Development Progress

Bangladesh's progress in health:

Healthy partnerships and effective pro-poor targeting

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List of abbreviations

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
BBS	Bangladesh Bureau of Statistics
BCC	Behaviour Change Communication
BHW	Bangladesh Health Watch
BRAC	Bangladesh Rural Advancement Committee/Building Resources Across Communities
CBO	Community-Based Organisation
CRED	Centre for Research on the Epidemiology of Disasters
DFID	UK Department for International Development
DHS	Demographic and Health Survey
DOTS	Direct Observed Treatment Short Course
EPI	Extended Programme on Immunisation
ESP	Essential Service Package
FPP	Family Planning Programme
GDP	Gross Domestic Product
GoB	Government of Bangladesh
HFA	Health for All
HIV	Human Immunodeficiency Virus
HNPSP	Health, Nutrition and Population Sector Programme
HPSP	Health and Population Sector Programme
HPSS	Health and Population Sector Strategy
ICDDR-B	International Centre for Diarrhoeal Disease Research, Bangladesh
IDU	Injecting Drug User
IDA	International Development Association
MDG	Millennium Development Goal
MFA	Multi Fiber Arrangement
MMR	Maternal Mortality Ratio
MoHFW	Ministry of Health and Family Welfare
MR	Menstruation Regulation
MUAC	Middle Upper Arm Circumference
NAB	NGO Affairs Bureau
NGO	Non-Governmental Organisation

NID	National Immunisation Day
NIPORT	National Institute of Population Research and Training
NSP	Nutritional Surveillance Project
OFDA	Office of US Foreign Disaster Assistance
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PHC	Primary Health Care
PPP	Public-Private Partnership
RDRS	Rangpur Dinajpur Rural Service
RMG	Ready-Made Garments
Sida	Swedish International Development Cooperation Agency
SWAp	Sector-Wide Approach
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
U5MR	Under-Five Mortality Rate
UK	United Kingdom
UN	United Nations
UNDP	UN Development Programme
UNESCAP	UN Economic and Social Commission for Asia and the Pacific
UNESCO	UN Educational, Scientific and Cultural Organization
UNFPA	UN Population Fund
UNICEF	UN Children's Fund
VHV	Village Health Volunteer
WHO	World Health Organization

1. Introduction

> 'Efforts to improve [maternal and child mortality] must necessarily span multiple sectors in rural and urban areas in order to find the most appropriate package of policies and interventions. Improvements here thus imply progress across a broad range of problems and policy fronts, including all other MDGs' (World Bank, 2007).

Despite the unpromising situation from which Bangladesh emerged as a nation almost 40 years ago, the country has achieved some extraordinary improvements for the most vulnerable sectors of society. In contrast with its socioeconomic conditions, and although poverty remains prevalent,[1] the health and population sector has shown impressive progress.

Many key development indicators in the health and population sector have shown marked improvements (BHW, 2007; MoHFW, 2008). Infant and child mortality rates have reduced remarkably: infant mortality (0-1 year) went from 105 per 1,000 live births in 1991 to 47 in 2007 and, in the same period, the under-five mortality rate (U5MR) was cut by more than half, going from 151 to 61 per 1,000 live births. The latter figure is even more impressive considering its level was 239 in 1970 (MDG Indicators; World Bank DataBank). The proportion of fully immunised children reached 89% in 2008 (MDG Indicators), from less than 1% during the 1980s (World Bank DataBank). The total fertility rate (TFR) has more than halved, coming down to two births per women in 2008 from seven in the previous decade. Contraceptive prevalence among women aged 15-19 increased to nearly 56% in 2007, from around 25% in the mid-1980s (ibid). Life expectancy rose from 44 in 1970 to 66 years in 2008. Moreover, and overturning past patterns, women now live longer than men (BHW, 2007; World Bank DataBank).[2] Maternal mortality and malnutrition prevalence, although still high, have also improved over the years. Additionally, the country's developments in health facilities, infrastructure and family planning services have been remarkable (BHW, 2007; MoHFW, 2008).

A few key factors have contributed to these achievements. Through several policies, plans and programmes, the Government of Bangladesh (GoB) has shown policy continuity and commitment to improving health conditions, placing particular emphasis on improving the health conditions of its citizens, targeting specifically the poor, women and children. Innovative practices and approaches for targeting and empowering the most vulnerable, together with effective partnerships between GoB and vibrant and powerful non-governmental organisations (NGOs), are important factors. NGOs on their own have also played a key role in developing novel approaches and practices, as well as in delivering services to hard-to-reach groups. Donor assistance has also been instrumental.

1. Despite dropping by almost 20% from 2000 to 2005.
2. Bangladesh is one of the few countries where, until the late 1980s, gender differences in life expectancy contradicted the expected patterns of women living longer than men (BHW, 2007)

2. Context

2.1 Country context

Bangladesh is a young nation, having gained independence in 1971. The country has one major ethnic group (98% of the population are Bengali), and the majority of its population is Muslim. Most, if not all, people speak Bengali, with variations such as Sylhet and tribal dialects spoken in specific regions (key informant interviews). These characteristics strongly marked its foundations.[3] United on the basis of a common cultural and linguistic identity, Bengalis fought for their independence in a civil war that lasted roughly nine months, in which few families were left unaffected (Bangladesh News, 2008; Sisson and Rose, 1991). Fighting alongside the peasants during the Liberation War, the educated middle classes and intellectuals became exposed to the problems of the poor – therefore engendering a new consciousness on social issues (Islam and Uttam, 1986). Individuals such as the founder of the NGO BRAC (then the Bangladesh Rural Advancement Committee)[4] and the founder of the Grameen Bank were highly influenced by what they experienced during the Liberation War (key informant interviews).

The aftermath of the civil war laid the ground for the formation of numerous NGOs and community-based organisations (CBOs), which were founded to assist communities in post-war rehabilitation.[5] Later, with assistance from foreign donors, they extended their activities to deliver services in the areas of gender, education, health care, microfinance and income generation (Zohir, 2004).[6]

Apart from the large number of NGOs and CBOs, the struggling newborn country also attracted the attention of the international donor community, which provided humanitarian aid and assistance for the reconstruction of the war-devastated economy. In the early years, development partners, led by the World Bank, supported efforts to expand agricultural production and to develop population and family planning programmes. They funded not only development projects but also imports of food items and essential commodities. As a result, Bangladesh became heavily dependent on external aid and currently has one of the strongest local presence of donors worldwide (Rahman, 2008).

2.1.1 Territory and population characteristics

Geographically located between India, Myanmar and the Bay of Bengal, most of the territory of Bangladesh is set on a low-lying delta with many rivers (Pearson, 1999). The terrain's characteristics are a drawback when it comes to infrastructure and transport links such as roads or railways. Some parts of the population are hard to reach physically. Frequent natural disasters, including yearly flooding during the monsoon season, add further challenges in terms of development.[7]

With an estimated population of 160 million, Bangladesh has the highest population density in the world, at 2,600 persons per square mile (World DataBank). Although still largely rural, its urban population has been increasing rapidly and is presently at about 27% of the population (NIPORT, 2006; World DataBank). In Dhaka, the largest city in Bangladesh, the proportion of the population living in slums increased from 20% to 37% between 1996 and 2005. The population density in the slums is estimated to be roughly 200 times greater than the national level, at 531,000 persons per square mile (NIPORT, 2006). Although the proportion of the population below the poverty line declined by 18% between 2000 and 2005, the country still remains one of the poorest countries in the world, with 40% of Bangladeshis living below the poverty line. The rural population is still poorer than the urban one: 43.8% of the population in rural areas is below the poverty line as opposed to 28.4% of the urban population (Narayan et al., 2007).

3. The struggle for an identity and cultural freedom, which began with the advent of the Language Movement in 1952, ended up with the Liberation War between West Pakistan (Pakistan) and East Pakistan (Bangladesh). The Liberation War in itself was a major revolution against oppression and fundamentalism (Sisson and Rose, 1991).

4. BRAC has become one of the biggest of the NGOs that have originated in developing countries, and recently changed its name to Building Resources Across Communities to reflect is now global reach.

5. Millions of people died and thousands were left homeless, hungry and sick. Nearly 10 million took refuge in India and had to be resettled. What remained were critical food shortages, hundreds of destroyed roads and transport links and a war-damaged economy (Rahman, 1978; Time, 1971).

6. 'For example, *Gone Shasthya* has its roots in a mobile medical unit that provided support to the freedom fighters in 1971; RDRS [Rangpur Dinajpur Rural Service] started its activities by providing post-war rehabilitation services and supporting infrastructure in the northwest region; and BRAC commenced its activities by providing relief and rehabilitation assistance to the community of fishermen in the northeast, who were displaced due to the atrocities during 1971' (Zohir, 2004).

7. Since its independence Bangladesh has experienced 212 recordable incidences of natural disaster, including 103 cyclones, tornados and storms, 58 floods and tidal surges, 27 viral and bacterial epidemics, 18 droughts and other extreme weather phenomena and 6 earthquakes (OFDA/CRED International Disaster Database, in Yaqub, 2004).

2.1.2 Political and economic sphere

Amidst the political instability and widespread corruption characterising the country since its independence,[8] Bangladesh has managed to achieve economic stability through a series of economic reforms (Yaqub, 2004). Coinciding with the return to a democratic system, major changes introduced during the 1990s included trade liberalisation, macroeconomic stabilisation and financial deregulation. More flexible economic policies, export-oriented industrialisation and inflow of foreign direct investment produced a jump in gross domestic product (GDP) growth per capita from a yearly rate of 1.2% until 1989 to 3.3% from the 1990s onwards (World Bank, 2007).

Within this framework, two main activities have contributed to boosting the economy, with important pro-poor impacts: the large increase in the production of rice and wheat since the 1990s and the boom of the garment industry. These developments would not have been possible, or perhaps would have been achieved to a lesser extent, without donor assistance (Yaqub, 2004).

New technology, agricultural innovations and substantial investments in irrigation now facilitate rice production throughout the year, thus smoothing fluctuations in rural income and employment.[9] This not only has increased rural incomes but also, as supply has expanded, has led the price of rice to drop significantly. Both effects have been conducive for food security in Bangladesh (Ahluwalia and Hussain, 2004; Ahmed, 2004).

The garment sector is one of the most important components of Bangladesh's economy. The Multi Fiber Arrangement (MFA) and the liberalisation measures taken in the 1990s have made garments the country's primary export. Ready-made garments (RMG) accounted for 16% of the total value of exports in 1986, and 76% of total export earnings in 2000 (Yaqub, 2004). Beyond the importance of the sector as a major driver of growth in Bangladesh, the apparel sector now employs almost 2 million workers, of whom almost 90% are female. It has become a key provider of employment and income to the urban poor as well as to rural migrant women (Kabeer and Mahmud, 2005).

2.2 Sectoral context

2.2.1 Health system policy and programme

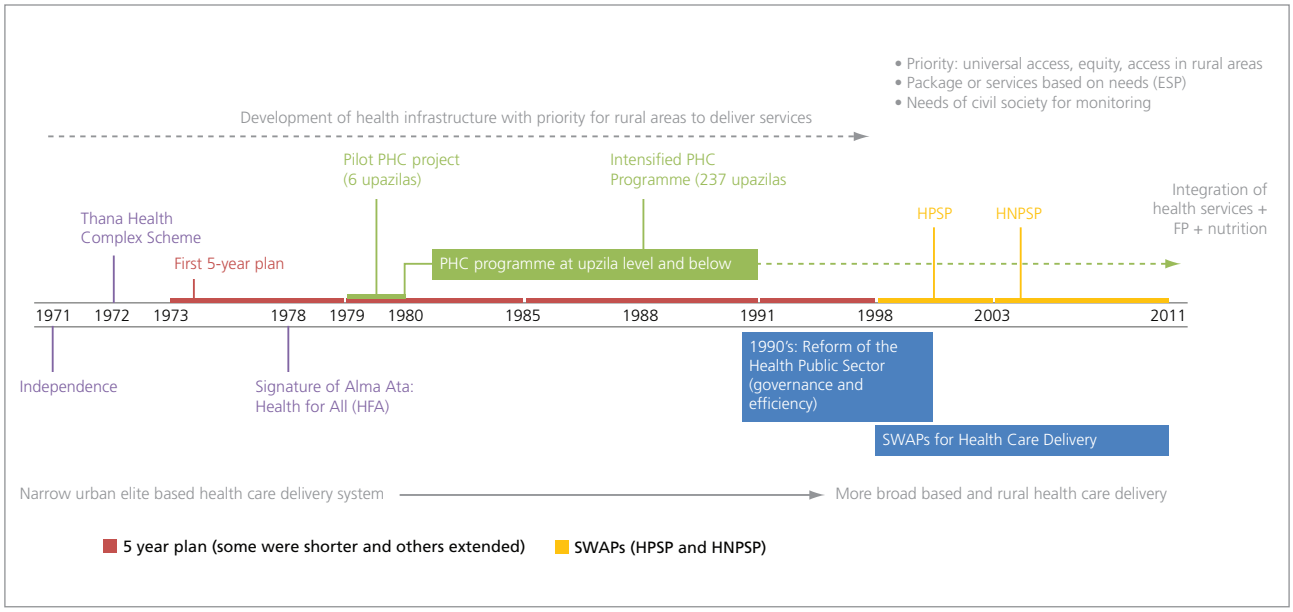
Since independence, the Ministry of Health and Family Welfare (MoHFW) in Bangladesh has made extensive efforts to move from a narrow urban-based health care delivery system to a more broad-based rural programme, in order to reach the poor and vulnerable, especially women and children (Figure 1 shows the evolution of health policy over time). Committed to the goal of Health for All (HFA),[10] Bangladesh undertook successive five-year development plans with a strong focus on primary health care (PHC) and family planning,[11] which were implemented through a project-based approach.[12] The PHC package evolved into the Intensified PHC programme, which integrated health and family planning services and added community mobilisation by involving village health volunteers (VHVs) and traditional birth attendants (TBAs), while strengthening management at union, *upazila* (sub-district) and district levels (WHO, 2008).

Supported by donors, in 1998 there was a major reform of the health sector and a sector-wide approach (SWAp) was adopted. The SWAp brings together GoB, donors and other stakeholders under the country's strategic health plan. It represents a shift from project to programme approaches in an attempt to improve health governance and efficiency, by integrating external assistance into MoHFW programmes and avoiding duplication of resources. The current national health plan is the Health, Nutrition and Population Sector Programme (HNPSP) (2005-2011), framed under a SWAp (MoHFW, 2008). Priority focuses are universal access, equity and rural areas. These are being tackled by delivering an Essential Service Package (ESP), which include five areas: reproductive health care; child health care; communicable disease control; limited curative care; and behaviour change communication (BCC).

8. After five year of the independence, Bangladesh's first President was assassinated. This event started a period of distress, characterised by periods of martial law, successive military coups and political assassinations, until democracy was re-established in 1990. From 2007 to 2009, a caretaker government took power with the goal of solving the corruption deeply institutionalised in the government. Democracy was restored 2009.
9. It is worth noticing that some of the new technologies that enabled the jump in rice production, such as the tubewell irrigation system, have been developed by the Bangladeshis themselves through public-supported research.
10. Bangladesh was a signatory to the Declaration in the International Conference on Primary Health Care held in Alma Ata in 1978, which identified primary health care as the strategy to achieve the goal of HFA by the year 2000 (WHO, 2008).
11. PHC services focused on eight principles: health education; nutrition; adequate and safe water and sanitation; maternal and child health; immunisation; prevention and control of endemic diseases; treatment of common ailments and injuries; and provision of essential drugs (WHO, 2008).
12. Within a project approach, development objectives were implemented through autonomous projects targeted at specific development needs. Individual projects proceed at their own pace, are not synchronised with national plans and tend to duplicate effort. A programme approach is a process which allows governments to articulate national priorities and realise sustainable human development objectives through national programme framework (set of interrelated policies, strategies, activities and investments designed to achieve a specific development objectives). A programme may include many projects. A programme approach permits all donors under government leadership to support one or several components of a national programme (UNDP, 1997).

Developed through a participatory approach, the HNPSP aim to make a cost-effective contribution to the priority health needs of the poor, by reorganising the MoHFW (integrating the Health and Family Welfare wings), improving decentralisation, strengthening management and increasing partnerships with NGOs and the private sector (Simpson et al., 2001).

Figure 1: Health system policy timeline



Source: Simpson et al. (2001); WHO (2008).

A key element in improving health governance and efficiency is the better coordination of external assistance aligned with the country's strategic health plan. Donor assistance, since the 1970s, has been crucial to the development of Bangladesh generally, and the health sector in particular. Although the magnitude of external aid in the health budget has been decreasing, it is still significant. From 1993 to 2000, donor contributions varied between 31% and 40% of health expenditure, with GoB contributing between 60% and 69%. Under the HNPSP, it has been estimated that development partners will support 27% of the budget, with the remaining 73% provided by GoB (Simpson et al., 2001; MoHFW, 2008). In addition to support given to projected five-year plans, there are numerous bilaterally funded and managed projects. Monitoring and coordination of so many projects represented a heavy administrative load, so the SWAps were designed as a more efficient mechanism to coordinate activities among the various development partners and GoB.

From a financial point of view, a pooled fund was introduced with the reform, to channel all external resources to the sector through MoHFW and simplify negotiations with development partners.[13] Some donors still contribute to parallel funding, but these activities need to be reflected in MoHFW operational plans so that the ministry can capture all health sector expenditure (Simpson et al., 2001).[14]

2.2.2 Health care delivery system characteristics

The health care system in Bangladesh is a mix of public and private investment, with the public sector providing the majority of physical infrastructure and services and NGOs and the private sector providing greater and more diverse coverage.

Government policy guidelines, through MoHFW, manage all these institutions and the health care system as a whole (Osman, 2004, in Yaqub, 2004). MoHFW is divided into two: one branch concerned with population and family planning and the other with general health and well-being.

13. The pooled fund is coordinated by the World Bank and comprises a consortium of 10 donors and aid agencies led by the World Bank. It funds approximately 35% of the MoHFW's budget, with over 30 multilateral and bilateral organisations supporting the ministry.
14. Donor commitments for the period 2005-2011 are 60% pooled and 40% non-pooled (MoHFW, 2008).

The GoB health care service network expands from the higher administrative level to villages through three tiers: primary care at *upazila* (sub-district) level, secondary in districts and tertiary in divisions.[15] At the *upazila* level are *upazila* health complexes (463 across Bangladesh), which act as the first point of referral as well as providing PHC directly to the rural poor. Beyond this, the PHC system is broken down at the *upazila* stage to the union level and the community level (Ara, 2008). A referral system is in place, from simple PHC and community clinics to specialised and postgraduate hospitals at division level, although districts also have various types of hospitals.

Table 1 provides a summary of the care and type of facilities available at every level of public administration in the country (WHO, 2005).

Table 1: Level of care and type of health facility

Level of care	Administrative unit	Health facility
Tertiary	Division or national/capital level	Postgraduate, specialised teaching hospitals/institutes
Secondary	District	District hospitals, maternal and child welfare centres
Primary	*Upazila*	*Upazila* health complex
	Union	Union health and family welfare centres
	Community/village	Community clinics

Source: Rahman (2003), in WHO (2005).

Private for-profit providers and private not-for-profit groups or NGOs also play critical roles in the Bangladesh health sector. NGOs are involved mostly in PHC provision in both rural and urban areas, running a total of 613 health facilities, including a number of tertiary care hospitals (WHO, 2005). NGOs and the private sector also provide reproductive care services. Many NGOs have special programmes and facilities providing antenatal and safe delivery care. In addition, several private clinics are also being set up throughout the country at all levels, with a larger number of private physicians and service sites in urban areas (WHO, 2005).

Maternal and child welfare centres and district hospitals provide basic essential obstetric care and obstetric first aid. However, owing to shortages of trained staff and of support facilities, many of the district hospitals are not providing 24-hour essential and emergency obstetric care services. Similarly, more than 80% of *upazila* health complexes are not ready to provide such services. The child health and nutrition component of the ESP includes: control of vaccine-preventable diseases through the Expanded Programme on Immunisation (EPI); management and control of acute respiratory infections; prevention of childhood diarrhoeal diseases; and administration of vitamin A capsules. All components of the ESP are provided at all levels of the system (WHO, 2005; 2008).

A comprehensive programme effort has been made in recent years towards increasing access to health care services, with special emphasis on human resource development. One of the problems is the low salaries offered to doctors, which have driven them into private practice. To help solve such issues, non-medical health staff, such as VHVs, have been trained to deliver child and maternal care at different levels (WHO, 2005; 2008).

In addition to formally trained health providers, a large number of traditional healers have considerable influence on local health care practices. Homeopathy and traditional medicines, such as *Ayurveda* and *Unani*, are very commonly practised (WHO, 2005).

15. The country has six administrative divisions and 64 districts. Districts are divided into 476 *upazilas* and *upazilas* into 4,770 unions. Each union consists of approximately 25,000 people and the unions are subdivided into villages. An extensive health infrastructure is spread throughout the country at every administrative level (Ara, 2008).

3. What has been achieved

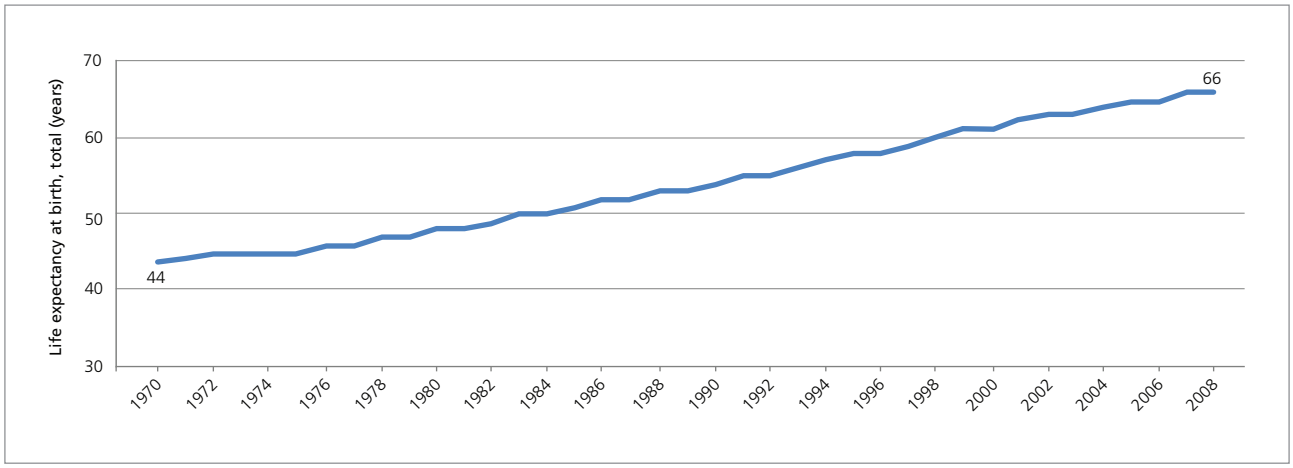
In order to identify improvements in the health sector in Bangladesh, we considered a set of indicators. We put emphasis on those set as milestones for the Millennium Development Goals (MDGs), as well as on those that illustrate improvements in social well-being. Clearly, there are many links between indicators, i.e. success on one indicator leads to and/or is influenced by success on another. For example, child mortality is closely linked to nutrition (see The Lancet, 2008), and there are also clear links between immunisation coverage and child mortality. We discuss the indicators separately below, but also show linkages between indicators where possible.

As seen in the analysis below, many indicators show that progress in health has been notable not only in absolute terms but also when taking into account the distribution of that progress within society, demonstrating that real improvements have taken place for the poor. It is also important to point out that there has been progress across quintiles and that even the upper three quintiles (except the very top few percent) are still quite poor by global standards.

3.1 Life expectancy

Since independence, Bangladeshi life expectancy at birth has improved significantly. A baby born back in 1970 could expect to live only until the age of 44; a newborn in 2008 can expect to live 66 years. Figure 2 shows how the improvement has been continuous over the whole period, at an average yearly rate of almost 1%. This has been possible as a result of improvements in health status at various stages of the lifecycle, especially during the early years of life. This is closely linked with performance in the field of immunisation and its impact on child mortality (BHW, 2007).

Figure 2: Life expectancy at birth, 1970-2008



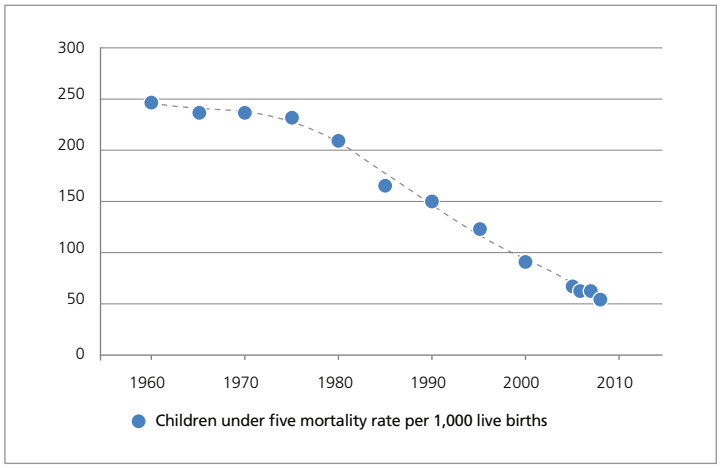
Source: World DataBank.

It is important to note that, until the late 1980s, Bangladesh was one of the few countries where gender differentials in life expectancy and child survival opposed expected patterns of female biological superiority.[16] The fact that nowadays women live longer than men represents an enormous change in how society sees the role of the sexes – and specifically the value placed on girls. This may in turn owe in part to Bangladesh's social programmes – particularly the empowerment of women by NGOs and the emphasis by GoB on girls' education, as well as opportunities for women's employment in the modern sector (discussed below).

3.2 Child mortality

Child mortality is normally assessed on two indicators: infant mortality (0-1 year old) and U5MR (0-5 years old). As already mentioned, Bangladesh has made extraordinary improvements on both indicators in the past three decades. Figure 3 shows that U5MR remained persistently at a level higher than 230 per 1,000 live births until the mid-1970s, after which, from 1975 onwards, there was a quick and continued decline – from 233 to 54 deaths per 1,000 live births between 1975 and 2008 at an average yearly rate of 4.5%.

Figure 3: U5MR, 1960-2008



Source: MDG data; World DataBank.

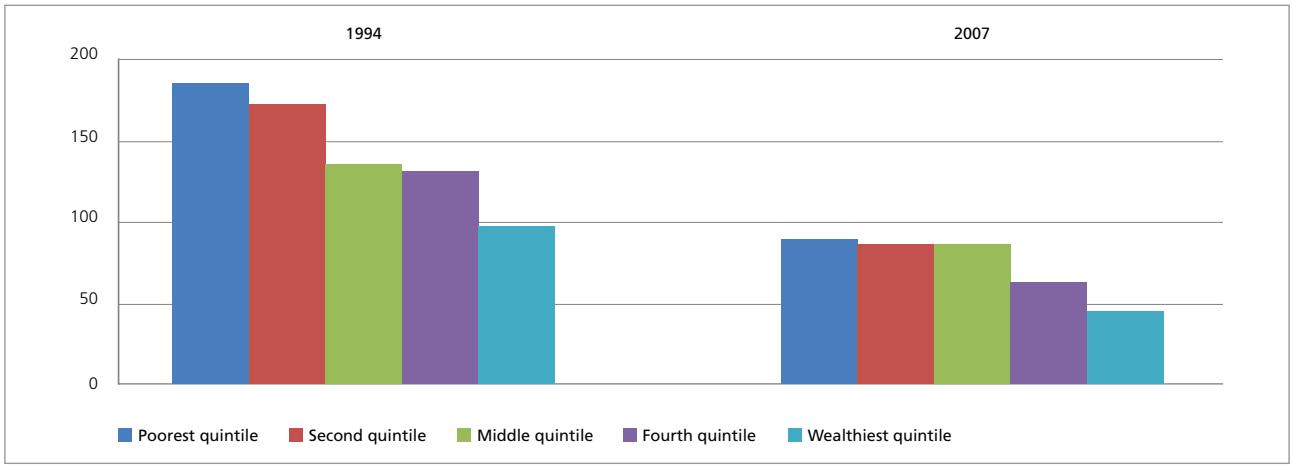
Figure 4 reveals that Bangladesh has made substantial progress in reducing U5MR. In addition, over 13 years, the gap between the rich and the poor has reduced by half, going down from 88.4 in 1994 to 43 per 1,000 live births in 2007. In relative terms, both groups have diminished their chances of dying before the age of five by almost the same rate (54% and 55% for the first and fifth quintiles, respectively). However, the absolute decline in U5MR for the poorest quintile, from 99 to 54 per 1,000 live births, was almost double that of the wealthiest quintile. The evolution of the infant mortality rate shows similar patterns.

Whereas U5MR reduced for both boys and girls between 1999 and 2004, the decline was greater among girls than boys, reducing by 19% for girls in comparison with 12% for boys (Figure 5).

When comparing U5MR of rural and urban areas (Figure 6), it is possible to see that the gap between the two has decreased. U5MR in urban areas has remained at roughly the same level, but rural areas show a decline of 32% between 1999 and 2004.

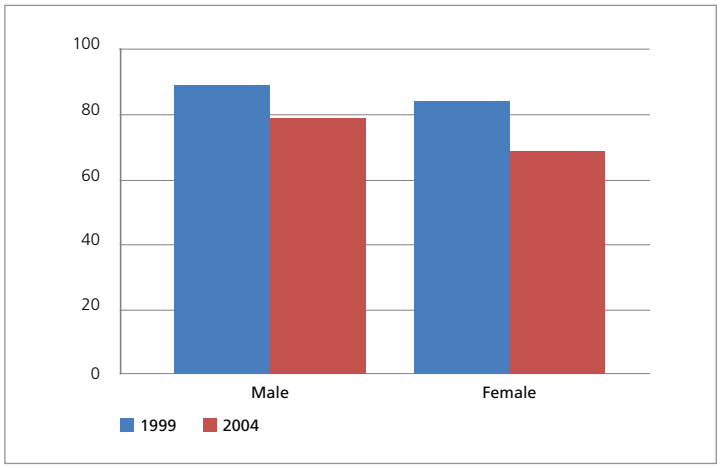
16. Bhuiya et al. (1986; 1989); D'Souza and Chen (1980); Koenig and D'Souza (1986); Sen (1990); GoB (1998); all in BHW (2007).

Figure 4: U5MR by income quintile, 1994 and 2007



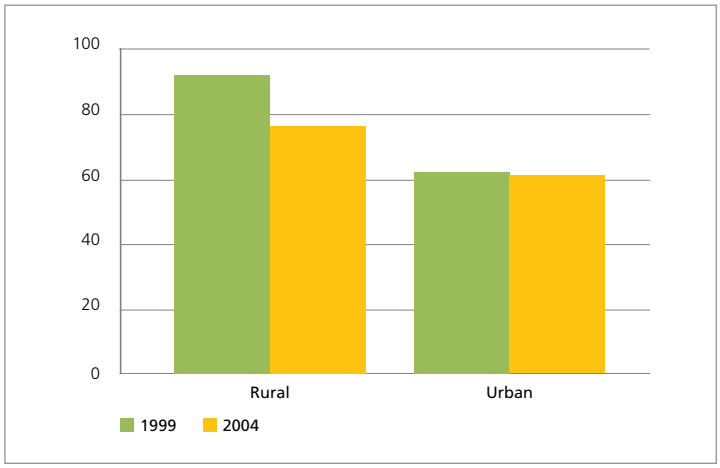
Source: MDG data; World DataBank.

Figure 5: U5MR by gender, 1999 and 2004



Source: BBS data.

Figure 6: U5MR by rural-urban, 1999 and 2004



Source: BBS data.

The main of causes of death among children under the age of five for the period 2000-2003 were neonatal, including diarrhoea during the neonatal period (45%), diarrhoeal diseases (20%) and pneumonia (18%). Another 2% of children under five years die from immunisable diseases, such as measles (WHO, 2005).

Achievements in the field of child mortality have been analysed extensively, but exploring morbidity is also important in order to understand, among other things, the costs involved in dealing with morbidity and the ways in which it affects health and broader well-being. Unfortunately, too few data are available to judge progress on morbidity over time. Box 1 is not comprehensive enough to generate a conclusion, but it does provide a hint of what might be happening in this area of health.

Box 1: Child morbidity

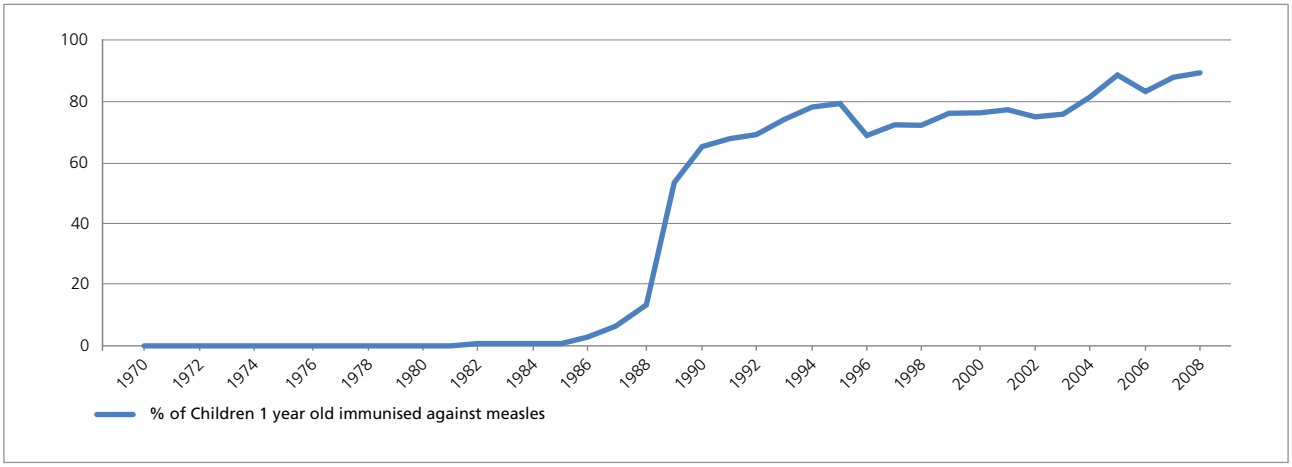
Although data about child mortality abound, data on child morbidity are scarce. However, information on prevalence of diarrhoea among children under five years old collected by the Demographic and Health Survey (DHS) shows that prevalence remained somewhat static over the period 1996-2004 (BHW, 2007).

3.3 Immunisation coverage

'At the immunisation site in Nayabari, one mother, Amena Khatun sat with her daughter Mukta, two, in her lap. "My mother-in-law used to talk about people dying in their thousands from infectious diseases like cholera and tuberculosis," she recalled. "Vaccines now save lives, and we have noticed that fewer children die from these diseases nowadays."'[17]

Progress made in the field of immunisation has been impressive. Prevention and control of diseases such as measles, poliomyelitis and diphtheria have been crucial to reducing infant and child morbidity and mortality. Figure 7 shows that coverage among children jumped from 1% in 1985 to 88% in the late 2000s, with impressive performance during the 1980s.

Figure 7: Proportion of one year olds immunised against measles, 1990-2007

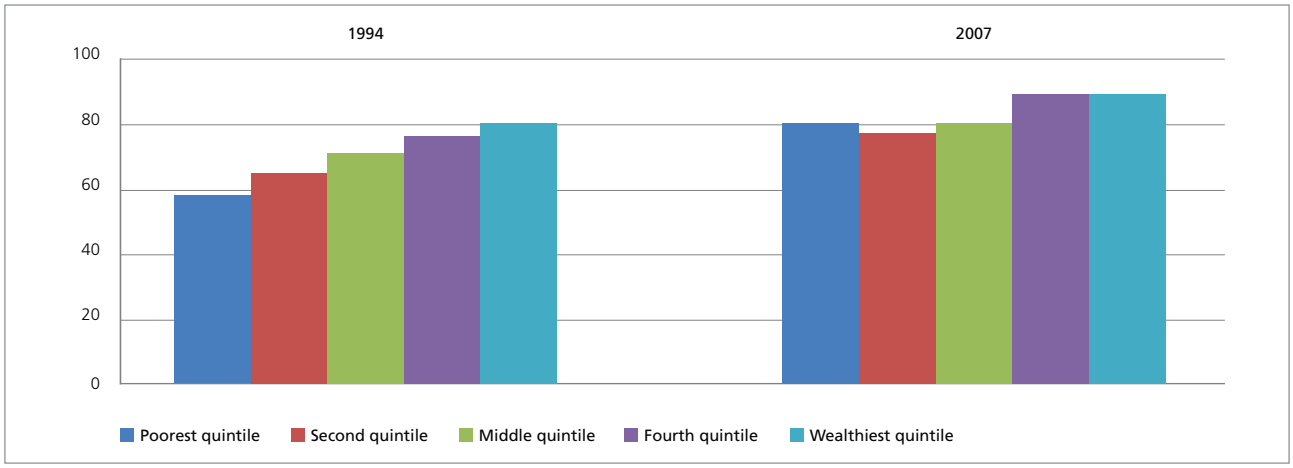


Source: MDG Indicators.

17. www.unicef.org/childsurvival/bangladesh_52966.html.

Improvements in immunisation coverage have been extremely equitable, and the gap between the poorest quintiles has reduced significantly (Figure 8). Difference in coverage of about 22% in 1994 reduced to 9% in 2007. In this case, the poor made greater improvements than the rich, both in absolute and relative terms: for the richest quintile, the increase in coverage was 11%; for the poorest quintile, the increase was 36%.

Figure 8: Proportion of one year olds immunised against measles, by income quintile, 1994 and 2007



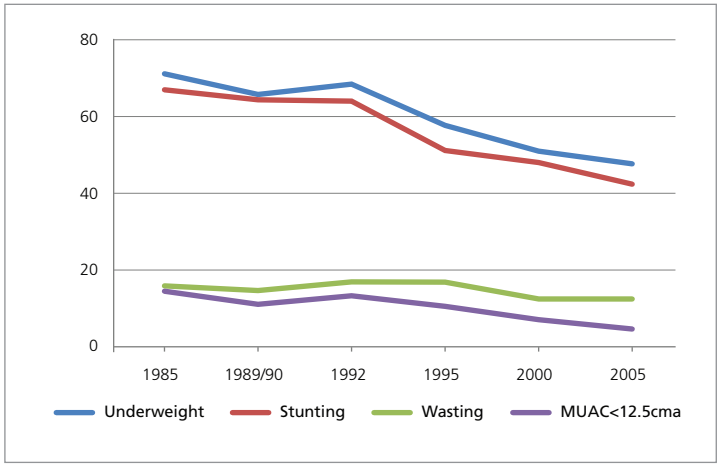
Source: DHS and MDG data.

3.4 Under-nutrition

'I've been in Bangladesh many times and some time ago I used to see malnutrition everywhere around all the time. You don't see it so much now. That is an indication' (Key informant interview).

Children's nutrition is another area where improvements have been noteworthy. The four levels of under-nutrition surveyed by the Bangladesh Bureau of Statistics (BBS) – underweight, stunted, wasting and MUAC<12.5cm[18] – showed a decreasing trend between 1985 and 2005 (Figure 9).

Figure 9: Nutritional status in children under five, 1985-2005

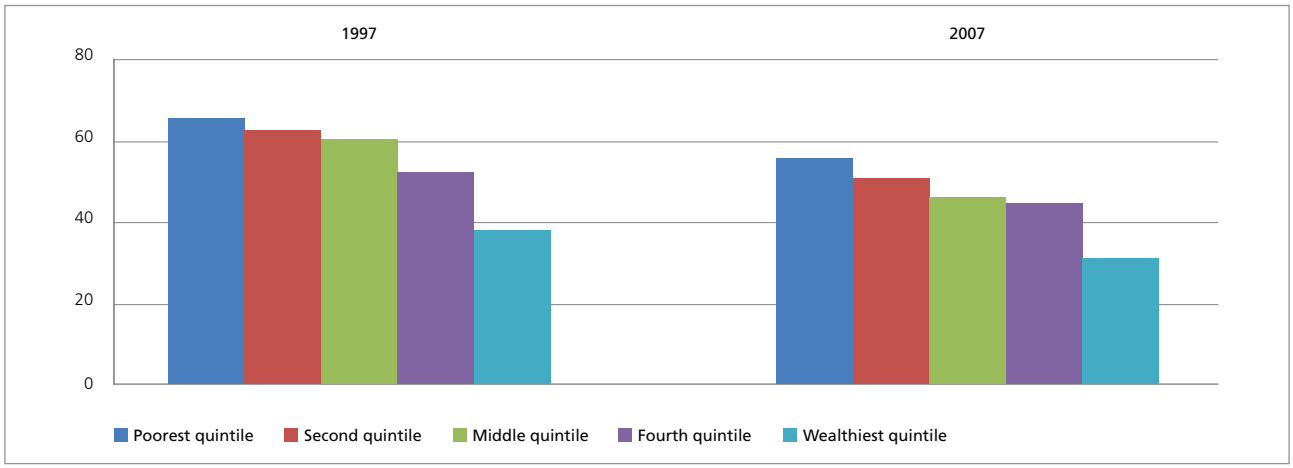


Source: BBS data.

[18] Underweight is low weight for age. Wasting is low weight for height. This is a strong predictor of mortality among children under five. It is usually the result of acute weight loss or significant food shortage and/or disease. Stunting is low height for age. This is caused by long-term insufficient nutrient intake and frequent infections. It represents chronic malnutrition and effects are largely irreversible. MUAC <12.5cm is a simple way of assess undernourishment by measuring the middle upper arm circumference (MUAC); when it is <12.5cm it indicates moderate to severe undernourishment.

There has also been a significant reduction in the incidence of severe malnutrition, measured as MUAC<12.5. Figure 10 shows that, over a period of 20 years, the proportion of severe undernourished children plummeted by 74%, to reach its lowest level at 4.1% in 2005. When analysing malnutrition measured on underweight and stunting indicators, although levels are still very high, they have reduced by 33% and 37%, respectively, from 1985 to 2005. On the other hand, statistics for 'wasting' children show a much slower decline, from 15.3% in 1985 to 12.7% in 2005.

Figure 10: Children under five underweight, 1997 and 2007



Source: DHS and MDG data.

Despite still large differences in the weight of children across economic groups, the poor-rich gap narrowed by 13% between 1997 and 2007. In relative terms, though, both income quintiles reduced at a similar rate (15% and 17%, respectively), with the third quintile showing the larger reduction (23%). Contrary to expectation, however, nearly a third of children from the richest quintile are also underweight. This suggests that factors other than income play an important role here.

As Table 2 shows, for every measure of malnutrition, the nutrition status for rural areas has been poorer than that of urban areas, with the latter reporting larger improvements over time.

Table 2: Nutritional status of children under five by area of residence, 1985-2000

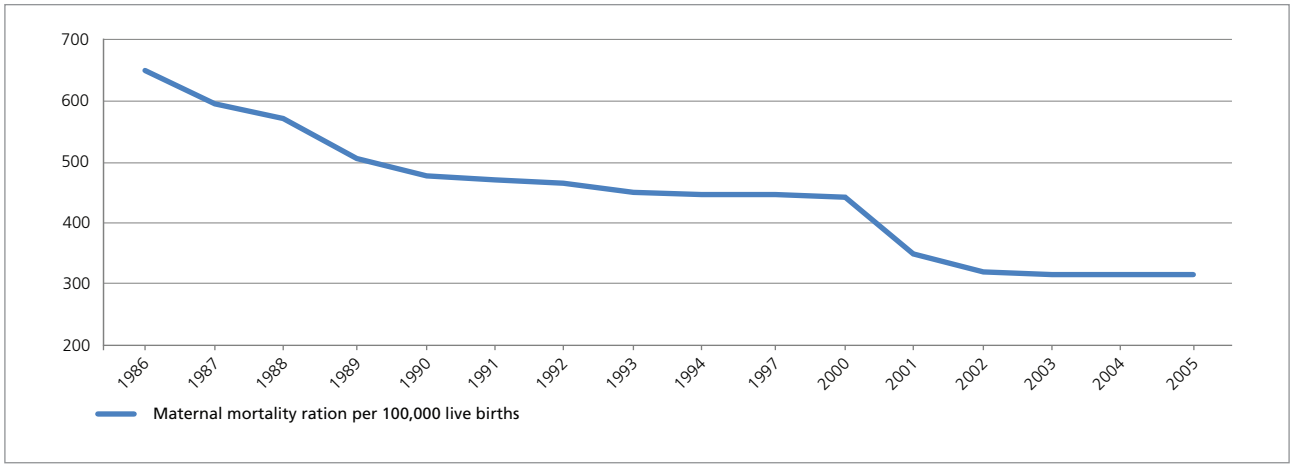
	1985	1989/90	1992	1995	2000	2005	Variation 2005-1985
Underweight							
Rural	72.0	66.7	69.8	59.3	52.6	50.1	-30%
Urban	62.3	62.7	57.2	46.3	41.8	38.5	-38%
National	70.9	65.8	68.3	57.4	51.0	47.8	-33%
Stunting							
Rural	68.9	66.7	65.8	52.8	50.2	44.9	-35%
Urban	57.1	58.3	52.8	42.9	37.5	32.5	-43%
National	67.5	64.6	64.2	51.4	48.3	42.4	-37%
Wasting							
Rural	15.4	14.7	16.9	17.2	12.2	13.1	-15%
Urban	14.0	14.0	15.1	13.3	10.9	10.8	-23%
National	15.3	14.4	16.7	16.6	12.0	12.7	-17%
MUAC <12.5							
Rural	14.9	11.0	13.2	11.0	7.0	4.9	-67%
Urban	9.9	8.5	8.4	6.6	3.6	2.6	-74%
National	14.4	10.7	12.6	10.4	6.5	4.1	-72%

Source: BBS data.

3.5 Maternal mortality

Bangladesh has reported steady progress on reducing maternal mortality over the past three decades, which went down from 650 per 100,000 live births in the 1980s to around 320 in the early 2000s (Figure 11). Although this means that the country has almost halved the maternal mortality ratio (MMR), it is still very high, and it is predicted that it will not achieve the MDG in this area.

Figure 11: Maternal mortality ratio, 1986-2005



Source: UNESCAP using BBS data from the Vital Registration System, in World Bank (2007).

Because of constraints in data availability on MMR over time, it is not possible to assess how progress has been distributed across income groups or between rural and urban areas. However, it has been reported that inequalities exist between income quintiles and place of residence. 'National as well as community-level data also show substantial use-inequities in maternal health services by asset quintiles, education, distance to facility and place of residence' (UNESCAP, 2008).

The five main causes of maternal mortality in Bangladesh are: haemorrhage; obstructed labour; ruptured uterus; eclampsia; and complications from unsafe abortion. Non-health factors affecting safe motherhood are: i) the 'three delays' (in seeking care, in receiving care and in arranging transport); ii) empowerment of women; and iii) poor-rich and spatial gaps in maternal health (UNESCAP, 2008). The still low proportion of births attended in medical facilities – or by skilled medical personnel – is also related to the level of maternal mortality (see below).

3.6 Family planning

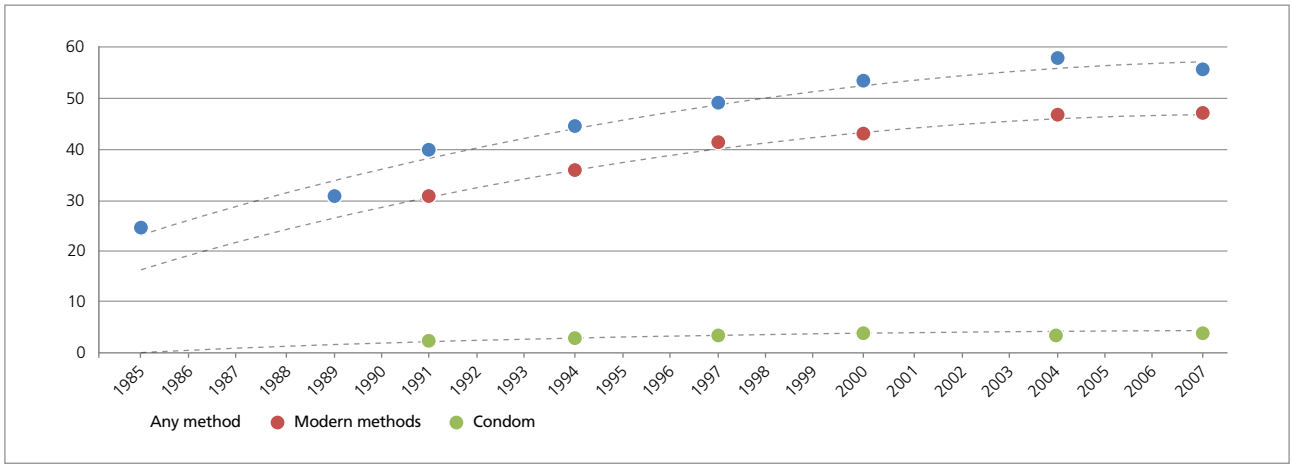
In the mid-1970s, over-population was declared Bangladesh's number one problem. The Family Planning Programme (FPP), which began in the early 1950s, has achieved substantial progress here. One significant success has been the decline in the TFR, from seven per woman in 1978 to almost two in 2008 (World DataBank). The population growth rate went from 3% to 1.5% in the same period.[19]

Reduction in the TFR is closely associated with another remarkable success: the increased use of contraceptive methods. The contraceptive prevalence rate (CPR), which in 1975 was at 7.7%, reached a peak in the mid-2000s at 58.1%, and then seems to have decreased slightly, to 55.8% by 2007 (Figure 12). Considering that Bangladesh is a mainly Muslim country, the achievement is even more striking. In Islam, fertility is highly prized, with the most conservative believing that family planning is a lack of trust in God (Maguire, 2003).

The crude birth rate, which until the mid-1970s was stagnant at 47 per 1,000 people, reduced to 21 in 2008 (World DataBank).

19. www.unfpa-bangladesh.org/php/about_bangladesh.php.

Figure 12: Contraceptive prevalence among married women 15-49 by method



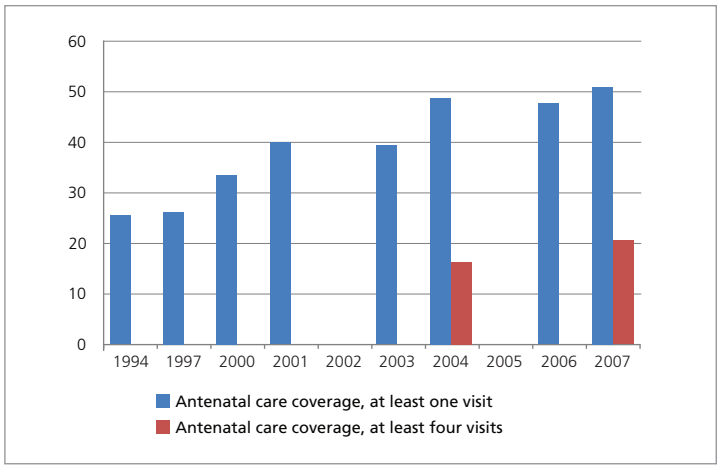
Source: MDG data; World DataBank.

3.7 Antenatal care coverage

Since the early 1990s, Bangladesh has followed a strategy of improving access to facilities equipped and staffed to provide emergency obstetric care. Coverage of antenatal care from a medically trained person doubled from 25.7% in 1994 to 52.2% in 2007. There was a relatively greater increase for the poorest women, for whom antenatal care almost trebled (13% to 32%), whereas the increase for the wealthiest women went from 59% to 85%. However, given the low base in the poorest quintile, the poor-rich gap increased by almost 17% over this period (Figure 14).

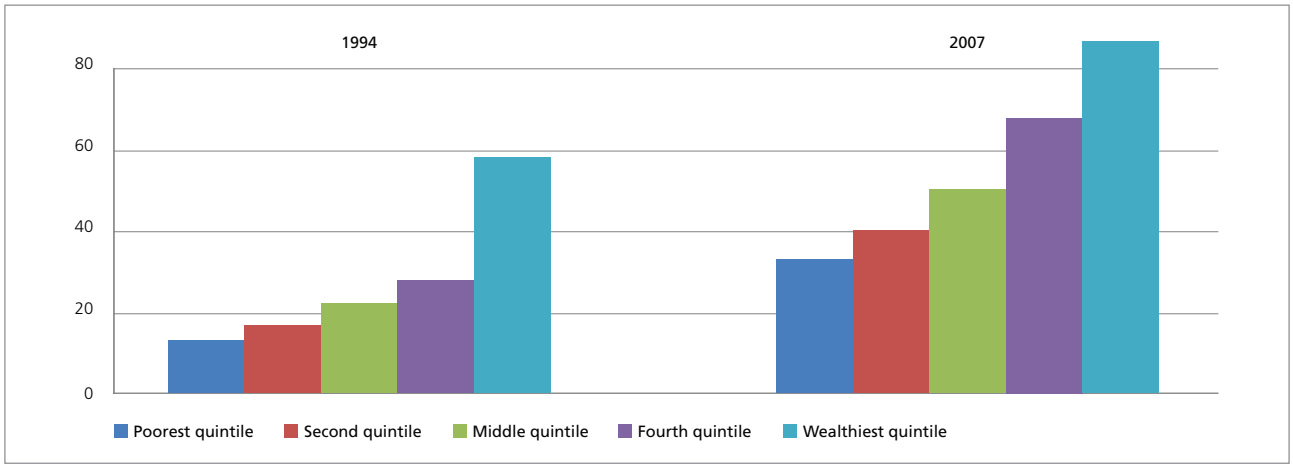
A similar pattern is observed when analysing access by region. In relative terms, access to antenatal care in rural areas increased more than that in urban areas, but utilisation remained much lower among the poorest rural women without formal education (18%) compared with the richest urban women with secondary or higher education (99%) (Collin et al., 2007).

Figure 13: Antenatal care coverage, 1994-2007



Source: MDG data.

Figure 14: Antenatal care coverage, by income quintile



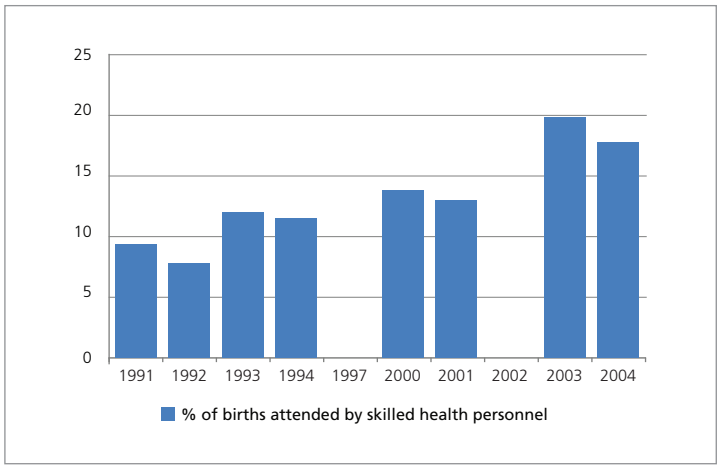
Source: DHS and MDG data.

3.8 Births attended by skilled health personnel [20]

'"I have had two children at home in deliveries that had a lot of anxieties and difficulties, but here I have had no worries," she said, resting, after giving birth to a healthy boy at the centred run by a NGO operating under the Second Urban Primary Health Care Project in partnership with the GoB."'[21]

Professional attendance at delivery increased by 89% between 1991 and 2004. Skilled attendance reached 24.4% in 2009, showing a further improvement of 36% between 2004 and 2009 (UNICEF, 2010). By any standards, thought this figure remains very low. More than 70% of deliveries occur at home, attended by TBAs (58%) and relatives or friends (14.5%) (ibid).

Figure 15: Proportion of births attended by skilled health personnel, 1991-2004

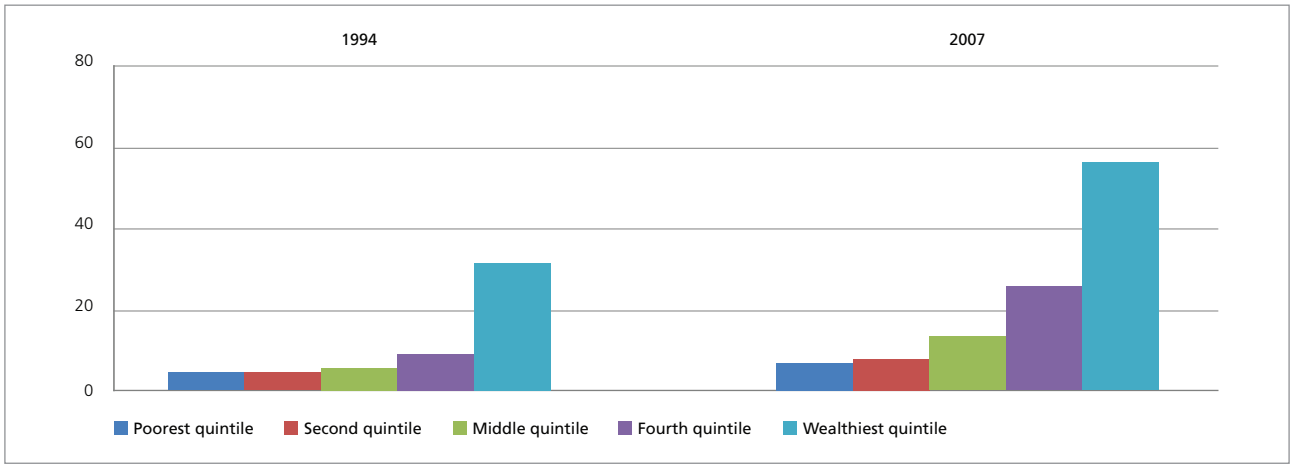


Source: MDG data.

The distribution of this relative progress remains unequal across income groups (Figure 16). Birth attended by a health professional among women from the wealthier quintile increased by 82%, compared with 74% among the poorest. In 2007, 56.6% of births were delivered by skilled personnel among women from the richest quintile, as opposed to 6.8% among women from the poorest.

20. Skilled attendant at delivery is defined as assistance provided by a doctor, nurse or midwife (UNICEF, 2010)
21. www.adb.org/Documents/Feature-Stories/2009/Ban-Health-Standards.asp.

Figure 16: Proportion of births attended by skilled health personnel by income quintile



Source: DHS and MDG data.

Additionally, there are high rural-urban disparities in institutional deliveries, with the proportion of deliveries assisted by skilled health personnel considerably higher in urban areas than in rural areas:

> *'35% of deliveries were attended by medically trained providers in urban areas and only 7% in rural areas during 1991-1993. In 2002-2006 the corresponding figures were 37% and 13% respectively. This trend illustrates that the rate of improvement in terms of increase in number of deliveries attended by skilled health personnel is higher in rural areas compared to urban areas'* (UNDP, 2008).

3.9 Other health indicators

Although significant improvements have been seen on the health indicators mentioned above, progress has lagged on others. HIV prevalence, for instance, even though still low in the general population, has been increasing among high risk groups, in which the infection rate is rapidly reaching the threshold level (e.g. rates of 7% were found among male injecting drug users (IDUs) in Dhaka) (Azim et al., 2008). In addition, with an estimate 30.9 million people above 15 years old consuming some form of tobacco, in 2005 the total death toll from tobacco use was estimated at 5.4 million, including about 1.5 million cancer deaths. If this trend continues, it has been estimated that by 2030 the amount of casualties will reach 8.3 million (Zaman, 2009).

3.10 Health infrastructure and personnel/staffing

GoB has made considerable improvements in terms of building physical infrastructure and health care centres to deliver comprehensive preventive and curative services throughout the country, focusing specifically on rural areas.

In 1971, health infrastructure in Bangladesh consisted of only 8 medical colleges, 1 postgraduate institute, 37 tuberculosis clinics, 151 rural health centres and 91 maternity and child welfare centres (Osman, 2004, in Ara, 2008). By 1996, GoB had built 4200 union sub-centres and health and family welfare centres, 379 health complexes and 59 district hospitals. Another 460 *upazila* health complexes, 1,362 union sub-centres, 3,315 community clinics, 15 government medical colleges and 7 postgraduate/specialised hospitals were incorporated into the health care network (Ara, 2008).

Progress has been made also in terms of the number of hospital beds, which increased from 43,293 in 1999 to 51,684 in 2005 (WHO, 2007, in Ara, 2008). However, the sector suffers from a serious shortage of skilled personnel. There are around five physicians and two nurses per 10,000 people (UNDP, 2008).

3.11 Broader development impact and inter/cross-sectoral contribution

It is widely recognised that health contributes to improved performance in the national economy and to human capital accumulation and enhanced productivity of workers (Ahmad, 2003). Better health contributes to greater economic security and growth, reduces absenteeism and increases enrolment in schools for children. Additionally, better health reduces medical costs, both of the government and of households, and leads to better attendance in school and higher levels of knowledge attainment, so contributing to better-paid jobs and larger benefits for the future generation.[22] Similarly, progress in a number of 'sector' programmes contributes to better health. Parallel, complementary and mutually reinforcing sectoral improvements have taken place in Bangladesh. Progress has been made in education (particularly girls' education), water and sanitation and reducing vulnerability. Increased and stable incomes and food availability have impacted on health by improving people's nutritional status.

3.11.1 Progress in education

There is extensive and overwhelming evidence that girls' education is integral to almost every aspect of development (Sperling and Herz, 2004). Many studies have shown that education is one of the most important socioeconomic factors influencing people's behaviour and attitudes. 'In general, the greater a person's educational attainment, the more knowledgeable he/she is about the use of health services, family planning methods, and the health care of children' (NIPORT, 2009). In particular, girls' education has been identified in cross-country studies as one of the biggest determinants of health status. Girls' education impacts on health include: reductions in child and maternal mortality; improvement in child nutrition and health; lower fertility rates; enhancement of women's domestic role and their political participation; improvement of economic productivity and growth; and protection of girls from HIV/AIDS, abuse and exploitation.[23]

In recent decades, Bangladesh has made substantial improvements in the field of education, and in promoting girls' education in particular. The Education for All Report 2008 shows that, not only has Bangladesh almost doubled the number of children enrolled in primary schools in 20 years (from 8.9 million in 1985 to 16 million in 2005), but also about half of the students enrolled in primary schools in 2005 were female, compared with in the early 1980s, when the proportion of girls was around 35%. The share of female enrolment at secondary level has exceeded 50% (see Section 4.5.2).

3.11.2 Progress in water and sanitation

Safe drinking water is a basic need for good health. Access to unsafe drinking water can lead to diseases such as diarrhoea, cholera and typhoid.

Bangladesh has achieved significant coverage in water supply during the past decades. The availability of suitable ground water at low depths has allowed for the installation of hand pump tubewells at an affordable cost and provided potable water to households. Nearly 7 million hand pumps have been installed throughout the country. Rural coverage reached 97%, until detection of arsenic in some areas caused a decline in coverage to about 76% (Minnatullah and Orsola-Vidal, n/d).

Comparable progress is taking place in rural sanitation since 2003. Over a period of 3 years, rural sanitation coverage went from 35% to 70%, through the adoption of a Community and Local Government led Total Sanitation Campaign (Minnatullah and Orsola-Vidal, 2006).

3.11.3 Increased incomes, reduced vulnerability

As stated in Section 2, Bangladesh has shown considerable gains in terms of GDP per capita over the past 20 years, and reduced the proportion of people living below the poverty line by almost 20% from 2000 to 2005. In spite of this, the country is considered to be one of the poorest countries in the world. Although poverty remains prevalent, achievements have been made in terms of smoothing income fluctuations, a major source of vulnerability for poor households. Apart from causing transitory poverty, income fluctuations interrupt schooling

22. In contrast, unhealthy people are usually poor because they cannot work to earn a living. They are usually malnourished and susceptible to disease, in which case they become unable to work either in the fields in rural areas or in factories in the cities, and are therefore unable to obtain food, shelter and clothing. Thus they become poor, and because they are poor and cannot obtain adequate health care, they eventually become poorer.

23. http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/0,,contentMDK:20298916~menuPK:617572~pagePK:148956~piPK:216618~theSitePK:282386,00.html#why.

of children and hamper the ability of poor households to treat morbidity properly. A number of important measures have been instrumental in reducing vulnerability. The introduction of irrigation systems and new varieties of crops has helped cushion agricultural production from irregular rainfall and floods in the boro rice season and reduced the seasonality in employment and production, while at the same time contributing towards food sufficiency. Additionally, expansion of microfinance has given poor households a consumption smoothing mechanism, while greater stability in agricultural production combined with economic diversification into non-agricultural goods and services in rural areas has played an important role in mitigating income fluctuations. Increased and more stable incomes, together with augmented food availability, have also had a significant impact on the nutritional and health status of the population (Sen et al., 2004).

4. Drivers of progress

What explains the progress achieved in the health sector in Bangladesh, when other sectors remain stagnant or have improved only marginally? This is, after all, a country where most of the people live under the poverty line and where access to health services is potentially jeopardised by, among other things, a large proportion of the population living in rural areas. This is also a country which, emerging from the civil war, was characterised by inadequate knowledge of basic health measures among the population and societal barriers preventing women from seeking care.[24]

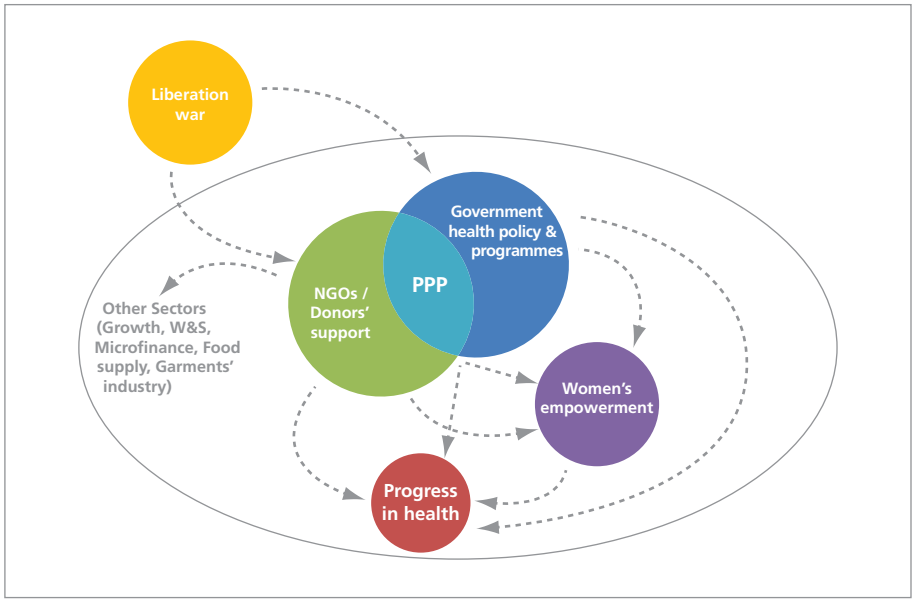
The key to this progress lies in a combination of factors which, although analysed separately, have developed simultaneously, interacting and reinforcing each other. They are: the role of GoB; the role of NGOs; effective collaboration between GoB and NGOs; innovative pro-poor health interventions; and empowerment of women.

Figure 17 shows the interaction between the factors of progress identified in this research. It shows that the Liberation War played an important role in shaping the way of thinking of a generation, engendering social consciousness among elites and intellectuals with regard to the living conditions of vulnerable groups. Additionally, the war had more tangible consequences, which influenced the direction that Bangladesh was to take: the war left behind a proliferation of NGOs and donors ready to start reconstructing the country. These would become key actors in the process of development.

Progress in other social and economic sectors of the country, such as water and sanitation, the garment industry and agriculture, add to the context in which health improvements occurred. This progress interacted with the health sector, with both sectors mutually reinforcing positive impacts on each other.

Within this framework, the health sector was able to progress thanks to the key roles of, and partnerships between, GoB and NGOs. The strong presence of international donors and agencies is a crosscutting factor that has contributed towards health progress. Funding and technical assistance have supported not only the government budget but also bilateral programmes and NGOs.

Figure 17: Interaction among factors of progress



Source: Own analysis on the basis of the literature reviewed and interviews with key informants.

24. See www.brac.net/index.php?nid=65.

4.1 Role of the government: Policy continuity and regulation/coordination

4.1.1 Policy continuity

The continuation of the government's pro-poor health policy over the years is an important factor in the progress in the health sector (key informant interviews). Throughout the four decades since independence, Bangladesh has been ruled by successive military regimes and democratic governments. In spite of the changing political scene, each administration has taken health very seriously, maintaining PHC as a priority for national development (WHO, 2008; key informant interviews).

> *'Approval of the radical HPSS/HPSP [Health and Population Sector Strategy/Programme] along with MoHFW's approach during HPSP development indicates GoB's strong commitment to improving health sector performance despite the lack of wider public sector reform in Bangladesh'* (Simpson et al., 2001).

Over the years, the Bangladeshi government has been developing and improving its health policy and plans on the basis of its performance. However, the underlying policy has always been committed to the goal of HFA:

> *'The basis of the policy of the government was to provide health care to the un-served and underserved population as far as possible, at their door steps, at a cost that the people can afford'* (Zohir, 2004).

4.1.2 The role of government as regulator/coordinator of actors

A common debate in the economic policy arena is the role of the state versus the private sector (including both for-profit and not-for-profit organisations) in health care services. Governments can intervene in different forms – as financiers, providers and/or regulators (Ahmad, 2003).

The public health care delivery system has traditionally performed quite poorly, and its quality has been questioned: 'the quality of the curative care of the public facilities has fallen below even what the poor are willing to accept' (BHW, 2007). Government ineffectiveness, lack of transparency, mismanagement, lack of adequate human and financial resources and corruption have all been reported with regard to the public health sector (Ahmad, 2003).

However, GoB appears to have a relatively efficient system for allocating services to the non-governmental sector. NGOs are required to register with the NGO Affairs Bureau (NAB) and to renew this every five years in order to avail themselves of foreign funds (Ahmed, 2001; Zohir, 2004). NAB must approve projects and foreign funding in advance. NGOs must receive all funding through a single bank account, and the bank must submit full reports to the central bank, which then reports to NAB. Additionally, each NGO needs to submit a yearly auditor's report to NAB (penalties apply) (Ahmad, 2001). Therefore, GoB knows which service is being provided by which NGO and in which location. These regulations allow GoB to adequately synchronise services NGOs provide with those of the public health system, by directing them to where they are most needed.

In addition to regulating activities carried out by the NGOs, GoB establishes partnerships with NGOs by subcontracting them to deliver health services under national programmes. Partnerships among GoB and the NGOs are discussed in the following sections.

It is worth noting that, unlike in many other countries, GoB has actively created a space for NGOs to work, flourish and embark on more activities, providing them with administrative and legislative support (Zaman, n/d; key informant interviews).

4.2 The role of NGOs

The scale and presence of NGOs in Bangladesh is overwhelming: there are over 6,000 registered NGOs and they cover at least a quarter of the population (Katz, 2009). They engage in a variety of services, including microcredit, essential health care, informal education, women's empowerment and human rights advocacy. They frequently work at the grassroots level, adopting participatory approaches which allow them to embed themselves in the local community and which make them more sensitive to local needs. Their flexibility means that they can work in remote and sensitive areas where government organisations are less welcome, and thus they have been able to deliver services to communities more efficiently than GoB has (Zohir, 2004).

> *'Some 500 non-governmental organisations operate in the health, nutrition, and population sector in Bangladesh. They also play a key role in educating women and mobilising the female workforce that has been key to Bangladesh's improvement, especially in the background of a culture that traditionally limits opportunities beyond the home for women'* (Abbasi, 1999).

Research is another important activity, included in the mandate of some NGOs. For instance, the immensely successful Oral Rehydration Therapy (ORT) programme (Section 4.4.1) was formulated as a result of research by the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR-B) and proved to be a cost-effective solution to cholera and diarrhoeal diseases (Glimpse, 1994). NGOs like BRAC have also worked towards developing systems of outreach activities that have made it possible for them to provide health services to hard-to-reach populations (see following sections).

NGOs have had an impact on health outcomes from two different perspectives. From a supply side, they have been working directly on health-related activities, providing a range of health services. In addition, through their interventions, and also in other sectors, they have contributed towards creating a different kind of demand in terms of health (key informant interviews).

4.3 Effective collaboration between government and NGOs

Bangladesh has a long history of government collaboration with NGOs, particularly on issues related to poverty and health. In 1996, GoB created an NGO Consultative Council in order to enable direct communication with NGOs. Currently, through the health sector SWAps, there is a strong emphasis on public-private partnerships (PPP), mainly through NGOs.

In these partnerships, usually funded by external donors, GoB subcontracts NGOs to implement health service delivery. GoB is responsible for planning and overseeing programmes, whereas NGOs take care of actual health care service delivery to the poor under a partnership agreement made between the two parties. For instance, in 2000, with funding from the United Kingdom (UK) Department for International Development (DFID), GoB contracted 27 NGOs to provide most of the ESP to about 330,000 married women aged 15-49 years in 27 rural areas. The NGOs received financial and technical support on service delivery, and fieldworkers and paramedics received advice on neonatal care. The relatively low neonatal mortality rate (below 30 per 1,000 in 2003) achieved in the areas where they worked (compared with Bangladesh as a whole) could owe in part to the high coverage of reproductive health outreach services put into practice (IDCCR-B, 2006). As the pace of urbanisation increased, GoB started implementing these kinds of partnerships in urban areas too. A PPP provides facilities and services to six city corporations and five municipalities across Bangladesh through a project financed mainly by the Asian Development Bank (ADB), and co-financed by DFID, the Swedish International Development Cooperation Agency (SIDA) and the United Nations Population Fund (UNFPA). The initiative is aimed at reaching underserved communities and, in particular, improving child and maternal health in urban areas where mortality rates remain high.

In most cases, programmes implemented in the mainstream are based on successful activities piloted by the NGOs themselves and later sponsored by GoB. This was the case for some of the most successful programmes, like the delivery of ORT and the Direct Observed Treatment Short Course (DOTS) programme for tuberculosis, both implemented through BRAC (Katz, 2009).

Collaborative efforts between GoB and the non-governmental sector appear to have had positive results in Bangladesh, with the relationship frequently proving beneficial to both parties. In general, NGOs receive a better response from local communities, who may distrust the government. Additionally, NGOs in Bangladesh have an extensive network throughout the country, giving them good coverage and outreach within local communities – including some not reached by the government. NGOs benefit by receiving training, gaining access to government facilities such as laboratories and, in some cases, being able to avail themselves of GoB's purchasing power when it comes to buying medicines or other equipment in bulk. All this ensures that public and private resources are used more efficiently and helps avoid duplication of effort (Katz, 2009).

Meanwhile, although NGOs have the ability to cover many local areas and work at the grassroots level, GoB can see the larger picture and draw up policies for the entire country. Thus, the PPP allocates responsibilities to the party best positioned to produce the better results (Hossain, n/d).

NGOs do not want to limit their role to implementation, however; they want to be fully integrated into the health programme in Bangladesh and have gone some way towards achieving this. Indeed, the GoB policy is to encourage the involvement of NGOs and the private sector in all aspects of the delivery of health care, including formulation of policy, in spite of inevitable strains in relations this brings about at times (Abbasi, 1999).

4.4 Innovative pro-poor health interventions

As we have seen, GoB has invested substantially in the institutionalisation and strengthening of health and family planning services, with special attention to rural areas, and is committed to the key HFA and PHC approaches. Its overall policy has been pro-poor, focusing particularly on women, children and the rural poor. In particular, certain interventions appear to have been especially successful when it comes to explaining the progress on health outcomes.

> *'Bangladesh can be proud of her health innovations and achievement: the doorstep service and the family planning programme, the campaign for ORT, immunization, the essential drug policy, the national Menstruation Regulation (MR) programme and so on'* (BHW, 2007).

Many programmes started as innovative pilot projects initiated by NGOs (in many cases supported by international assistance), which GoB later mainstreamed and scaled up, pointing once again to the successful collaboration and partnership. The most successful are listed below.

4.4.1 Oral rehydration therapy

ORT, which became a revolutionary solution to diarrhoeal diseases, is a simple formula based on common ingredients affordable by poor households (common salt and unrefined brown sugar). ORT was developed by the predecessor to ICDDR-B under a programme aided by the US Centers for Disease Control.[25] In 1980-1990, BRAC was central to designing the public education campaign and teaching over 12 million mothers how to prepare ORT at home. This was followed by a strong GoB promotion campaign, distribution of pre-packaged oral rehydration solution (ORS) and expansion of the availability of pre-packaged ORS in rural pharmacies (Chowdhury, 1997, in Yaqub, 2004).

Diarrhoeal diseases are one of the major causes of morbidity and mortality in Bangladesh, and are the second largest killer of children. The ORT programme has reduced mortality considerably. Multi-sectoral partners are involved in mobilising the community, particularly with regard to correct home-based care and timely referral. The availability of ORS has increased through the formation of ORS depots in local communities.

4.4.2 Immunisation campaign

The World Health Organization (WHO) EPI – usually implemented through the UN Children's Fund (UNICEF) – was created in 1974 as a worldwide alliance of collaborating nations aiming to expand immunisation services and coverage (Jamil et al., 1999). Under the auspices of the WHO in 1979, GoB launched an EPI against six childhood diseases (diphtheria, pertussis or whooping cough, tetanus, tuberculosis, polio and measles). Initially, this was limited to a selected number of *upazila* health complexes and hospitals and some NGOs. Later, between 1985 and 1990, it was expanded to another 460 *upazilas*, 84 municipalities and 4 cities. The programme received strong support and assistance from several partners, including NGOs, donor agencies, commercial enterprises and community volunteers (ibid). This campaign explains the increase in the number of fully immunised children observed in Section 3. Additionally, since 1995, National Immunisation Day (NID) has been set aside every year. On this day, volunteers work all day long at community level, followed by a four-day house-to-house campaign to make sure that no child has been left out.

The success of the immunisation campaign has been tremendous, and Bangladesh has not had a case of polio since 2000 (WHO, 2005). Meanwhile, the cost of fully immunising a child with EPI has been estimated at $11.76 in Bangladesh, compared with a developing country average of $15. This seems to be explained by the fact that in Bangladesh NGOs deliver the programmes, through other programmes (Chowdhury et al., 2002, in Yaqub, 2004).

4.4.3 Family Planning Programme

Perhaps the earliest programme in Bangladesh, FPP started in the 1950s (when Bangladesh was East Pakistan), with voluntary efforts by a group of social and medical workers, supported mainly by international donors. The massive programme takes into account women's isolation and dependence, especially for those who are usually confined to the home, by bringing the delivery of contraception to their doorstep. An innovative approach was developed between 1965 and 1970, wherein women from the villages were recruited as non-medical reproductive health agents to stimulate demand for family planning services. They were trained to provide motivation through a house-to-house service in rural areas, offering selected clinical and non-clinical methods.

25. www.gatesfoundation.org/gates-award-global-health/Pages/2001-centre-for-health-and-population-research.aspx.

After it was interrupted by the Liberation War, the government of the newly formed nation of Bangladesh restarted the programme, and since then has prioritised it as a national population programme to reduce population growth. The programme is now incorporated into national health planning.[26] It is noteworthy that policy continuity in the field of family planning survived the hard transition of the country from being East Pakistan to being independent Bangladesh.

The success of the programme is represented by the remarkable decline in the TFR and the increased use of contraceptive methods today, as observed in Section 3. As discussed in Section 4.5, the programme has also played an important role in empowering women.

4.4.4 Community participation and door-to-door services

Community participation and outreach practices have proven very effective in accessing hard-to-reach populations. National health planning has stressed the roles of the individual, family and community since 1980, with the Intensified PHC Programme, when it implemented a process of decentralisation at *upazila* and union level. Delivery of services at community level is of vital importance, since transport is a big issue for many people in the villages (key informant interview).

Door-to-door services implemented with community participation have transformed villagers from being passive recipients to being active participants in their own development. VHVs are recruited (selected by their community) and trained in preventive care and general diagnosis. Their role includes education of community members on the basic causes, prevention and control of diseases. The system works on a referral basis, so when a case surpasses the knowledge of a VHV, he or she refers the patient (often even personally accompanying them) to the village health care post or union health and family welfare centre. During outreach clinic sessions, VHVs participate in growth monitoring, social mobilisation and distribution of Vitamin A and ORS. 'Screening and referral roles of VHVs in Bangladesh are unique and have added impetus to the whole concept of volunteers in PHC' (WHO, 2008).

4.5 Working on the demand side: Empowerment of women

Empowering women has been critical to the progress achieved in health outcomes in Bangladesh.[27] Amongst other things, empowerment of women translates into a change in decision making power and control, which subsequently leads to better health results (Chowdhury, 2010; Duby, 2010).

Research carried out in Bangladesh by the Nutritional Surveillance Project (NSP, 2006) on women's empowerment and nutritional status reveals the difference between men and women in terms of priorities. The study shows that women prioritise investments in medical services and food and hence provide better health care and a better quality diet to their children. Thus, children belonging to households where women are the decision makers consume a more diverse diet than households headed by men, and have a higher expenditure on health services. The research concludes that, although the proportion of female-headed households in Bangladesh is very small, they perform impressively: even with fewer resources women manage to achieve better child and maternal nutritional outcomes. The results emphasises that female empowerment is essential for Bangladesh to achieve the MDGs.

Empowerment is not easy to measure, and may be influenced by multiple factors. Some key factors are: access to income-generating activities; access to health care; education; land ownership; political participation; freedom of choice and movement; and an increased role in decision making (Lucy et al., 2008).

Different interventions have affected women's status in Bangladesh. In particular, two programmes/policies have been set up with the explicit goal of empowering women: NGO-driven microcredit programmes and the GoB education policy emphasising girls' education. Other policies and programmes, despite not being specifically designed to empower women, have had an indirect impact on women's status, including the FPP and the GoB economic policy.

26. www.dgfp.gov.bd/main_english.htm.

27. Bangladeshi women face severe challenges as a result of their economic, social, and cultural positions. Bangladeshi society is deeply rooted in tradition and stereotypes of dependent women. Male domination and subordination of women are the underlying tenants of the country's social structure. The basic unit of the social structure is the family, which sets roles for men and women. Men have the economic control and therefore are the decision makers. Women's lives in such a traditional patriarchal Muslim society are dominated by a highly restricted social structure (Lucy et al., 2008).

4.5.1 Microcredit and the role of NGOs

To improve women's status in society, NGOs have promoted, among other programmes (health, education), microcredit to generate employment opportunities, skills training and rights information awareness (Lucy et al., 2008). Control over their own economic livelihood is crucial to enable them to take control over their own decisions.

Microcredit has not only helped women save and manage their own resources. In addition, the credit groups organised around it have created the space for other services to be delivered through them, such as family planning. These groups have proven critical to gender-related change. With an emphasis on collective rather than individual empowerment, they have generated a sense of solidarity and helped reverse historic lack of voice.

> *'Women were more likely to participate in household decision-making, less likely to vote according to their husbands wishes, and one revealed that "before we even feared talking in front of our husbands, nowadays we do not even fear talking with the magistrate"'*(Braunholtz-Speight et al., 2008).

A study conducted among Bangladeshi women who received microcredit loans from the Grameen Bank and BRAC reported that the 'microcredit loan programs improved women's income and enhanced their sense of self-empowerment related to control over their freedom of movement and decision-making' (Lucy et al., 2008). Groups have also helped generate awareness in other spheres, such as on health issues.

4.5.2 Government education policy: Focus on girls' education

The GoB education policy is expressly intended to improve women's status. With the support of international donors, GoB has implemented a girls' scholarship programme[28] and worked with NGOs to expand small rural schools that work closely with communities and families (DFID, 2006; IRIN, 2010; O'Gara, 2006).[29] Additionally, important government-led advocacy campaigns to encourage girls' participation in schools and to delay the age of marriage have made a significant contribution towards convincing parents of the security and safety of their daughters at school (DFID, 2006). NGOs have also played an important role in the achievements made in education. Since 1985, for instance, BRAC has been implementing a non-formal educational programme in remote areas, with a particular emphasis on girls and children with special needs. There are more than 31,000 BRAC schools in rural areas (Zohir, 2004).

As a result of these policies, female net enrolment rate in primary schools rose from 33% in 1970 to 91% by 2006, and in secondary schools from 13% in 1990 to 42% by 2006 (World DataBank). Education has proven a powerful tool to influence and change social relationships, particularly in terms of female-male power interactions. It can help develop rights awareness and build confidence and self-esteem (Braunholtz-Speight et al., 2008). Attendance in school also allows girls to get out of the house and thus move away from the traditional role of helping with household chores and taking care of younger siblings. Access to education results in more equal power relations between females and males, which helps shift intra-household decision making and increase the possibility of better nutritional patterns at home (NSP, 2006). When educated girls become mothers, they tend to have fewer children and provide better health care and nutrition for their children, and are more likely to send their children to school (O'Gara, 2006).

The Bangladesh DHS 2007 provides considerable evidence on the positive link between female education and health (NIPORT, 2009). For instance, U5MR ranges from 32 deaths per 1,000 live births among children of women with secondary complete or higher education, to 93 deaths per 1,000 live births among children of women with no education. Similarly, regarding vaccination coverage, only 72% of children of mothers with no education are fully vaccinated, compared with 93% of children of highly educated mothers. Female education is also positively correlated with knowledge of HIV/AIDS, which goes from 42% among uneducated women, to 75% among those who have completed primary school (only), to 95% among those who have completed secondary education. Girls' education has been also credited with contributing towards the significant reduction in MMR, as well as the success in family planning and reduction in TFR (IRIN, 2010).

4.5.3 Family Planning Programme

The reduction in TFR credited to the FPP (see Section 4.4.3) represented a very important step towards empowering women in Bangladesh. Having to take care of fewer children not only improved women's and their children's health, but also provided them with extra time to engage in other activities (key informant interviews). Until then, traditional female role expectations and women's dependence on men had influenced reproductive decision making.

28. GoB introduced the Female Secondary School Stipend Programme in the 1990s, supported by the International Development Association (IDA) branch of the World Bank.

29. Although there are no official tuition fees for state primary education, other direct and indirect costs (such as uniforms, transport, text-books and building) constitute a burden on parents and act as a significant barrier to girls attending school.

A study conducted among poor women across six villages revealed that women perceived three areas of benefits from family planning. First, they recognised family planning as a way of relieving economic pressure on the family, also enabling them to give their children better food, clothing and education. Second, having a smaller family relieved them from the physical stress of frequent childbearing. Third was a greater level of happiness and harmony in the home. These are all factors conducive to better health standards.[30]

4.5.4 Government economic policy

GoB's liberalisation policies[31] and the boom of the garment industry, in which the vast majority of employees are young women, have allowed women to earn their own money and move away from their 'isolation,' i.e. being confined in the home. Having control over their resources not only has empowered them to participate in intra-household decision-making but also means that they have the resources to go out of their homes and seek health services; before, they might have had to wait for the door-to-door service (key informant interviews).

30. www.fhi.org/en/RH/Pubs/wsp/fctshts/Bangladesh1.htm.
31. Pro-export economic orientation with an emphasis on trade liberalisation and boosting the private sector; reduced tariffs and other import taxes; elimination of import prohibitions and quotas; and a market-determined exchange rate were all policies designed to attract foreign investment in labour-intensive export products (Sen et al., 2004).

5. Conclusions

The story of progress in health in Bangladesh well might generate a feeling of optimism. It illustrates that a country with many disadvantages and few advantages can go from being a poster child for underdevelopment to being a 'model to follow,' at least in some aspects of development. Although there is still much to be done in the country in terms of health, it is important to recognise that real improvements have occurred for the poor over the country's almost 40 years of history.

5.1 Key lessons

The story of Bangladesh offers lessons and hopes for countries with similar levels of deprivation and adverse conditions:

- **Political commitment and continuity matter.** Continuity in policies towards a clear goal, no matter what the ruling party is, has proven effective in reversing some potentially negative health trends. After four decades of political instability, rapid turnover of parties and military coups, Bangladesh is still firmly working towards the aim of HFA. International commitments, such as the MDGs, may have acted as incentives, but the case of Bangladesh reveals the willingness of a society to improve the well-being of the most vulnerable.
- **International donors can be instrumental** in contributing to countries' development, by supporting governments' budgets but also bilateral programmes and NGOs. They can also play a significant role by encouraging schemes that have proven successful in similar countries (e.g. EPI and FPP in Bangladesh). In countries that are heavily dependent on external funding, **mechanisms to ensure that funding is aligned with the country's national planning** are important. SWAps help governments shape health policy, strengthen implementation and make health financing more predictable and flexible. In this sense, health SWAps in Bangladesh seem to have helped GoB have greater control over the influx of external funding into the sector. As opposed to previous models, where too many projects, vertical interventions and donor-driven initiatives may have fragmented national health systems and undermined the role of government, the SWAp in Bangladesh seems to have benefited the government by giving it a clear idea of what is actually happening in the sector, critical also to its role as a regulator.
- Despite being accused of widespread corruption and inefficiency, the **government has positioned itself as a coordinator of the other actors.** With a clear goal, and awareness of its own limitations in terms of capacity to deliver appropriate services for the most in need, GoB has created a policy and regulatory environment that is conducive to others doing what they do best and that at the same time holds them accountable for their work. This has meant providing space for NGOs to innovate and also identifying key innovations that could be scaled up into broader national programmes. Meanwhile, **NGOs have innovative ideas, broader reach and close links at grassroots level**, which enable them to understand the needs of the community and thus develop innovative, participatory and bottom-up measures to meet these. **Effective collaboration and partnership between government and NGOs** means that both sides can play to their own comparative advantage, in partnerships that allocate responsibilities to the party that is best positioned to produce the better results: while NGOs have the ability and flexibility to cover many remote areas and work at grassroots level, the government can see the larger picture and design policy in tune with people's needs.
- A few **highly pro-poor public policy interventions** have played a major role in improving progress on some key health indicators in Bangladesh. The best of these have involved simple and pragmatic solutions that address people's needs at an affordable cost.

- **Involving community members** in the provision of health care not only has solved issues of delivery capacity but also has had a direct impact in terms of education and awareness on health issues among villagers themselves. As people cannot be 'de-educated,' the supply of health services through community members has the potential to later on generate its own demand, thus ensuring sustainability of the progress made. In the same line, empowerment of women aims to generate an after demand for health care services.
- Further improvements in **Bangladesh** could be made by **building on the measures that have proven successful**, for example concentrating on programmes that have involved communities, decentralising yet further than the *upazila* level to respond more effectively to local needs and including more targeted capacity building of local governments able to work on the ground.
- In **other countries**, at least **certain aspects could be replicated** (BRAC is working in another eight countries replicating the programmes that proved to work in Bangladesh[32] and Grameen Bank microfinance programmes have spread even to the US), as long as attention is paid to the local context. For example, whether or not a country has a proliferation of NGOs, as exists in Bangladesh, the government can work in partnerships with other actors of society, including NGOs, the private sector and the population. These partnerships can help countries deliver a holistic package of programmes, provided that this is adapted to local conditions and incentives. However, the principles to bring to the work are the same, with social mobilisation and community participation a cornerstone for a bottom-up approach, as well as a focus on working at the village level and emphasising the role of women.

5.2 Challenges

- Although progress in health in Bangladesh has been remarkable, the country still has a long way to go, particularly in the area of **maternal health**. There is still a large proportion of pregnant women who do not have access to antenatal care, and an even larger proportion do not receive skilled attendance at delivery. This is particularly important, considering that the most prevalent cause of death among pregnant women lies in complications that could be avoided with proper staff attendance.
- Without disregarding the progress made in terms of reducing inequalities in life expectancy and on other health indicators, the trend of **economic inequality**, although still not considered acute in Bangladesh, is an issue that need to be followed closely since, as much as Bangladesh moves towards a more liberal economy, there may be a danger of an increase in the socioeconomic gap in society.
- It is also important to bear in mind that, as further improvements are made in the area of health, the pressure of an ageing population is bringing a **change in epidemiology and a rise in non-communicable diseases** that will present new challenges in terms of policy and programme design. The negative impact of tobacco is already evidence of this trend. Additionally, the **fast rate of urbanisation** will require adapting policies and programmes originally designed to serve in rural areas to the urban setting. Some measures are already being taken in this regard, but it is important to take into account that Bangladesh has a projected urban population of 50%, while being the seventh most populated country in the world. Urban health issues will thus present new challenges to be addressed in Bangladesh.
- A question arises from the model itself: is it possible that the presence of **external aid channelled through the NGO sector is somehow weakening the role of the government**? In other words, can the presence of strong links between donors and NGOs reduce the room for manoeuvre and the role of the government in the larger picture? How much space can the national government concede to the non-governmental sector? To answer these questions seems important when considering that it is government, not donors or NGOs, that is accountable to the people, who need to have the confidence to vote for it. The government in its role as regulator should be strong enough to ensure the effective protection of public interest demands, particularly as Bangladesh is an example of a government that has shown strong commitment to improving the health status of its people.

32. Afghanistan, Tanzania, Sierra Leone, Sri Lanka, Pakistan, Uganda, Liberia and Southern Sudan.

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