensure regular updating of PER the HEU needs to appoint two officials solely for PER with basic skills in Microsoft Excel and provide them with requisite hands-on training.
3. Close collaboration between HEU, The Financial Management and Audit Unit (FMAU) and Chief Accounts Officer (CAO) Health will not only ensure regular updating of PER but also facilitate improvement in data quality. In the past HEU produced two PER (2000 and 2001) jointly with FMAU.
4. The PER should be produced before October each year in order to inform budget preparation and budget revision. Therefore, preparatory activities need to start immediately after budget announcement to hasten data collection and clarifications.

For making data available and improving data quality

5. MOHFW might consider developing own accounting system using open source software to capture DPA and disaggregating the development expenditure into Government, Reimbursable Project Aid (RPA), and Direct Project Aid (DPA) contribution. Open source software will make interface with iBAS feasible once MOF also updates iBAS to capture these data.
6. It is commendable that MOHFW uploads its Medium Term Budgetary Framework (MTBF) budget on its website. However, it would be better to upload the detailed revenue (non-development) and Development budget (both original and revised) on its website.
7. FMAU needs to develop a manual providing clear guidelines with adequate examples for correct coding of expenditure data. This will improve accuracy in data entry and also improve transparency.
8. Coding for MSR needs to be revisited. There should be a code for medicines only and a separate code is required for medical and surgical supplies. This will enable a valid comparison between per capita MOHFW spending on medicines and per capita Out-Of-Pocket (OOP) payment on medicines.
9. DGFP needs a separate function code (or at least operation codes) for different tiers of its facilities, especially for MCWC. This will facilitate more accurate estimation of Reproductive, Maternal, Neonatal and Child Health (RMNCH) expenditure particularly at facility level.
10. DGFP MIS needs to report the HNP service utilization data at different tiers of DGFP facilities other than only population services.
11. Both MIS need to place more emphasis on improving data quality.

9. Conclusions and recommendations

This is the eleventh review of public expenditure on health conducted by the Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MOHFW) since 1995. Following the National Health Accounts' (NHA) approach this Public Expenditure Review (PER) include health expenditures incurred by other ministries, as well as MOHFW expenditures excluding pension amount.

This PER covers the period between 1997-2014. This report used the audited data for 1997-2012 but the data for 2013 and 2014 are unaudited which might change once the final audit is completed.

9.1. Conclusions

Public spending on health as a share of GDP is low and the share has been declining over the years. In 2012, its share was 0.8% of GDP, lower than the average for low income (2.6%) and South Asian countries (1.2%) for the same year. Public expenditure on health remained below one percent of GDP throughout 1997-2012. Further, the share of preventive care in government health spending decreased from 47% to 36% during the same period.

Resource allocation to MOHFW increased more than sixfold in nominal terms and more than doubled in real terms between 1997 and 2015, though the growth slowed during 2010-2015; annual growth rate in real terms slowed down to around 4% during 2010-2015 from 6% during 1998-2009.

Despite the growing size of the MOHFW budget its share in total national budget has been on a declining trend during 1997-2015 and the share dropped to 4.4% in 2015. Increased growth of interest payment in the national budget crowded out social sector spending (World Bank 2015). Though the Sixth Five Year Plan envisioned increasing the share to 12% by 2015, in reality it remains at around one third of the set target. It clearly shows that contrary to the set target, health has not been prioritized as far as the budgetary allocations are concerned.

GDP growth has not been translated into more resource allocation for health as evident by the estimated elasticity of nominal MOHFW budget in relation to nominal GDP. Elasticity was 0.89 during 1998-2015 and 0.60 during 2010-2015.

Contribution of Project Aid to the MOHFW Development budget increased more than threefold in nominal terms during 1997-2015. Reimbursable Project Aid (RPA) has been the dominant mode of external assistance since 2004, indicating greater use of the government accounts system by the Development Partners (DPs) for channeling funds.

The MOHFW expenditure increased fivefold in nominal terms. It doubled in real terms. However, in terms of per capita it has increased by 64% since 1997. Share of revenue (non-development) expenditure in total MOHFW expenditure has been growing and reached 62% in 2014.

Capital expenditure on an average made up one fifth of MOHFW expenditure. Spending on construction as a share of the MOHFW capital expenditure has declined from 78% to 40% during 1997-2014, while share of spending on medical equipment has grown from 5% to 42% during the same period.

There have been some positive trends in spending on recurrent line items. Salary and allowances, as a share of the MOHFW recurrent spending has dropped from 70% to 52% during 1997-2014, leaving more resources for non-pay recurrent expenditure. Between 1997-2012 per capita spending on medicines and medical supplies i.e., MSR (Medical and Surgical Requisites) increased fourfold. Since

2010 its share in MOHFW expenditure averaged at 12%. Procurement of contraceptives is increasingly financed from Revenue budget, a sustainable budget source.

Despite the positive trends, spending on a number of recurrent line items appeared inadequate. Per capita MSR spending was only 6% of what households spent on medicines per capita (Taka 582) in 2012. Further, inpatient facilities receive MSR allocation for inpatients (per bed), but not for their outpatients. Current diet allocation seems insufficient for three quality meals and needs to be adjusted for inflation. Spending on cleaning (0.5%) for a large number of facilities and offices seems insufficient. Only 3% of MOHFW expenditure on repair and maintenance of buildings, machines, medical equipment, furniture, fixtures, and vehicles is clearly inadequate.

Furthermore, greater transparency and accountability need to be ensured for the spending on some line items. For example, unallocated block allocation since 2006 has been significant and it is difficult to track the reason for such spending. There is no guideline for allocating grants-in-aid (represented 2% of recurrent spending in 2014) to autonomous organizations and NGOs.

Proportion of MOHFW budget allocated to 'upazila level and below' is one of the indicators of the Results Framework (the target is 60% by 2016) under the Health, Population and Nutrition Sector Development Program (HPNSDP), however, it is difficult to accurately estimate. The Operational Plans (OPs) only reflect the Development budget, which do not show allocation to facilities at different tiers or to geographical areas (e.g. districts, upazilas). In 2012, expenditure at upazila level and below estimated to be 49% of the total MOHFW expenditure, based on available information.

The sector program budget increased fourfold and Development budget increased threefold between HPSP (Health and Population Sector Program) and HPNSDP (Health, Population and Nutrition Sector Development Program). HNPSP (Health, Nutrition and Population Sector Program) recorded highest growth both in revenue and development expenditure in nominal as well as real terms.

There have been some improvements in absorption capacity. Overall revised budget execution has been improving in successive sector programs, the highest execution rate being recorded during HPNSDP (89%) for revised Development budget. Higher execution rate of a three time larger budget indicates improved absorption capacity.

Sector programs have always been aligned with broader national policy goals such as Five Year Plans Poverty Reduction Strategies and Millennium Development Goals (MDGs). However, resource allocation basis within MOHFW is not always consistent with policy priorities.

Non-MOHFW ministries' spending on health makes up less than one tenth of all ministries' including MOHFW spending on health. However, their contribution to financing of some important line items is significant (e.g. Non-MOHFW ministries financed 28% of medicines, vaccines and medical supplies in 2012). Non-MOHFW financing is not taken into account in health sector planning and budgeting.

Budget structure, processes and allocation basis undermine efficiency in budgeting and planning. Budget is bifurcated into Revenue and Development budgets that are prepared by different units/staff following different time schedules. Both Revenue and Development budgets finance several recurrent line items such as Medical and Surgical Requisites (MSR), diet, repair and maintenance, etc. Moreover, a facility receives MSR budget from multiple sources within each budget. Furthermore, Revenue budget is not linked to sectoral priorities, as OPs do not reflect Revenue budget that makes up about 60% of the sector program budget.

There is some evidence of efficiency gains in terms of utilization of various inputs. Between 2003 and 2011 absenteeism among different providers reduced except for doctors at union level facilities. Efficiency gained through reduced absenteeism among providers at upazila health complex is equivalent to 4% of its total expenditure. Efficiency gain (11%) through increased utilization of medical equipment during 2004-2011 represents 2% of total MOHFW expenditure. Efficiency analysis showed improvement at upazila health complex on several counts. Unit cost for admission almost halved while unit cost for outpatient care reduced by one-third during 1997-2010.

There is ample scope for improving efficiency of health facilities. Deployment of health workforce across different tiers of facilities needs to be rationalized and balanced. It is also necessary to regularly collect information on attendance of providers at health facilities for monitoring purposes. A system should be in place to track medical equipment from procurement to installation as well as utilization. The Data Envelopment Analysis (DEA) and the Pabon Lasso model assessed 32-39% district hospitals to be efficient, which means over 60% district hospitals are not operating efficiently. Improving efficiency means saving of resources i.e. increasing fiscal space for health.

The issue of equity remains a major concern, although some improvements are evident. Only 11% in the poorest quintile accessed the health care services from the public sector. The gap between the poorest and the richest women in using public facilities or any facilities for delivery has narrowed between 2007 and 2014. Concentration index for the public facility delivery also declined between 2007 and 2014. Poorer divisions received higher share of MOHFW expenditure compared to their respective divisional share in population. However, facilities located in poorer areas do not receive higher funding, as Revenue budget allocation is staff and bed capacity driven, not taking into account poverty status of the geographical areas or utilization of facility services.

9.2 Recommendations[25]

Recommendations are clustered around the strategic objectives of the Health Care Financing Strategy.

Strategic objective 1: Generate more resources for effective health services

- The Government of Bangladesh needs to reprioritize health sector within its national budget to increase fiscal space for health towards achieving Universal Health Coverage (UHC).

Strategic objective 2: Improve equity and increase health care access, especially for the poor and vulnerable

- MOHFW should immediately implement needs based resource allocation formula reflecting the needs of the population.
- Operational Plans in the next sector program should clearly specify how much budget each OP will allocate to different tiers of facilities, especially to upazila level and below.
- OPs need to indicate budget allocation to specific geographical areas (district/upazila). The specification will allow allocating more resources to poorer areas as well as facilitate district health system budgeting.
- MSR allocation should be based on the needs of the facilities; for example, MSR for inpatient facilities should also include allocation for outpatient units. This will help increase the overall stock of medicines at the facilities, leading towards better utilization of health services.

[25] Recommendations specific to conducting PER are presented in the preceding section (Section 8.2)

Strategic objective 3: Enhance efficiency in resource allocation and utilization

- Resource allocation for preventive care services, which are also cost effective, should be increased.
- Both Revenue and Development budget should be developed jointly and if possible simultaneously in order to improve efficiency in budgeting and planning.
- Operational Plans in the next sector program need to reflect Revenue budget at least by program components.
- Recurrent line items such as MSR and Diet need to be financed from one budget preferably from the Revenue budget in order to avoid duplication and ensure better transparency as well as predictability.
- In order to improve transparency unallocated block allocation must be reduced to a minimum level.
- In order to advance the UHC agenda effective coordination with other ministries that spend on health is imperative. Particularly, spending by the Ministry of Local Government and Rural Development, which is responsible for urban primary health care should be considered in sector program planning and budgeting.

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ANNEX

Annex Table 1: MOHFW budget, 1998-2015

	Current Crore Taka			Constant Crore Taka (2005-06=100)		
Year	MOHFW revenue budget excl. pension	MOHFW development budget	MOHFW budget excl. pension	MOHFW (net) revenue budget excl. pension	MOHFW development budget	MOHFW budget excl. pension
1998	765	1112	1877	1080	1569	2648
1999	852	1309	2160	1158	1779	2937
2000	990	1446	2436	1302	1901	3202
2001	1111	1577	2688	1415	2007	3422
2002	1252	1621	2874	1534	1987	3521
2003	1325	1702	3028	1535	1971	3506
2004	1410	1512	2922	1561	1675	3236
2005	1652	2080	3732	1749	2202	3951
2006	2063	2177	4240	2063	2177	4240
2007	2404	2375	4779	2257	2231	4488
2008	2606	2606	5212	2269	2269	4538
2009	3395	2439	5834	2769	1989	4758
2010	3617	3075	6692	2753	2341	5094
2011	4426	3473	7899	3124	2451	5575
2012	4830	3562	8392	3151	2324	5476
2013	5121	3825	8946	3118	2329	5446
2014	5448	3602	9050	3139	2075	5214
2015	6091	4349	10440	3318	2369	5687

Annex Table 2: MOHFW budget as proportion of national budget, 2000-2015

Year	MOHFW Revenue budget (excl. pension) as % of National Revenue budget	MOHFW Development budget as % of National Development budget	MOHFW budget (excl. pension) as % of National budget
2000	5.0%	9.0%	6.8%
2001	5.4%	8.6%	6.9%
2002	5.5%	8.3%	6.7%
2003	5.5%	8.5%	6.9%
2004	4.8%	7.1%	5.7%
2005	5.0%	8.7%	6.5%
2006	5.4%	8.2%	6.6%
2007	5.5%	9.0%	6.8%
2008	4.8%	9.7%	6.4%
2009	5.0%	8.9%	6.1%
2010	4.6%	9.7%	6.1%
2011	5.1%	8.7%	6.2%
2012	4.6%	7.5%	5.5%
2013	4.5%	6.8%	5.3%
2014	4.0%	5.4%	4.4%
2015	3.9%	5.3%	4.4%

Annex Table 3: MOHFW revised budget as proportion of national revised budget, 2000-2015

Year	MOHFW revised revenue (excl. pension) as % of National revised Revenue budget	MOHFW revised Development budget as % of National revised Development budget	MOHFW revised (excl. pension) as % of National revised budget
2000	5.1%	8.1%	6.5%
2001	5.1%	7.4%	6.2%
2002	5.8%	8.1%	6.8%
2003	5.2%	8.1%	6.4%
2004	5.2%	9.1%	6.9%
2005	5.4%	6.0%	5.6%
2006	5.4%	9.2%	6.8%
2007	5.4%	10.4%	7.0%
2008	4.6%	10.1%	6.2%
2009	4.9%	10.8%	6.5%
2010	4.9%	9.5%	6.2%
2011	5.4%	7.4%	6.0%
2012	4.5%	7.2%	5.3%
2013	4.4%	6.7%	5.1%
2014	4.2%	6.2%	4.8%
2015	4.3%	6.0%	4.8%

Annex Table 4: Per capita MOHFW expenditure, 1997-2014

	Per capita spending (current Taka)			Per capita spending (constant Taka)		
	MOHFW Revenue	MOHFW Development	MOHFW Total	MOHFW Revenue	MOHFW Development	MOHFW Total
1997	63	73	136	93	108	201
1998	65	73	138	92	103	195
1999	70	73	143	95	99	194
2000	75	74	149	99	97	196
2001	80	88	168	102	112	214
2002	91	90	181	111	110	221
2003	96	78	174	111	90	201
2004	106	98	203	117	108	225
2005	123	82	204	130	87	216
2006	138	126	263	138	126	263
2007	158	120	277	148	112	260
2008	163	136	299	142	119	261
2009	198	133	331	161	109	270
2010	231	168	399	176	128	304
2011	281	172	453	198	121	320
2012	293	174	468	191	114	305
2013	301	216	517	183	131	315
2014	352	219	571	203	126	329

Annex Table 5: MOHFW recurrent and capital expenditure, 1997-2014

	MOHFW expenditure (current crore Taka)					
	Recurrent revenue	**Recurrent development**	**Total recurrent**	**Capital revenue**	**Capital development**	**Total capital**
1997	754	634	1388	15	262	277
1998	797	647	1444	16	267	283
1999	873	654	1527	18	270	288
2000	951	668	1619	12	276	288
2001	1040	249	1289	1	903	904
2002	1195	553	1748	10	639	650
2003	1297	796	2092	2	251	253
2004	1406	810	2216	41	529	570
2005	1656	709	2365	47	427	475
2006	1887	981	2867	49	787	837
2007	2204	1087	3291	37	614	651
2008	2279	1174	3453	63	786	849
2009	2730	1070	3800	141	865	1005
2010	3185	1455	4640	212	1012	1224
2011	4004	1491	5494	168	1060	1227
2012	4207	1756	5963	197	856	1053
2013	4433	1892	6326	199	1424	1622
2014	5208	2011	7219	276	1405	1681

Annex Table 6: HPSP by Operational Plans

HPSP Operational Plans	Budget in Crore Taka	% of total
ESP (Other than Reproductive Health)	9,523	14.5%
ESP (Reproductive Health)	29,760	45.3%
Reorganization of Service Delivery: Management Change Unit	325	0.5%
Human Resource Management, MOHFW	121	0.2%
Pre-Service Education	647	1.0%
In-Service Training	2,394	3.6%
Nursing Services and Education	218	0.3%
Construction, Repair & Maintenance	***3,118***	***4.8%***
Procurement, Storage and Supply-DGFP	433	0.7%
Procurement, Storage and Supply-DGHS	983	1.5%
Quality Assurance	40	0.1%
Unified BCC	980	1.5%
Unified MIS	68	0.1%
Research and Development-DGHS	1,277	1.9%
Hospital Services	1,750	2.7%
Alternative Medical Care Facilities	26	0.0%
Sector-Wide Management (MOHFW)	323	0.5%
Improved Financial Management, MOHFW	124	0.2%
Policy Research Unit (PRU)	294	0.4%
Drug Administration	36	0.1%
Regulation	24	0.0%
Environmental and Occupational Health	178	0.3%
Inter-Sectoral Multi-Sectoral Collaboration	4	0.0%
Pilot Programme for Community and Inter-Sectoral Nutrition Activities (BINP)	3,132	4.8%
AIDS/STD Prevention & Safe Blood Transfusion Program.	256	0.4%
Micro-Nutrient Supplementation	114	0.2%
Total	**65,626.80**	**100%**

Source: RPIP of HNPSP, 2006

Annex Table 7:Revised HNPSPPIP budget by Operational Plans

HNPSP Operational Plans	Budget in Crore Taka	% of total
Essential service delivery	***2852***	***17.2%***
Communicable Disease Control	641	3.9%
TB & Leprosy Control	574	3.5%
Health education & promotion	105	0.6%
Improved Hospital Services Management	1236	7.5%
Alternative Medical care	61	0.4%
Non-communicable Disease Control & Other Public Health Interventions	190	1.1%
National AIDS/STD Program and Safe Blood Transfusion	567	3.4%
In-service Training	281	1.7%
Pre-service education	214	1.3%
Management for Procurement, Logistics & Supplies	321	1.9%
Research & Development (Health)	26	0.2%
MIS-Health, Services & Personnel	79	0.5%
Quality Assurance	8	0.0%
Sector-wide Program Management (Health)	19	0.1%
Human Resource Management (Health)	6	0.0%
Improved Financial Management (Health)	3	0.0%
Micro-nutrient Supplementation	105	0.6%
National Eye Care	20	0.1%
Nursing Education & Services	95	0.6%
Strengthening of Drug Administration management	10	0.1%
Clinical Contraception Services Delivery	607	3.7%
Family Planning Field Services Delivery	1992	12.0%
Maternal, Child & Reproductive Health Services Delivery	691	4.2%
Information, Education & Communication (FP)	112	0.7%
MIS- Services & Personnel	28	0.2%
Procurement, Storage & Supplies Management	109	0.7%
Sector-wide Mgmt-FP	4	0.0%
Human Resource Mgmt - FP	25	0.2%
Improved Financial Management - FP	3	0.0%
Training, Research & Development (NIPORT)	121	0.7%
National Nutrition Program	1251	7.5%
Physical Facilities Development (c,r& m)	***3748***	***22.6%***
Sector-wide Mgmt-MOHFW	31	0.2%
Human Resource Management - MOHFW	10	0.1%
Improved Financial Management - MOHFW	25	0.2%
Health Economics Unit	25	0.2%
Policy reforms	369	2.2%
Total	**16566**	**100%**

Source: 2nd RPIP HNPSP (2003-2011), 2008

Annex Table 8: HPNSDP PIP budget by Operational Plans

HPNSDP Operational Plans	Budget in Crore Taka	% of total
Essential Services Delivery (ESD)	446	2.0%
Maternal, Neonatal, Child and Adolescent Health (MNCAH)	3019	13.6%
Community Based Health Care (CBHC)	1657	7.5%
TB and Leprosy Control (TB-LC)	322	1.5%
National AIDS And STD Program (NASP)	273	1.2%
Communicable Diseases Control (CDC)	603	2.7%
Non-Communicable Diseases (NCD)	519	2.3%
National Eye Care (NEC)	22	0.1%
Hospital Services Management (HSM)	1862	8.4%
Alternate Medical Care (AMC)	79	0.4%
In-Service Training (IST)	337	1.5%
Pre-Service Education (PSE)	595	2.7%
Planning, Monitoring and Research (PMR-DGHS)	53	0.2%
Health Information Systems and E-Health (HIS-EH)	609	2.7%
Health Education and Promotion (HEP)	146	0.7%
Procurement, Logistics and Supplies Management (PLSM-CMSD)	438	2.0%
National Nutrition Services (NNS)	1490	6.7%
Maternal, Child, Reproductive and Adolescent Health (MCRAH)	879	4.0%
Clinical Contraception Services Delivery (CCSD)	1358	6.1%
Family Planning Field Services Delivery (FPFSD)	1614	7.3%
Planning, Monitoring and Evaluation of Family Planning (PME-FP)	10	0.0%
Management Information Systems (MIS)	58	0.3%
Information, Education and Communication (IEC)	135	0.6%
Procurement, Storage and Supplies Management (PSSM-FP)	80	0.4%
Training, Research and Development (TRD)	111	0.5%
Nursing Education and Services (NES)	300	1.4%
Strengthening of Drug Administration and Management (SDAM)	32	0.1%
Physical Facilities Development (PFD)	4815	21.7%
Human Resources Management (HRM)	147	0.7%
Sector-Wide Program Management and Monitoring (SWPMM)	72	0.3%
Improved Financial Management (IFM)	36	0.2%
Health Economics and Financing (HEF)	58	0.3%
Total	**22177**	**100.0%**

Source: HPNSDP PIP

Annex Table 9: MOHFW revised budget and expenditure as proportion of MOHFW budget, 1998-2014

Year	MOHFW revised budget as % MOHFW budget	MOHFW expenditure as % MOHFW budget	MOHFW expenditure as % of MOHFW revised budget
1998	106%	92%	87%
1999	97%	84%	87%
2000	97%	78%	81%
2001	98%	82%	83%
2002	92%	83%	90%
2003	92%	77%	84%
2004	114%	95%	83%
2005	85%	76%	89%
2006	97%	87%	90%
2007	99%	82%	83%
2008	96%	83%	86%
2009	102%	82%	81%
2010	100%	88%	88%
2011	92%	85%	93%
2012	91%	84%	92%
2013	95%	89%	94%
2014	105%	98%	93%

Annex Table 10: Annual Revenue budget calendar

Date	Activity
31 August	Distribution of Budget Forms for next fiscal year from Finance Division (FD)/MOF to ministries
31 August	Call notices from DG (DOF) to Drawing and Disbursement Officers (DDO)
31 October	Submission of estimates by DDOs to DG (DOF)
25 November	Receipt of consolidated estimates by FD/MOF from MOHFW along with first 3 months actual spending from current financial year
20 January	Completion of examination of budget estimates by FD/MOF
15 February	Receipt of six months actual spending by FD/MOF
15 February	Commencement of budget meetings between MOHFW and FD/MOF
28 February	Completion of review of the estimates on basis of first six months actual spending
10 March	Distribution of first edition of the budget to MOHFW from FD/MOF
28 March	Completion of discussions between MOHFW and FD/MOF regarding estimates
First week of April	Presentation of budget estimates to the Cabinet
31 May	Preparation and printing of budget estimates, details of receipts and expenditure, supplementary estimates and Finance Minister's speech
First week of June	Presentation of budget estimates to Parliament

Sources: FMAU (2007)

Annex Table 11: Annual Development Program (ADP) budget calendar

Date	Activity
For current year's Revised ADP (RADP)	
Mid – December	Issuance of guidelines and call notices to line ministries by the Programming Division of the Planning Commission
Mid – January	Return of call notice by line ministries to the Programming Division of the Planning Commission (through Planning Wing of respective ministries)
By end of February	Completion of preparation of RADP
Early April	Transfer of RADP data to the FD/MOF
For next year's ADP	
Mid – February	Issuance of guidelines and call notices to the line ministries by the Programming Division of the Planning Commission
First week of March	Return of call notice by the line ministries to the Programming Division of the Planning Commission (through the Planning Wing of respective ministries)
By end of April	Completion of preparation of ADP
First week of May	Transfer of ADP data to the FD/MOF
By end of May	Completion of the preparation of the Development budget by the FD/MOF (current year's revised and next year's budget)

Sources: FMAU (2007)

Annex Table 12: Medium term budget framework (MTBF) calendar

Date	Activity
Strategic phase	
15 August	MTBF guidelines development and approval of the Budget Management and Resource Committee (BMRC)
30 September	First update of macroeconomic and financial framework
30 September	Ministerial MTBF development by respective ministries
20 October	Analysis of budget framework of ministries
25 October	Expenditure analysis and suggestions of probable resource envelop
31 October	Finalization of the draft Medium Term Budget Policy Statement (MTBPS) and approval of the BMRC
Budget estimation phase	
07 November	Issuance of call notice by Finance Division and Planning Commission
31 December	Estimates from DG
31 January	Analysis of estimates by the ministry and finalization
28 February	Second update of macro economic and financial framework
15 March	Analysis of budget by Finance Division and Planning Commission
30 April	Budget discussion with respective ministries
Budget finalization and approval phase	
30 April	Finalization of MTBF
07 May	Compilation of draft budget and finalization
Third week of May	Present MTBPS to National Economic Council (NEC)
Fourth week of May	Printing of budget
First week of June	Presentation of MTBPS to Cabinet and approval
First week of June	Presentation of budget and MTBF to Parliament

Source: FMAU (2007)

Annex Table 13. Hospitals' efficiency using DEA model

District hospitals of	Efficiency Score
Bagerhat	0.691
Bandarban	0.277
Barguna	0.741
Barisal	0.379
Bhola	0.711
Bogra	0.356
Brahmanbaria	1.000
Chandpur	0.741
Chittagong	0.314
Chuadanga	0.975
Comilla	0.621
Cox's Bazar	0.795
Dinajpur	0.321
Faridpur	0.676
Feni	0.771
Gaibandha	1.000
Gazipur	0.769
Gopalganj	0.579
Habiganj	1.000
Joypurhat	1.000
Jamalpur	0.933
Jessore	0.588
Jhalokati	0.628
Jhenaidah	0.941
Khagrachari	0.678
Khulna	0.450
Kishoreganj	1.000
Kurigram	0.966
Kushtia	0.769
Lakshmipur	1.000
Lalmonirhat	0.674
Madaripur	0.533
Magura	1.000

Manikganj	1.000
Meherpur	0.777
Moulvibazar	0.787
Munshiganj	0.614
Naogaon	0.804
Narail	0.614
Narayanganj	0.412
Narshingdi	0.753
Natore	0.852
Netrokona	0.764
Nilphamari	0.820
Noakhali	0.405
Pabna	0.751
Panchagarh	0.612
Patuakhali	0.424
Pirojpur	0.551
Rajbari	0.620
Rangamati	0.311
Shariatpur	0.580
Satkhira	1.000
Sirajganj	1.000
Sherpur	0.829
Sunamganj	0.803
Sylhet	0.453
Tangail	1.000
Thakurgaon	1.000
Mean Efficiency 0.719	

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