

Budget and Child Health in Bangladesh

1. Introduction

Health is a fundamental human right that underpins survival of citizens, the worth and value of human capital and the overall well-being of the economy. Sen (1999) regarded health as one of the basic capabilities that gives value to human life¹ and augments human capital which is the engine of economic growth² and sustainable development. Healthier workers are more productive, and earn higher wages; they also help attract foreign direct investment.³ The level of ill health reduces the amount and productivity of labor supplied to an economy.⁴ Empirically, Bhargava *et al.* (2001) found positive effects of survival rates on GDP growth rates in low-income countries.⁵ Fogel (1994) revealed that about one-third of the increase in income in Britain during the 19th and 20th centuries could be a result of improvements in health and nutrition.⁶

Investment to attain and sustain the highest standard of health for children and women is a human right to survival imperative and sound economics that promotes social justice. Schultz (1999) showed that better health had a positive impact on the learning abilities of children, and leads to better educational outcomes that resulted in increased efficiency of human capital formation by individuals and households.⁷ Gyimah-Brempong and Wilson (2004) found that health contributed 22 and 30 per cent of per capita income growth rate in sub-Saharan Africa and OECD countries, respectively.⁸ Finlay (2007) found that healthy people invest more on education, which has positive and significant impact on growth.⁹ A considerable number of children in less developed countries suffer from poor health and nutrition, and complete far less years and learn less per year of schooling than that of their counterparts of developed countries.¹⁰ Thus, health influences economic growth indirectly since critical aspects of child health affect the future income through the impact of health on education. Early childhood development is vital for individual cognitive, emotional and physical progress. Proper childhood development crucially depends on suitable and proper preventive and curative medical attention.¹¹ Beside these, successful demographic transition from high to low fertility depends significantly on improving health.

Bangladesh is a country of around 150 million people today. The country has enormous possibility of boosting its economic growth by enhancing human capital through investment in healthy citizenry. In order to realize the potential, it is important for policy makers to understand the existing challenges and how budgetary allocation in health sector matches the inequities, especially children who are most deprived. Hence, this short paper on 'Budget and Child Health' examines the key challenges from the perspective of the rights of children to the highest attainable standard of health and the trend of budgetary allocation in health sector. The analysis does not cover the quality of spending and might not have captured all the health related budgetary allocations such as for Nutrition (treated separately in another paper), Chittagong Hill Tract (CHT), safety net and other programmes with direct and indirect impact on health of children and women. The review did not cover health insurance and the growing role of the private sector in the health services delivery.

2. Key Challenges of Child Health

Over the years, Bangladesh has achieved considerable progress in child health (Table 1). The fourth goal of the Millennium Development Goals (MDGs) is directly linked with children's

Table 1: Selected Indicators of Child Health

Indicator	2000	2004	2007	2011
Neo-natal mortality	42	41	37	32
Post-neonatal mortality	24	24	15	10
IMR (per 1,000 live births)	66	65	52	43
Child mortality (per 1,000 live children)	30	24	14	11
U5MR (per 1,000 live births)	34	88	65	53
Children fully vaccinated by 12 months (%)	52.8	68.4	76	82.5
Post-natal care (in 2 days of delivery) - child			18.5	24.9

Source: NIPORT (2012).

health outcome. For instance Under-Five Mortality Rate (U5MR) has significantly declined since 1990. Bangladesh Demographic and Health Survey (BDHS) 2011 data shows that U5MR has declined to 53 per 1,000 live births in 2011 from 65 as at 2007; Infant Mortality Rate (IMR) is 43 deaths per 1,000 live births and the child mortality rate is 11 per 1,000 children. Regionally, Bangladesh clearly stands out with the highest annual rate of reduction of U5MR (on average a 5.3 per cent annual rate of reduction between 1990 and 2011). Thus, Bangladesh is on track towards achieving the MDG 4 target for U5MR target of 48 per 1,000 live-births by 2015. Most of the deaths averted are clustered in the 1 to 5 year age range, reflecting the combined effect of a number of high-impact interventions and practices, including measles vaccination, exclusive breastfeeding, family planning, oral rehydration therapy, pneumonia treatment and vitamin A supplementation (see Nutrition Budget Analysis).

Ninety eight per cent of children 12-23 months have at least one vaccination. Overall, 86 per cent of children aged 12-23 months are fully vaccinated, and 83 per cent of the children received all vaccines by 12 months of age in 2011. Children age 12-23 months who are fully vaccinated increased from 73 per cent in 2004, to 82 per cent in 2007, and to 86 per cent in 2011. Improvements in vaccination coverage among 12-23 months age children have occurred in all divisions except in Barisal where the coverage has declined from 90 per cent in 2007 to 83 per cent in 2011. Nearly one-third of children reported with symptoms of Acute Respiratory Infections (ARI) were taken to a health facility or provider for treatment and 71 per cent of these children received antibiotics.¹² These progress also mirror the effectiveness of the health sector in delivery on immunization but might not in fact represent a robust health delivery system overall as shown by the sub-national disparities and performance of other health and nutrition outcomes.

A number of challenges remain in child health, which demands extra ordinary effort to close the equity gaps. Disparities in the effective coverage of health services (and indicators) by geographic regions (division, district and upazila), rural - urban and slums and non-slums and sex persists to some extent. Children living in urban slum had the highest rate of IMR and U5MR (68 and 95, respectively), significantly higher even than rural areas. Inequality exists between boys and girls in both IMR (54 for boys versus 43 for girls) and U5MR (72 for boys versus 55 for girls). While the IMR rate per 1000

Major Issues of Child Health in Bangladesh

- Disparity in IMR and U5MR and vaccination coverage exists by geographical region, rural-urban, slums-non-slums and gender. IMR is the highest in Jamalpur (71) and lowest in Rangamati district (36). The highest U5MR is in Jamalpur (98) and lowest in Pabna district (44).
- Considerable geographical disparity exists in all basic vaccinations by division; the lowest (80.1 per cent) in Sylhet to the highest (93.5 per cent) in Khulna.
- Substantial differences exist in health outcomes among geographical locations and socio-economic groups.
- Delivery of child-related services in Essential Services Package (ESP) is uneven. Only 58 per cent of 19 essential medicines were regularly available in health facilities in 2009.
- Quality of service is a major concern especially at facility-based child and neonatal health.

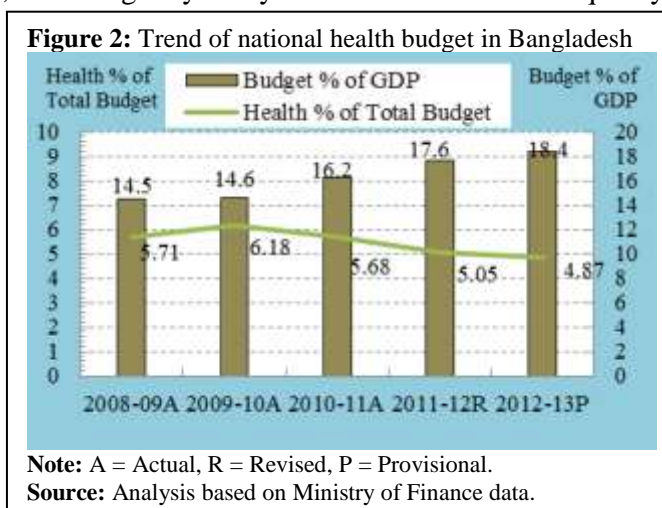
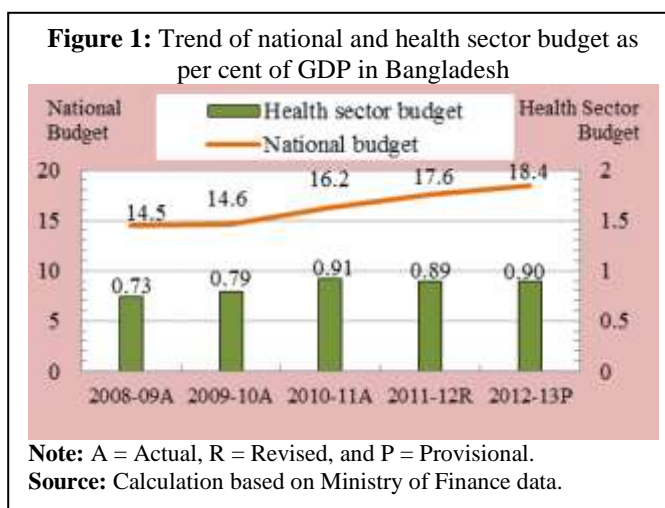
live births in Jamalpur is 71 (the highest) it is 36 (the lowest) in Rangamati districts. In case of U5MR, the highest was in Jamalpur (98) and lowest in Pabna district (44). By divisions, both U5MR and IMR were found to be highest in Sylhet (74 and 56, respectively), and lowest in Khulna and Chittagong (57 and 44, respectively) divisions. Rural-urban gap in both IMR and U5MR are prevalent.¹³ In rural areas U5MR and IMR are 66 and 50, respectively while in urban areas these are 53 and 42, respectively. Considerable geographical disparity exists in vaccination coverage by divisions, ranging from the lowest (80.1 per cent) in Sylhet to the highest (93.5 per cent) in Khulna. The coverage also varies by gender (boys 87 per cent and girls 85 per cent).¹⁴

There is a strong nexus between health and poverty. Children who are poor suffer from many diseases; as they are considerably excluded from health services for a variety of reasons. Delivery of child-related services in Essential Services Package (ESP) is uneven despite significant progress in infrastructure development. Only 58 per cent of 19 essential medicines was present in health facilities in 2009, which shows a gap in the supply of essential, and sometimes lifesaving medicines for children who are most deprived.¹⁵ It has been acknowledged

by most stakeholders in the health sector that the quality of service is a concern especially in deprived locations such as urban slums mainly due to insufficient number of skilled personnel, and lack of routine supportive supervision and monitoring. It is against this backdrop that the analysis of health sector budget is presented hereunder, from the perspective of its prospects in addressing these inequalities; towards a socially just Bangladesh in its march towards a middle income status by 2021. As stated above, this budgetary analysis does not look at the quality of spending.

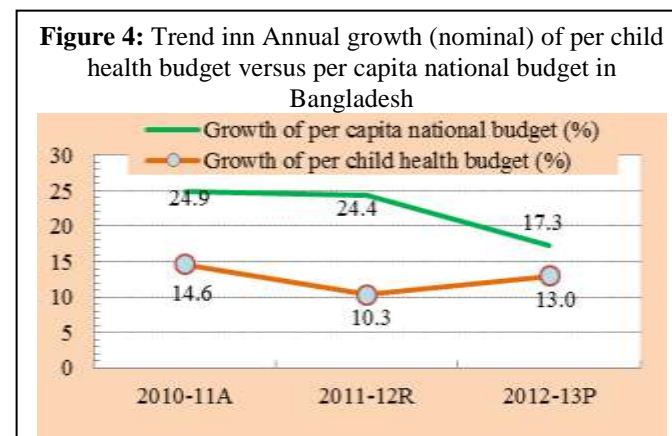
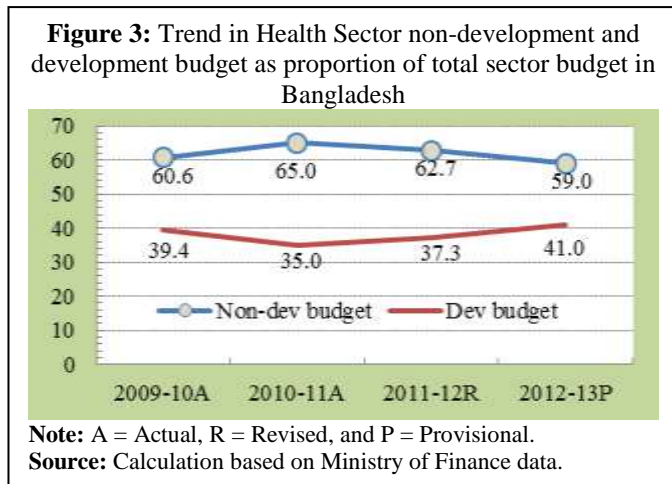
3. Health Budget

Budget in the health sector, especially for child health is critical in increasing availability, reducing geographical and socio-economic disparity in health outcomes, and improving accessibility and effective coverage of quality health services to promote child development for generating better human capital. According to Medium Term Budgetary Framework 2011/12-2015/16, the major commitment related to child health are ensuring health services for all, outreaching health services to the grassroots, improving health care for mother and child, preventing infant mortality rate. Therefore, it is important to assess the health sector budget to comprehend how far the sector commitments and programmes are being translated into fiscal measures, from the perspective of the most deprived children population.



Budget analysis shows that the national budget as per cent of GDP has increased from 14.5 per cent in FY 2008-09 to 18.4 per cent in FY 2012-13 (Figure 1). However, health sector budget as per cent of the national budget has decreased from 5.71 per cent in FY 2008-09 to 4.87 per cent in FY 2012-13 (Figure 2) and static at 0.9 per cent of GDP over the last three fiscal years (2010-11 to 2012-13, Figure 1). This implies that the health sector budget grows much slower in proportion to the national budget and overall economic growth.

In nominal terms, the size of the total budget, on average, grew annually at 28.7 per cent while health budget increased at 20.7 per cent per annum between FY 2008-09 to 2012-13. This lower pace of growth in the health sector budget, like in education, relative to the higher growth of the overall national budget, could be interpreted as a waning fiscal commitment. The share of non-development budget of health to the total health budget has been consistently high, about 60 per cent (Figure 3). However, the share of the development budget increased slightly in provisional budget of 2012-13. Figure 3 portrays that the development portion of the health sector gets less priority than recurrent expenditure. Balancing the development with the non-development portions of the sector budget optimally for effective delivery of services can be viewed from many angles. However, for the most deprived populations, the choices are simple – to ensure that the requisite skilled health personnel is available and offers effective lifesaving interventions all year round. Whatever the ratio is, it is critical to ensure that all underserved areas (urban slums and remote areas noted above) have adequate budget assigned to meet their right to quality health services in line with the priorities in the current Health, Nutrition and Population Sector Programme (HNPS); whose goal is to contribute to the improvement of health and welfare status amongst the most vulnerable women, children and the poor.



The health sector budget per child has been estimated to be BDT 606 in the provisional budget of FY 2012-13, implying on average, 14.3 per cent increase per annum from actual expenditure of FY 2009-10.¹⁶ On the other hand, per capita national budget rose from BDT 6,836 to BDT 12,458. The average annual growth of per capita total budget was about 27.4 per cent during this period. Hence, the growth of per child health budget is just half of the growth of per capita total budget, indicating shifting fiscal priority from child health care to other budgetary priorities (Figure 4).

A significant divergence between nominal and real per child health budget was evident from the analysis. As in education and other sectors, inflation also decimated the real value of the child health budget, which was estimated to be BDT 5.54 billion in FY 2011-12.¹⁷

Beyond the direct health services budget, the health sector has few social safety nets (SSNs). The Government has initiated two new SSNs: a) community based health care (CBHC), and b) maternal, child, reproductive and adolescent health (MCRAH) in the FY 2011-12 as measures to promote the well-being of mothers and children. It is good that both coverage and budget in absolute amount has been increased in the provisional FY 2012-13 estimates (Table 2). However, the coverage and the budget may not match the number of mothers and children who are entitled to these critical lifesaving services. The maternal health voucher scheme for pregnant women, discussed under the ‘Budget and Child Nutrition’ is also another measure which requires adequate funding with improved delivery modalities, to increase its efficiency.

Table 2: Social safety net programmes under health budget 2012-13

Programme	Coverage (million)		Budget in BDT (million)	
	2011-12 R	2012-13 P	2011-12 R	2012-13 P
Community Based Health Care (CBHC)	0.004	0.054	360	800
Maternal, Child, Reproductive and Adolescent Health	0.067	0.070	1181.5	1350

Source: Social Safety Net budget, Ministry of Finance. R = Revised; P = Provisional.

4. Efficiency and Equity of Public Expenditure

Depending on type of service, the public health services accounts for slightly more than half of the providers and supposedly the most affordable yet not readily accessible for the children in poor households or those living in remote or vulnerable areas. Children living in urban slums and on the streets also

Double Jeopardy: Extreme poverty and almost no child care at Kalabagan Slum in Dhaka

Gulbahar (10) lives in Kalabagan slum of Bawnia dam, located at Ward-5 of Dhaka City Corporation. Her father is a shopkeeper of wastage goods. She has 3 brothers and 3 sisters and this large family consisting of nine members is run only by the income of her father. Her family does not have health awareness. She did not take any vaccinations except polio. She frequently suffers from cold fever or diarrhea but cannot go to the doctor or do not take any medicine even due to financial insolvency and lack of knowledge.

tend to suffer from multiple social deprivations including malnutrition. Therefore, health outcomes for these children require special measure that is hardly encoded by the current budget. Children from relatively well-off households tend to benefit more from health budget because of their higher access to public health spending. The lowest quintile households are less likely to receive health care services from hospitals as only about 17 per cent access government health care services while the top quintile receives about 25 per cent. Consequently, poor households depend more on pharmacies, homeopathy or traditional health care provider. Out of Pocket Expenditure in health constitute a burden on poor households in the overall health financing as it increased from 57 per cent in 1997 to 64 per cent in 2007, according to a report on health care financing by the World Bank¹⁸. This report which in GDP terms implies that household share of the health financing is about 2 per cent of the GDP, is collaborated by the Ministry of Health in the Bangladesh National Health Accounts. On the other hand, the households of the lowest quintile represent around 27 per cent and the highest quintile corresponds to around 15 per cent in receiving preventive care from the government facilities. Since majority of preventive care targets children, this part of public expenditure on child health is more pro-poor.¹⁹

5. Policy Implications

Despite some good performances in child health outcome putting Bangladesh on course to attain the MDG 4 target, there are concerns that justify further dialogue and policy measures listed below:

1. Accessibility and effective coverage of health interventions for children living in urban slums, children working on the streets and those in hazardous environments requires special programme backed by adequate budgetary provisions, together with institutional accountability. It is important that the health authorities and development partners review the urban health investment case for longer term financing; as part of the larger health sector programme, with special consideration for the role of private service providers who are currently very active in the urban space.
2. While the Reach Every District (RED) Strategy has helped to close the gap for immunization service coverage at sub-national levels, it is recommended that appropriate equity based strategy be worked out for other health interventions that currently operate outside the immunization out reaches, to reduce regional and urban-rural disparity in health outcomes. Low performing areas should be given higher priority through specialized programmes, with adequate budgetary allotments tied to key performance indicators to be monitored with the participation of right holders.
3. In 2011 about 428,000 children of 12-23 months of age and 519,000 aged 12 months²⁰ were not fully vaccinated. This is indeed a significant drawback on the relatively successful Expanded Programme on Immunization (EPI). Leaving out about half a million children of two years of age from this life saving intervention compromises their rights, increases their vulnerability and that of the entire population, raising the risk of morbidity. Full vaccination of all children has to be ensured as a priority, with a combination of budgetary and equity focused strategy. In this regard, the UNICEF strategy of bottleneck analysis for effective coverage of key health interventions should be adopted and scaled up by the Ministry of Health and Family Welfare.
4. The Health, Nutrition and Population Sector Programme (HNPS) focus on children living in *char, haor*, coastal and hilly areas and urban slums require continued equity based funding, health care facilities with adequate skilled human resources, availability of essential medicines and safety net provisions for the most vulnerable populations.
5. For availability of essential drugs for children to be ensured in all public health facilities, additional budgetary provision and attention to distributive justice are critical. The Essential Services Package needs to pay attention to the children and women in hard to reach areas, urban slums and underserved populations.

¹ A. Sen, 1999, *Development as Freedom*, Alfred A. Knopf, New York, 1999.

² N.G. Mankiw, D. Romer and D.N. Weil, "A Contribution to the Empirics of Economic Growth", *Quarterly Journal of Economics*, Vol. 107, 1992, pp. 407-437.

³ D.E. Bloom, D. Canning, and D.T. Jamison, "Health, Wealth, and Welfare", in *Health and Development: A Compilation of Articles from Finance & Development*, International Monetary Fund, Washington, DC, 2004, pp. 10-15.

⁴ M. Grossman, "The Demand for Health: A Theoretical and Empirical Investigation", *Occasional Paper 119*, National Bureau of Economic Research, New York, 1972.

⁵ A. Bhargava, D.T. Jamison, L. J. Lau and C. J.L. Murray, "Modeling the effects of health on economic growth", *Journal of Health Economics*, Vol. 20, No. 3, 2001, pp. 423-440.

⁶ R.W. Fogel, Economic Growth, Population Health and Physiology: The Bearing of Long Term Processes on the Making Of Economic Policy, *American Economic Review*, Vol. 84, 1994, 369-395.

⁷ T.P. Schultz, "Health and schooling investments in Africa", *Journal of Economic Perspectives*, Vol. 13, 1999, pp. 67-88.

⁸ K. Gyimah-Brempong, and M. Wilson, "Health Human Capital and Economic Growth in Sub-Saharan Africa and OECD Countries", *Quarterly Review of Economics and Finance*, Vol. 44, 2004, pp. 296-320.

⁹ J. Finlay, "The Role of Health in Economic Development", *Working Paper No. 21*, Program on the Global Demography of Aging, Harvard University, Cambridge, MA, 2007.

¹⁰ P. Glewwe and E.A. Miguel, “The Impact of Child Health and Nutrition on Education in Less Developed Countries”, in T.P. Schultz and J. Strauss (eds.), *Handbook of Development Economics* (Volume 4), Elsevier, North Holland, 2008, pp. 3561-3606.

¹¹ N. Lustig, *Investing in Health for Economic Development: Report by the Mexican Commission on Macroeconomics and Health*, Instituto de Políticas Públicas y Estudios del Desarrollo, Universidad de las Américas, Puebla, 2004.

¹² NIPORT, *Bangladesh Demographic and Health Survey 2011: Preliminary Report*, Dhaka, 2012.

¹³ BBS and UNICEF, *Multiple Indicator Cluster Survey 2009*, Volume I: Technical Report, Dhaka, 2010.

¹⁴ NIPORT, *Bangladesh Demographic and Health Survey 2011: Preliminary Report*, Dhaka, 2012.

¹⁵ General Economics Division, *The Millennium Development Goals: Bangladesh Progress Report 2011*, Planning Commission, Government of Bangladesh, Dhaka, 2012.

¹⁶ To calculate per child budget we used the data from Population and Housing Census 2011, and BBS and UNICEF, 2010, op cit.

¹⁷ We used the data of consumer price index from Bangladesh Bank, *Economic Trends*, August 2012, Dhaka, to

calculate real budget. The formula of calculating real value of health budget is $RB_t = \left(\frac{NB_t}{CPI_t} \right) \times 100$, where *RB* stands for real budget, *CPI* means consumer price index, *NB* implies nominal budget, and *t* indicates period. The base year is set as 2010-11 = 100.

¹⁸ World Bank (2010) *Bangladesh Public Expenditure and Institutional Review: Towards a better quality of public expenditure*. Vol 1

¹⁹ Z. Ali, A.K.I. Haque and M. Ahmed, M.A. Hossain, S. Karim and O. Modhurima, *Benefit Incidence Analysis of Public Expenditure on Education, Health and Water in Bangladesh*, report prepared for Global Development Network, New Delhi, 2010.

²⁰ Estimated based on data of NIPORT, 2012, op cit; BBS, 2012, op cit; and UNICEF and BBS, 2010, op cit.