Review Article

Current status of health sector in Bangladesh

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Introduction

Over the last 42 years since independence Bangladesh has made lot of strides in the Health Sector. Visibly there is proliferation in health infrastructures - medical colleges, medical university, private medical colleges, private clinics, private hospitals, district hospital, rural health centers and community clinics. Many NGOs are also engaged and contributing toward health care delivery system. Much progress has been made in the pharmaceutical sector providing affordable medicine, intravenous fluids, anti cancer drugs etc. There is also increased awareness in the general public on health issues. National and private level campaigns are ongoing to promote mental and child health, vaccination programmes, mass deworming programmes, use of safe water and latrines, hand washing etc.

A satisfactory level of progress has also been made in family planning. The population growth rate has been brought down. A huge and thriving network of private physicians stretched and spread to all over the country is trying to meet the needs of day to day medical problems.

There have been significant gains in terms of polio & small pox eradication. Extensive vaccination, case isolation has resulted in diminishing number of diphtheria and tetanus. With improvement of overall hygiene and sanitation standard there is a discernible reduction in cholera, typhoid and dysenteries. A great no of tuberculosis satellite clinics now offer free treatment with contribution from NGO's. HIV & AIDS are at a low level of prevalence but remains a threat because of international employment. Kala Azar and malaria has been significantly curbed down.

Basic statistics

Bangladesh has a population of about 153 million, and is the eighth most populous country in the world[1] with a annual Population growth rate of 1.37%.[2] Male: female ratio is 104.9/100.0. Most people are living in the rural area (74%). Crude birth rate is 19.2 per 1,000 population and crude death rate is 5.5 per 1,000 population with net reproduction rate (NRR) per woman (15-49 year) is 1.03. Life-expectancy at birth (year) is 69.0 for both sexes: 67.9 for male and 70.3 for female.[3] (Table-I)

Table-I : Bangladesh-basic statistics

Area (sq. km)	147,570
Population density (per sq. km)	926
Crude birth rate (per 1000 population)	19.2
Crude death rate (per 1000 population)	5.5
Life expectancy at birth m/f (2011)	67.9/70.3

Current health workforce

An effectively performing health system is essential in im¬proving the population's health status, providing safe¬guard against health-related financial threat and enhancing the health sector's responsiveness to customer's needs.4 Health sector reform is not only a health-related issue but also a development issue as health care systems account for 9% of global production and a sig-nificant portion of global empowerment.[5]

Pluralistic governance exists in the Bangladesh health system i.e. different stakeholders with their respective roles are working in various competitive and collaborative combinations. There is at least four such stakeholders. First is the existence of a government sector with a mandate to not only set policy and regulate, but also to provide comprehensive health services. Almost two-thirds of total health expenditure is household expenditure in the private (formal and informal) sectors. Third is the vibrant and large non-government organisation (NGO) sector that focuses resources on the health needs of the poor, often as part of a broad array of development interventions. Fourth is the donor community that exercises disproportionate influences in determining policy and programmatic priorities, orchestrates technical assistance, and directs delivery strategies e.g. urban primary health care.[6]

Bangladesh has low ratios of credentialed professionals-only 0.5 doctors and 0.2 nurses per 1000 people, far less than the minimum standard of 2.28 per

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1000 recommended by WHO.[7] (Table-II) Bangladesh also has a shortage of skilled health workers (figure-1). with twice as many doctors as nurses clustered disproportionately in urban areas.[8] There are high levels of out-of-pocket and informal payments for health services and medicines that are exhausting millions of households[9] (figure 2). Despite these endemic shortfalls in key areas of the health system, pronounced and rapid progress in the most important health measurements - e.g. infant and child mortality, maternal mortality, fertility, and contraceptive prevalence—are remarkable.[10]

Table-II: Health Workforce of Bangladesh

Workforce	Total
Total Registered Graduate Doctors	53063
Estimated total doctors available in the country	43,537
% of Doctors working under MOHFW	35%
% doctors working under other Ministries	3%
% of doctors working under the private sector	58%
Medical Officers (MCHFP) under DGFP	540
Population per physician	3012
Population per bed	2665
Registered diploma nurses	26899
Population per nurse	6342
Estimated Nurses currently available	15,023
Dental Surgeons	4165
Family Plañning Officer (TFPO)	546
Assistant Family Planning Officer	1440
Registered medical technologists	20035
Medical Assistants	7365
Health Assistants (HA)	21016
Assistant Health Inspector	4202
Family Welfare visitors	5705
Health Inspectors	1401

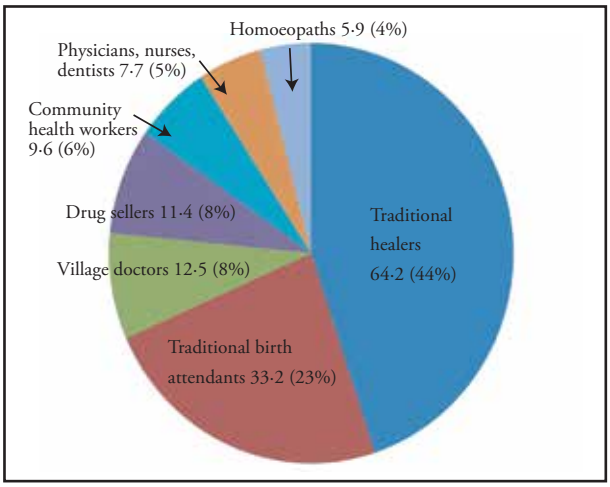

Figure-1: *Density of different types of health-care providers per 10 000 population (Data from The state of health in Bangladesh 2007)*[11]

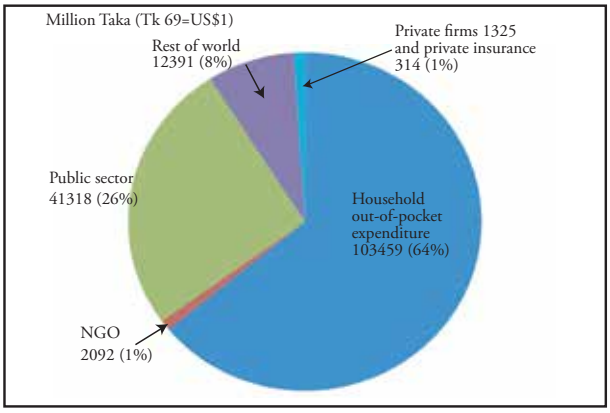

Figure-2: *Sources of financing for health expenditure in Bangladesh, 2006–07(Data from Bangladesh National Health Accounts 1997–2007)*[12]

Trends of health indicators

Bangladesh stands out as a country that has taken giant steps in healthcare and has made significant improvement in health sec¬tor, which make it an example for other developing coun¬tries even though being a resource poor country. Over the last decades, key health indicators such as life expectancy and coverage of immunisation have improved notably, whilst infant mortality, maternal mortality and fertility rates have dropped significantly.[4,13] Long before the emergence of contemporary global health initiatives, the government placed strong emphasison the importance of childhood immunisation as a key mechanism for reducing childhood mortality.

The Expanded Programme on Immunisation (EPI) in Bangladesh is consid¬ered to be a health system success because of its remark¬able progress over the last two decades. It provides almost universal access to vaccination

services, as measured by the percentage of children under 1 year of age who receive BCG (a vaccine against tuberculosis). This increased from 2% in 1985 to 99% in 2009. Coverage of other vaccines has also improved substantially.[14]

Maternal mortality has decreased by 75% since 1980,15 infant mortality has more than halved since 1990, and life expectancy has risen to 68•3 years, higher now than in neighbouring India and Pakistan.[10] Progress in infant, child, and maternal mortality has been substantial and steady during the past four decades. The steepest gains have been made in maternal mortality and mortality of children younger than 5 years, and slower gains have occurred in infant mortality.

The unprecedented reversal in excess mortality of girls compared with boys is startling.[16] This finding is a remarkable empirical demonstration that gender-based health and social interventions can reverse marked biases in the care and treatment of children.

Maternal mortality was reduced from 574 deaths per 100 000 live births in 1991, to 194 deaths per 100 000 live births in 2010.[17] As a surprise to many sceptics, Bangladesh also had pronounced reductions in birth rate (fertility) from about 7•0 children per woman in 1970, to 2•3 children per woman in 2010. Use of contraceptives in prevention of unwanted pregnancy increased from less than 10% of all couples in 1970, to 61% in 2010 (modern contraceptive 52%; traditional method 9%).[18]

This great reduction of fertility rate undoubtedly contributed to the speed and magnitude of improvements in mortality, particularly in women. Major shifts in cause of death have occured because of these reductions in mortality and birthrate.[16] Similar to many countries that have had epidemiological and demographical transitions; Bangladesh has had a decline in infectious diseases and a rapid onslaught of non-communicable chronic diseases in an increasingly urban and ageing population.

Compared with the country's Asian neighbours, Bangladesh shows exceptional health achievement. In addition to neighbouring countries in south Asia and southeast Asia, Bangladesh's national GDP puts it in the lowest income group of countries and regions, in the same range as neighbours such as Nepal, West Bengal, and Cambodia. However, Bangladesh's life expectancy is superior to that for the other countries, except for Nepal.

Bangladesh's infant mortality, under-5 mortality, and maternal mortality rates are also superior to those for the other neighbouring countries and regions, except for West Bengal. Bangladesh is ahead of Pakistan in all education and health indicators. Thus, Bangladesh is a so-called positive deviant in terms of its superior health performance relative to other countries and regions.[10] (Table-III & IV)

Table-III: Development indicators and health outcomes for Bangladesh and neighbouring countries and regions[10]

	Development indicators				Health outcomes			
	Population (millions)	Per head GDP(USS)	Poverty (%)	Girls enrolled in primary education (%)	Life expectancy at birth (years)	Infant mortality (per 1000 livebirths)	Under-5 mortality (per 100 000 livebirths)	Material mortality (per 100 000 livebirths)
South Asia								
Bangladesh	152.9	673	30.0%	92.3%	68.3	42	51	194
Pakistan	173.6	1007	22.3%	69.8%	65.0	66	86	260
Nepal	30.0	524	30.9%	NA	68.0	46	54	380
India	1224.6	1476	27.6%	89.3	64.8	48	65	230
West Bengal	91.3	612	NA	NA	64.8	33	40	145
Southeast Asia								
Cambodia	14.1	802	30.1%	95.7%	62.1	53	69	85
Laos	6.2	1208	27.6	87.8%	66.7	37	46	580
Burma	48.0	NA	NA	32.0%	64.2	45	57	240

Data from references 1, 30, 31 and 40.GDp-gross domestic product. NA-not available. *Primary education denotes girls aged6-10 years

Table-IV: Health-system indicators and health outputs in Bangladesh and neighbouring Asian countries and regions[10]

	Helth systems			Health outcomes					
	Health expenditure (% of GDP)	Public expenditure in health (%of total health expenditure)	Per head health expenditure (US$)	Doctors (per 1000 Population)	Nurses (per 1000 Population)	EPI (%)	Diarrhoeal episodes that recieve oral redydration therapy (%)	Skilled attendance at delivery (%)	Facility delivery (%)
South Asia									
Bangladesh	3.7	3.6	27	0.3	0.3	82.4	83.4	3.7	26.9
Pakistan	2.5	27.0	30	0.8	0.5	47.3	48.0	42.1	37.4
Nepal	5.4	39.3	33	0.2	0.5	82.8	40.7	49.5	40.6
India	3.9	31.0	59	0.6	1.3	44.0	61.2	48.9	40.4
West Bengal	NA	NA	NA	NA	NA	64.0	69.4	60.2	42.0
Southeast Asia									
Cambodia	5.7	22.4	51	0.2	0.9	78.8	58.4%	75.1	61.8
Laos	2.8	49.0	37	0.4	1.0	NA	NA	41.5	37.5
Burma	2.0	13.0	23	0.4	1.0	NA	NA	63.9	NA

Data from references 30, 31 and 40. EPI-expanded programme of immunisation. NA=not available.

MDG and Bangladesh

The millennium development goals (MDGs) are eight international development goals (4, 5, 6 are exclusively health related) that were established following the millennium summit of the united nations in 2000, following the adoption of the United Nations millennium declaration. All 189 United Nations member states at that time (there are 193 currently) and at least 23 international organizations committed to help achieve the following millennium development goals by 2015.[19] Bangladesh has made significant progress in improving the health of its population, and is one of the few developing countries that is on track to achieve Millennium Development Goals (MDGs). In 2010, the UN recognized Bangladesh for its exemplary progress towards Millennium Development Goal (MDG) 4 in child mortality[20,21] and for being on-track to achieve the maternal mortality reduction goals of MDG 5.[17](Table-V)

Table-V : MDG and Bangladesh

MDG	Bangladesh Target	Progress
MDG 4 Reduce child mortality	To reduce deaths of children under 5 by two-thirds by 2015, so reduce the under - five mortality rate to 48 deaths per 1000 live births	Under 5 mortality rate (/1000) 1994 : 133, Current Status : 65, 2015 target : 48
MDG 5 Improve maternal health	Reduce the maternal mortality ratio by three quarters between 1990 and 2015	1990 : 570, Current Status :320, 2015 target :143
MDG 6 Combat HIV/AIDS, malaria and other diseases		

Conclusion

In the back drop of such a changed scenario, there are newer health issues which needs to be urgently addressed. Non communicable diseases has shot up as a result of increased longevity, life style changes, industrialisation and work stress. Various types of cancer, coronary artery diseases, strokes, chronic renal diseases, chronic liver diseases, COPD has taken over mortality figures in contrast to infectious diseases in both urban and rural environments. These factors present both prevention and therapeutic challenges for a slowly adapting public health system.

Bangladesh has achieved a lot in health sector but has a lot to be achieved also in future. A national human resources policy and action plan, a national health insurance system and an interoperable electronic health information system are among the necessities in future.

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