

Health Care at a Crossroads in Bangladesh

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Abstract: Though Bangladesh has made tremendous strides forward in health and other socio-economic indicators in the recent past, basic needs of health still remain largely unmet and only less than half of the population has access to basic healthcare. The health spending is far below the optimum level which is needed to scale up essential health intervention. Bangladesh is also experiencing a critical and chronic shortage and imbalance of skill mix and deployment of health workforce. The important achievements in health indicators include life expectancy, infant mortality, and vaccinations. However, overall burden of mortality and morbidity in most of the key health indicators is higher compared to other regional countries. Despite remarkable progress, except child mortality, targets are not expected to be met by 2015 if the prevailing trends persist in several areas. Major reforms are needed in health and medical education to ensure quality healthcare for the population of Bangladesh.

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1. Introduction

It's really refreshing to know that Bangladesh is now considered an emerging 'tiger of Asia'¹ even though it was once branded a 'bottomless basket'. Bangladesh has made tremendous strides forward in health and other socio-economic indicators in the recent past, and the government has announced that it aims to become a middle-income country by 2021. The progress in healthcare is exceptional and exemplary, as clearly portrayed in a series of papers recently published in the *Lancet*.²⁻⁷ I wish to congratulate all the health professionals (governmental and non-governmental), teachers and trainers, donor agencies, policy makers, administrators, stakeholders, and the general public for their contribution to the improvement of the health indicators (including MDG) of the country. Even though considerable progress is being made to improve the health of the people of Bangladesh, there remain many areas of concern over development, provision, access and utilization of healthcare delivery. The successes in some areas can be seen as 'sporadic' and 'ad-hoc' when compared to the achievements of other countries.⁸ For example, how does Bangladesh compare with its neighbors? The holistic and comprehensive picture is not as encouraging (Table 1; the data are from the World Health Statistics 2013⁹ in the table and text unless indicated otherwise) as mentioned in the *Lancet* publications.

2. Health status in Bangladesh: An overview

Bangladesh is home to more than 2% of the world's population with more than 75% of its 142 million people living in rural areas. The adolescent

fertility rate (MDG 5) is approximately 2.5 times higher than the regional (WHO Southeast Asia*) average and is the highest in the region. Income inequalities rose with the Gini coefficient (0=perfect equality; 100=perfect inequality) going up to 32.1 in 2010 from 27.6 in 1992.¹¹

In Bangladesh, the basic needs of living, particularly health and education, remain largely unmet and only less than half of the population has access to basic healthcare. The country has some poor health indicators, as well as signs of gender and other inequalities. Bangladesh's Human Development Index (HDI) is 0.515, which gives the country a rank of 146 out of 187 countries and places it in the 'low human development' category.¹² The HDI of South Asia as a region increased from 0.356 in 1980 to 0.548 today, placing Bangladesh below even the regional average. The gross national income per capita (PPP int. \$) is approximately half of the regional average, and almost half of the population (49.6%) in Bangladesh lives on <\$1 (PPP int. \$) a day (MDG 1) (regional average 38.4%) – which is more than double the global average of 22.7%.

3. Medical education and research: Needs overhauling?

In recent years, medical education in Bangladesh has undergone a radical reform in a bid to make the curricula relevant to the needs of the country and produce a competency-based health workforce.^{13,14} However, radical changes in many areas are still needed to ensure social accountability of medical education, increase its community orientation and foster inter-professional teaching and learning. Bangladesh needs to overhaul its medical education

to the changing needs of healthcare so it can produce doctors who will be able to fulfill the expectations of society and cope with the exponential growth of knowledge and information technology. Biomedical

and educational research, something which influences the outcome of healthcare, has failed to set priorities and targets of healthcare and educational policies and practices.¹⁵⁻¹⁷

Table 1: Health and MDG-related indicators of selected WHO Southeast regional countries⁹

Countries	MDG 1 Population living on <\$1 a day (%) ^a (2005-08)	Life expectancy at birth (years) (2011)	MDG 5 Adolescent fertility rate ^b (2005-10)	MDG 4 Infant mortality rate (2011)	MDG 5 Maternal mortality ratio (2010)	MDG 5 Antenatal care coverage (%) (2005-2012)		MDG 5 Births attended by skilled health personnel (%) (2005-2012)	MDG 4 Measles ^c (2011)	Physicians Density ^d (2005-12)	Nursing and midwifery personnel Density ^d (2005-12)	Hospital beds ^d (2005-12)	Total expenditure on health as % of GDP (2010)
						At least 1 visit	At least 4 visits						
Bangladesh	49.6	70	133 ^e	37	240	50	26	31	96	3.6	2.2	6	3.7
India	41.6	65	39	47	200	75	50	58	74	6.5	10.0	9	3.7
Myanmar	...	65	17 ^c	48	200	83	43	71	99	5.0	8.6	6	2.0
Nepal	55.1 ^c	68	81	39	170	58	50	36	88	2.1 ^c	4.6	50	5.1
Sri Lanka	7	75	24	11	35	99	93	99	99	4.9	19.3	36	3.5
SEA Region	38.4	67	49	42	200	76	52	59	79	5.5	9.9	11	3.6
Global	22.7	70	49	37	210	81	55	70	84	13.9	29.0	30	8.2

^aPPP int. \$; ^bPer 1000 girls aged 15-19 years; ^cImmunization coverage among 1-year-olds (%); ^dPer 10000 population. ^eData from World Health Statistics 2011¹⁰

In a recent study,¹⁷ it was demonstrated that Bangladesh produced only 2% of the total publications generated by SAARC countries over the 25 years between 1985 and 2009. Another study conducted to quantify the volume of health related research over 1990 to 1996 identified that about two-thirds of the research were conducted by an international organization, ICDDR, B (International Centre for Diarrheal Disease Research, Bangladesh).¹⁸ The alarming issue which was highlighted in the study is that average number of research articles published by medical colleges attached to tertiary teaching hospitals was less than one per year.¹⁸ It is also interesting to note that no one is included in 'The *Lancet* Bangladesh Team'² (series of papers published by the *Lancet*) from any of the 54 public and private medical colleges (Source: BMDC website: <http://www.bmdc.org.bd/>; accessed 18 Oct 2014).

4. Healthcare spending: Below the level needed to scale up health interventions!

The knock on effect of education and research into healthcare is exacerbated by the very low allocation of resources in the health sector. Bangladesh ranks in the bottom quartile of healthcare spending in the region; the percentage of GDP allocation for health is 3.7%, a level far below that needed to scale up essential health intervention. Health spending is below than the low income (5.3%), lower middle income countries' (4.3%) and global (9.2%) averages. General government expenditure on healthcare as a percentage of total expenditure on healthcare in Bangladesh is 36.5%, which is less than the average of low income countries (38.5%). In terms of per capita expenditure on health (PPP int. \$), Bangladesh also spent an average of \$61 in 2010: under half the regional average of \$125.

Historically, the percent of GDP allocation on healthcare is lower in Bangladesh in comparison to other neighboring countries¹⁹ and, government allocation in total health expenditure in 2010 was less

than one-third of the total expenditure. Between 2000 and 2010, health spending per capita more than doubled in Bangladesh, which was faster than the regional average. However, it is less than the half of the regional average and below the average of low income countries. The government allocation in health as percentage of total expenditure on health in the region was increased by 8.4% from 2000-2010, whereas it was decreased in Bangladesh by 6.4% in the same period and as a result out of pocket and private expenditure increased unlike regional trends.⁸

Resources are essential to enable government to plan how best to meet the health-related needs of their populations and are indispensable in the prevention, diagnosis or treatment of a disease and in rehabilitation and palliative care. Chronic shortage of healthcare resources in Bangladesh had a number of implications on health systems and services which are discussed in the following sections.

5. Health workforce: Critical and chronic shortage and imbalance

The number of people in the health workforce is limited and the government healthcare system remains a very minor source of healthcare in rural areas. Health professionals are reluctant and less motivated to work in the rural areas and in the field of public health.²⁰ According to the WHO, Bangladesh will experience a critical and chronic shortage and imbalance of skill mix and deployment of health workforce.²¹ The nurse-doctor and medical technologist-doctor ratios are also among the poorest in the world. Major reforms are needed in healthcare and medical education to attract and retain health workforce to ensure equitable and quality healthcare for the population of Bangladesh.

On a per capita basis, there are fewer practicing physicians in the Bangladesh – 3.6 per 10,000 population. The regional average is 5.4 physicians and DPR of Korea has the highest number with 32.9 physicians. The average number of other categories of health personnel (nurse, dentists, pharmacists etc.) in Bangladesh is lower than the regional average. Bangladesh has the lowest number of nursing and midwifery personnel in the region, 2.7/10,000 population – Myanmar has the highest, 44.5 and the regional average is 9.9. Bangladesh has also the lowest number of hospital beds in the region, 6/10,000 population. The country also has relatively few healthcare personnel and hospital beds; health inequality is observed in the provision of healthcare delivery which is most prominent in the lower socio-economic groups.

6. Achievements in healthcare: Hype or hope?

The important achievements in health indicators in Bangladesh include life expectancy, infant mortality, vaccination of measles, DTP3 etc.^{8,9} Bangladesh has enjoyed large gains in life expectancy over the past two decades, linked to improvements in living conditions, public health interventions and progress in medical care. Life expectancy at birth in Bangladesh is 70 years, placing the nation in the first four among the 11 WHO SEARO countries. The infant mortality rate (MGD 4) has fallen significantly over the past few decades. It stood at 38 per 1,000 live births in 2011 though still higher in comparison to other regional countries. The data on vaccination [neonatal tetanus, measles (MDG 3), DTP3, HepB3, Hib3], children receiving Vitamin A supplementation and ORT, and smear-positive tuberculosis treatment-success (MDG 6) are much better than regional and global averages. However, there remain a lot of concerns in relation to some key mortality and morbidity indicators.⁸

7. Healthcare indicators: Real concerns

The overall burden of mortality and morbidity in most of the health indicators is higher in Bangladesh when compared with regional countries.^{8,9} The neonatal mortality rate (26 per 1,000 live births) and under-five mortality rate (46 per 1,000 live births) in Bangladesh are in line with regional averages, but higher than some regional countries. The difference is more prominent in rural areas, lowest wealth quintile, and lowest educational level of mothers. The reported cases of selected infectious diseases (e.g. leprosy and tuberculosis) are lower than the regional averages. The maternal mortality ratio (MGD 5) in Bangladesh is 240, which is one of the highest in the region. Despite efforts to expand emergency obstetric care by the government and non-governmental organizations, hospital deliveries remain at a low level. There are also concerns about the availability and quality of skilled birth attendance.¹⁹ It is forecasted that achieving the MDG target of 50% skilled delivery attendance by 2015 will be extremely challenging.¹⁹

The age-standardized mortality rate (per 100,000 population) for communicable and non-communicable diseases is also higher than the regional average. It is also found that age-standardized adult mortality rate (per 100,000 population) for all causes, cancer, cardiovascular diseases and diabetes is also higher than the regional average. Like many regional countries, Bangladesh is also experiencing continued economic growth and demographic transition and these lead to increase prevalence of non-communicable diseases (NCDs).⁸ As population aging will increase in the future, the

health burden from NCDs will rise in parallel with aging.⁸

In terms of health service coverage, some real concerns were noted in relation to poor antenatal coverage and availability of skilled health personnel. Bangladesh has the poorest antenatal care coverage (MDG 5) in the region; 50% had at least one visit and 26% had at least 4 visits: both figures are the lowest in the region. The percentage of births attended by skilled health personnel (MDG 5) (31%) is much lower than the regional (59%) and global (70%) averages. The data on population using improved drinking-water sources (MDG 7), population using improved sanitation ((MDG 7) and infants exclusively breastfed for the first 6 months of life are better or in line with regional or global averages. An increasing number of underweight children (age <5 years; MDG 1) and smoking among male adults are also the key areas of concern. The underweight and stunted data is far above the MDG target of reducing it to 33% for underweight.¹⁹

8. Conclusion

It is clearly evident that Bangladesh has made considerable progress in the improvement of the health of the people; nevertheless, there remain many areas of concern over health development and healthcare provision and financing. The government is committed to attain the health-related MDGs and other associated targets which are reflected in national programs.¹⁹ Despite remarkable progress, except child mortality, targets are not expected to be met by 2015 if the prevailing trends persist in several areas.¹⁹ To meet the goals and raise standards of health, the government will need to focus much more sharply on the needs of the poor and vulnerable.

Biomedical research is crucial for Bangladesh, and publications need to produce first-hand evidence that can identify the extent and burden of health-related problems and priority areas, and to formulate a health policy to utilize the scarce resources available in healthcare sector. Medical education, both under- and post-graduate, should be reoriented to pedagogical-based, community-oriented and research-informed in order to produce need-based healthcare professionals.

Cross-national comparisons are important to highlight the areas where Bangladesh could improve, and set benchmarks for improved performance. Strong initiatives have to be taken to strengthen the human resources for health development, adopt appropriate healthcare financing methods, and formulate a national health policy to address the issues and shortcoming of health development of the population. Moreover, improved data and monitoring tools are crucial for devising appropriate policies and

interventions needed to achieve the MDG and other health-related targets.

*WHO Southeast Asia region: Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste.

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