

BANGLADESH

National Health System Profile

1. TRENDS IN POLICY DEVELOPMENT

The constitutional commitment of the Government of Bangladesh is to provide basic health and medical requirements to all people in the society. The Constitution of the People's Republic of Bangladesh ensured that "Health is the basic right of every citizen of the Republic," as health is fundamental to human development.

Since independence, the government has been pursuing a policy of health development that ensures provision of basic services to the entire population, particularly to the under-served population in rural areas. The successive health plans of the country emphasize Primary Health Care (PHC) as the key approach for improving health status of the people. The goal 'Health for All by the year 2000' has been accepted by the government as a national goal. The past plans in the health sector had endeavored to provide essential healthcare to the general masses. To attain this goal, many development programmes have been undertaken in the health sector during the past years.

2. TRENDS IN SOCIOECONOMIC DEVELOPMENT

2.1 Economic trends

There has been a slow but steady increase in GDP per capita from US \$ 217 in 1991 to US \$ 445 in 2005. The annual growth rate of the GNP at constant market prices increased from 3.56 percent in 1991 to 5.5 percent in 2002. With the increase in population, the overall public financing for health remains the same (National Accounts Statistics, July 2004).

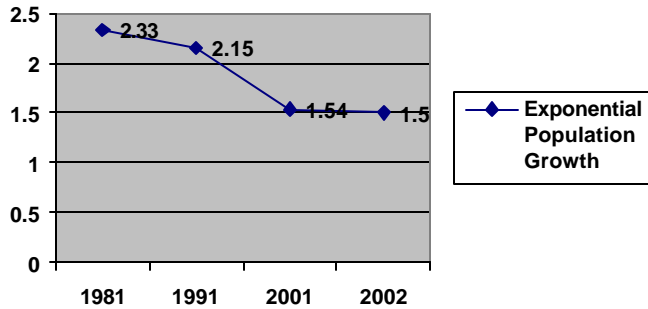
About one-half of the total population is poor, with the same picture seen in both urban and rural areas. Income generating schemes are being financed by the Government to make the poor more self-reliant.

The human development in Bangladesh is slow and steady as value of Human Development Index (HDI) has increased from 0.417 in 1990 to 0.530 in 2004, ranking the country at 137 among 177 countries. However, in terms of gender development, Bangladesh ranks at 102 among 177 countries, with Gender-related Development Index (GDI) value of 0.524 (Human Development Report, 2006).

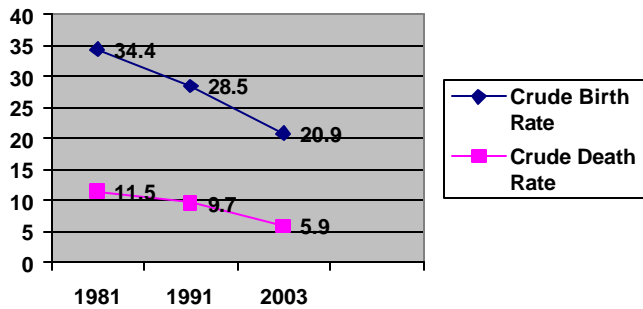
In Bangladesh, 36 percent population is living with a per capita income below US \$ 1 a day.

2.2 Demographic trends

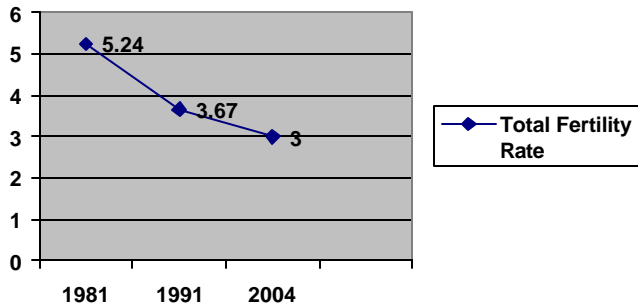
The total population of Bangladesh is about 140 million. The annual population growth rate has declined from 2.33 percent in 1981 to 2.15 percent in 1991 and further declined to 1.50 percent in 2002 (SVRS/2002). Similar declining trends are seen over the period of 1981-2002 for the crude birth rate (34.4 to 20.9), crude death rate (11.5 to 5.9) and total fertility rate (5.24 to 3.0) (SVRS/2002).



Source: Bangladesh Bureau of Statistics, SVRS 2002



Source: BDHS 2004



Source: BDHS 2004

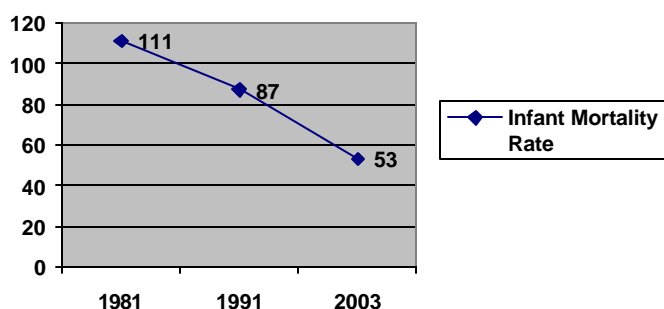
In Bangladesh, 38 percent of population was under 15 years, 55 percent in the age group of 15-59 years and 7 percent in the age group of 60 years and above (BDHS 2004).

Life expectancy at birth

The average life expectancy in Bangladesh has improved from 55 years in 1981 to 65 years in 2002, with 55 years for male and 54 years for female in 1981 to 64 years and 65 years for male and female, respectively, in 2002 (SVRS 2002).

Infant Mortality Rate (IMR)

In Bangladesh, Infant Mortality has declined during the period of 1981-2002. In 1981, 111 infants died per 1,000 live births, which has declined to 87 in 1991 and 53 in 2003 (BBSSVRS 2003).



Source: BBSSVRS 2003

Maternal Mortality Rate

In Bangladesh, Maternal mortality has declined during the period of 1992-2002. In 1992 it was 4.7 and in 2002 it was 3.8 per thousand live birth. (SVRS/2002)

2.3 Social trends

The adult literacy rate in the population over 15 years of age has shown a gradual increase from 1981 (males 39.7% and females 18.0%) to 2002 (males 55.5% and females 43.4%) (BBS, SVRS 2002). Whether this increase has resulted in better utilization of health services is difficult to ascertain.

In Bangladesh, Gross Enrollment Ratio (GNER) in primary education for both sexes is not much different. In the case of males, GNER was 94 percent in 2002-03, and for females it was 98 percent during the same period.

In case of secondary education, GNER for both the sexes has increased from 42 percent in 1998 to 47 percent in 2002-03. The GNER in secondary education for female has increased from 41 percent in 1998 to 50 percent in 2002-03, higher than males for whom the increase is from 43 percent in 1998 to 45 percent in 2002-03 (UNESCO).

2.4 Food supply and nutritional status

The prevalence of low birth weight (weight <2500 grams) has decreased from about 50 percent in 1993-95 to 40 percent in 2005. The percentage of underweight (weight-for-age) in children below 5 years was: severe - 12.8 percent, moderate - 47.5 percent, and that of height-for-age was: severe - 16.9 percent, moderate - 43.0 percent (Bangladesh Demographic and Health Survey 2004).

About 69 percent of the population suffers from Iodine Deficiency Disorders (IDDs), as estimated by the urinary excretion of iodine. Among the population, the total goiter rate is 47.1 percent, of which 8.8 percent have visible Goiter. The presence of cretinism is 0.5 percent (1993). The IDD control programme now targets hyper endemic areas with lipiodol injections as a short term measure, and universal iodization of salt as the long term intervention.

Anaemia in pregnant women

The prevalence of anaemia among adult women was estimated at 74 percent and that of children less than five years at 73 percent (1982-83). Studies conducted in 1990 and 1995 found the situation unchanged.

2.5 Lifestyle and Risk Factors

The percentage of the male population aged 15 years and above who are regular smokers has steadily increased over the last five years. Data for 1995 show that the proportions of adult males and females, who are regular smokers are 41 percent and 4.6 percent, respectively. The Government and NGOs are making efforts to counter this trend by creating more awareness of the adverse effects of smoking, through warning messages on cigarette packets, anti-smoking schemes among doctors, banning advertisements on radio, creation of smoke free zones, etc. There is a need also to address issues relating to substance abuse, drug trafficking and juvenile delinquency.

3. HEALTH AND ENVIRONMENT

3.1 General protection of the environment

There are many legislative enactments pertaining to the environment that need to be modified and updated. In 1989, a new Ministry of Environment and Forests was created. In May 1992, a national environmental policy was approved and a national environmental action plan developed. In 1995, the Bangladesh Environment Protection Ordinance was introduced. Environmental objectives were included in the government's Fourth Five Year Plan (1990-95), and these also find place in the Perspective Plan (1996-2010). Monitoring and regulatory mechanisms for air pollutants mainly caused by vehicular emissions are operational only in four major cities. A standard for per capita water availability has yet to be set. A national monitoring system to deal with contamination of drinking water has not yet been established. The regular collection of solid waste is only in municipal towns but handling and disposal is questionable. Bangladesh has no national food safety policy. A plan of action for food safety

and an inter-ministerial committee for coordinating and monitoring food safety are operational. The incidence of food-borne diseases is high.

With regard to housing, the key issues identified are unplanned and unregulated urban growth, high population density, often with poor provision for sanitation causing a high incidence of disease, and inadequate facilities for disposal of waste, and sewage treatment and management. In 1993, the government adopted a National Housing Policy with provision to address the above issues. In 1991, for the first time, protection of the environment and environmental pollution were included in the industrial policy.

The main constraints include delay in the approval of national policy and work plans, lack of a monitoring system for environmental health concerns, insufficient budget, and insufficient trained manpower.

3.2 Water supply and sanitation

The availability of safe drinking water in urban areas has increased from 44.9 percent in 1991 to 99.7 percent in 2001, and in the rural sector from 88 percent to 96.8 percent during the same period. Over 96 percent of the rural population use tubewell water (safe water) for drinking purposes, but only about 16 percent use it for other domestic purposes, due to the distance from the water source.

The proportion of the population with adequate excreta disposal facilities has increased, from 38 percent (1991) to 98 percent (2001) in the urban sector and from 10 percent (1991) to 92 percent (2001) in the rural sector (BBS, Report of SVRS, June 2003).

The main constraints are the shortage of trained manpower, limited funds, poor community awareness, and a weak information system.

4. HEALTH RESOURCES

4.1 Human resources for health

Significant changes in human resources for health have taken place in recent years leading to overall improvement in the coverage of health services. These include production and deployment of more health and health-related personnel, refresher training for health personnel in service, and greater use of health volunteers. In 1997, the distribution of physician per 10,000 populations was 2.03, which has increased to 3.0 in 2005, whereas nurses available per 10,000 populations were only 1.4 in 2004 [Management Information System (MIS), Directorate General of Health Services (DGHS), Bangladesh]. Actions are being taken, which include the establishment of a permanent health institute, formulation of a human resource development plan, and enhancing the quality of medical education.

4.2 Financial resources for health

In 1993-94, the national health expenditure by both public and private sectors amounted to 3.04 percent of the GNP. It has increased to 3.4 percent in 2003. Public expenditure on health as percentage of total expenditure on health was 36.5 percent in 1998, which has declined to 25.2 percent in 2002. Government health expenditure as percentage of the total government expenditure was 6.9 percent in 1998 but it has also declined to 4.4 percent in 2002 (World Health Report 2005). In 1998, the total government health expenditure per capita was US \$ 4, which has increased to US \$ 11 in 2002. Constraints of mobilizing financial resources for health and their efficient use are the inability of communities to finance health services due to poverty, unwillingness of donors to support infrastructure development, and lack of coordination in financial mobilization. The government now gives priority to cost sharing, decentralization of authority, decision making and programme implementation at the peripheral level, promotion of community participation, delivery of a package of essential services to the poor, and mobilization of financial resources by negotiating with donors such as the World Bank.

4.3 Physical infrastructure for health

Since the mid 1980s the government has sought to improve its health services and teaching institutions. The explicit goal was to build one Union Sub centre (USC) or Health and Family Welfare Centre (HFWC) in every union (4415); one health complex in every *thana* (397); and one general hospital or tertiary facility in every district (59). As of 1996, there were 4200 USCs/IFWCs, 379 health complexes and 59 district hospitals. By 1999, there were 460 Thana health complexes, 1362 Union Sub-Centers and 3315 Community Clinics; there were also 15 government medical colleges and 7 postgraduate/specialized hospitals. There are another 33 private medical and dental colleges. The total number of hospital beds was 43,293 (1999), which has increased to 51, 684 in 2005. In 2005, 3.43 beds per 10,000 populations were available (MIS, DGHS, Bangladesh). To overcome many of the local constraints in the construction and maintenance of health facilities, the government is considering introduction of a more need-based health planning process that will involve all stakeholders and the community.

4.4 Essential drugs and other supplies

As early as the 1980s, Bangladesh had a national essential drugs policy and a list of essential drugs to be procured and used in health services. These have been maintained to date. Most of the essential drugs were known by their generic name and were less costly than brand name drugs. Production and distribution facilities, both in the private sector and public limited companies, are adequate. Despite these advantages, government run health facilities did not have sufficient essential drugs to meet their actual needs, since the budgetary allocation for the procurement of drugs was not enough. In 1997, a sample of health facilities in remote areas revealed that only eight percent of essential drugs needed at those levels were available. Over the period 1990-95, however, the investment (public and private) in essential drugs, vaccines and ORS increased from 4.31 million to 75.29 million taka.

The government also launched an education programme for providers and users on the rational use of drugs. The government is considering implementation of a new cost sharing scheme based on a sliding scale, which would benefit the poor.

4.5 International partnership for health

Bangladesh willingly shares experiences and expertise with other countries, particularly in training, research and disease surveillance. WHO has played a major role in gradually building up the national capacity through regional collaboration. SAARC is another forum used to address regional issues including health. Partnership arrangements for health have been established with bilateral agencies, with funds usually channeled through non-governmental organizations. An NGO bureau regulates and monitors the funding. There is a need to further strengthen coordination between NGOs and government activities/programmes.

5. DEVELOPMENT OF THE HEALTH SYSTEM

5.1 Health policies and strategies

The cornerstone of national health policy is the Health and Population Sector Strategy introduced in 1998. Priority is given to ensuring universal accessibility to and equity in healthcare, with particular attention to the rural population. MCH receives priority in the public sector, and reproductive health has recently become a priority concern. There has been improvement in the government financial allocation for health. Efforts are being made to develop a package of essential services based on the priority needs of clients, to be delivered from a static service point, rather than providing door to door visits by community health workers. This is a major shift in strategy and will require complete reorganization of the existing service structure. This is expected to reduce costs and increase efficiency as well as meet "peoples' demand". Privatization of medical care at the tertiary level, on a selective basis, is also being considered.

Progress made towards achievement of health related MDGs is given at Annex-2

5.2 Inter-sectoral cooperation

Inter-sectoral committees at the different levels from the national level to the periphery are formed, whenever the need for cooperation exists. At national level, for example, nutrition and population councils are chaired by the prime minister. At the district and *thana* levels, inter-sectoral coordination committees also exist, while at the lowest administrative level (union), similar committees are formed, e.g., for water and sanitation projects.

5.3 Organization of the health system

Committees have been formed, including an inter-ministerial committee, to integrate/merge the health and the family planning departments. Functionally, health and family planning

personnel work closely at Thana, union and outreach levels, but a dichotomy exists at the district and national levels. More decentralization of management is also being considered.

5.4 Managerial process

The government decided to formulate a national health policy during 1997, for which a health policy committee and five subcommittees were formed. There was a change from a top-down planning process for health to a participatory approach involving the stakeholders in the health sector. The first product that was formulated utilizing this approach was the health sector perspective plan. The health and population sector strategy document was also prepared following the same process.

A new approach to program implementation, which is product oriented and emphasizes on outputs rather than inputs is being tried out with WHO assistance. Decentralization of the management process is also being considered.

5.5 Health information system

A weekly epidemiological surveillance and outbreak control reporting system for selected communicable diseases have been initiated throughout the country. The routine HMIS is functioning with some limitation, though activities have been undertaken to strengthen it. Information support is not yet adequate. Use of data remains limited. Strengthening of the HMIS through training, use of data collection tools already designed, and the establishment of information networks with computer support have been planned.

5.6 Community action

The roles of the individual, family and community are emphasized in the intensified action programme for PHC implementation, which involves decentralized planning at thana and union level. A total of 12 districts (86 thanas) are now in the intensified PHC programme. Through intersectoral collaboration and community participation, a joint action plan has been implemented involving 60,000 village health volunteers (one each for 50 households). The participation of teachers and religious leaders is encouraged. The information department and mass media inputs are also utilized to support IEC activities.

5.7 Emergency preparedness

Currently, there is no legislation in the country that underpins the management of natural disasters at national and sub-national levels. In the absence of any legislation, the Ministry of Disaster Management and Relief in 1997 issued revised "standing orders for disasters." These provide guidelines and instructions to various line departments and ministries. There are separate standing orders for different hierarchical levels of the health sector, which include coordination committees; contingency plans for manpower deployment, essential medical relief supplies and maintaining a database; training in emergency preparedness and response; a communication network; and budgetary allocation for emergency management. A draft "Disaster Management Act" is currently under review.

5.8 Health research and technology.

Three organizations [the Bangladesh Medical Research Council (BMRC), the Institute for Cholera and Diarrhoeal Disease Research, Bangladesh (ICDDR), and Essential National Health Research (ENHR)] spearhead biomedical and operational research. They undertake training and provide research grants. Many of the research findings are helpful in making policy decisions. Research units have also been opened by BMRC in medical colleges. Field study stations have been established by BMRC and ICDDR. BMRC has reorganized itself internally to cope with the growing demands of young researchers. Literature search systems in BMRC and ICDDR have been modernized.

Health systems research (HSR) is not handled as a separate, independent entity. Individual faculty members and other relevant people have been trained in HSR, but there is no coordination among researchers. Health training institutions have yet to include HSR in their curricula. The research culture is developing in Bangladesh, and there is no effective critical mass of researchers to form a strong advocacy group. Coordination and networking among researchers and funding agencies are yet to be developed.

6. HEALTH SERVICES

6.1 Health education and promotion

Educational support to national health programmes has been provided by the Health Education Bureau (HEB). Emphasis has been given in recent years to school health education, hospital health education and coordination with NGOs. Constraints include the lack of a national IEC strategy, the low priority given to health education by the health services, underutilization of health education officers, and lack of opportunities for professional advancement of those working in health education. Some issues under consideration are the inclusion of a health education component in the new national health policy and strengthening of coordination among the HEB, ongoing government health programmes and NGOs.

6.2 Maternal and child health/family planning/adolescent health

During 2004, the proportion of women attended by trained personnel during pregnancy was 27.2 percent; that of deliveries attended by trained personnel was 13.4 percent; and the ratio of women of childbearing age currently using family planning was 58.1 percent (Bangladesh Demographic and Health Survey 2004). In maternal health, there is slow progress as MMR reported for 1991 was 4.7 per 1000 live births, which has declined to only 3.8 per 1000 live births in 2002. The TFR declined from 3.67 in 1991 to 3 in 2004, but is still high.

Based on the causes of maternal deaths, several project activities have been initiated to reduce maternal mortality (Sample and Vital Registration System, 2002). These include providing comprehensive reproductive health, family planning and essential obstetric care (EOC) supported by UNFPA. UNICEF assistance to EOC is implemented through the

Obstetric and Gynecology Society of Bangladesh. The WHO-assisted programme on maternal and neonatal care including EOC is managed by the government and the ICDDR,B. Training and logistic supply management for MCH/FP is also being strengthened. Some of the main constraints are lack of skilled manpower, weak management capabilities and limited resources. In the future, priority will be given to more training and utilization of midwives at the peripheral level.

6.3 Immunization

The proportion of infants (0-11 months) who have been fully immunized according to the national EPI schedule in 1999 was 52.8 percent. By individual vaccines, the proportions in 2005 were: DPT3 - 83 percent, OPV3 - 90 percent, measles vaccine - 77 percent, and BCG - 99 percent. The percentage of pregnant women immunized with tetanus toxoid (at least one) was 85 percent (BDHS 2004).

Immunization services have been extended up to village level, and community support is readily available. Three NIDs for polio have also been successfully implemented during the last three years. The morbidity and mortality rates of EPI-target diseases have been considerably reduced. A good opportunity is now available to utilize the already established and well known EPI outreach centers for delivery of other components of PHC as well.

6.4 Prevention and control of locally endemic diseases

Dengue

Dengue was an unfamiliar disease in Bangladesh till the outbreak in 2000. It occurs in epidemic form in most countries of Asia, East and West Africa and some Pacific Islands. Epidemic outbreaks of Dengue have become frequent in recent years in the neighboring countries including India, Myanmar and Thailand. Almost all ages and both sexes are susceptible to Dengue. The infection can lead to fatal Dengue Shock Syndrome (DSS). It is a vector borne disease transmitted by certain species of Aedes mosquito. Aedes aegypti (and Aedes albopictus) is a peri-domestic mosquito, which lay eggs in small collections of clean water such as flower vases and pots, which act as breeding places. Usually Dengue transmission occurs during the rainy season of the year. In Bangladesh, Dengue was never looked for seriously, except scattered studies which indicated sporadic cases over the last few years though not confirmed by definitive laboratory investigations.

Since July 2000, there had been an outbreak of Dengue and Dengue Haemorrhagic Fever (DHF) in the Dhaka City and cases had also been reported from other big cities of different parts of the country. As on 10/8/04, a total of 16,388 Dengue cases were reported of which 210 were deaths. The Case Fatality Rate (CFR) found was 1.28 percent.

The Directorate General of Health Services has taken initiatives to develop national guidelines by adapting the WHO guidelines according to the local needs. The objective of the guideline is to control transmission of Dengue Fever and DHF and reduce morbidity and prevent deaths. This will help to establish Early Diagnosis and Prompt Treatment (EDPT) of Dengue Fever and DHF.

Tuberculosis

Tuberculosis (TB) is major public health problem, which ranks Bangladesh fifth among the high-TB burden countries in the world. The national tuberculosis control and prevention programme was started in 1965. The services were mainly curative and were provided through 44 TB clinics (presently Chest clinics), eight segregation hospitals and four TB hospitals. TB services expanded to 124 Upazila Health Complexes (UHC) during 1980-86 through the project, “Strengthening TB and Leprosy Control Services,” and became integrated with leprosy during 1986-91 under the “Mycobacterial Disease Control Programme.” However, it was reported that treatment completion was less than 50 percent and case detection less than 20 percent of the estimated cases.

The present revised NTP was launched under the project “Further Development of TB and Leprosy Control Services” and adopts the DOTS strategy. Its field implementation started in November 1993 in four thanas, expanding progressively to the 460 upazilas by June 1998. NTP will also be implemented in the metropolitan cities.

The present estimates of TB are based on two surveys performed in 1964-66 and 1987-88. Annual report of Tuberculosis of 2005 shows tuberculosis incidence is 221/100,000 population. Tuberculosis death is 7% of total death in the country.

The present revised NTP, adopting the DOTS strategy, dates from end of 1993. It was expanded to all rural upzilas in less than five years under the Fourth Population and Health Project (FPHP), with the technical assistance of the WHO and partnership of NGOs. Since July 1998, NTP is administered under the HPSP, and integrated into the CDC area of the ESP. At the end of 2000, NTP reached 95 percent geographical coverage of the country including the main cities of Chittagong, Khulna and Rajshahi.

NTP reported 654,068 TB cases till December 2003, of them 44,447 were new pulmonary cases, smear-positive. Of the reported cases, 55.5 percent of the total pulmonary cases are smear-positive and 44.5 percent are smear-negative. The ratio of pulmonary new smear-positive cases to pulmonary smear-negative and extra-pulmonary is 1:1.

In 2000, the NTP notification rate was 28.6/100,000 new sputum-positive cases (corresponding to 29 percent detection rate). The male-female ratio among the NTP new smear-positive patients was 1:0.4. This ratio increased to 1:0.8 in the metropolitan areas.

The NTP overall treatment success in the new smear-positive patients is excellent, with steady annual improvement till the 81.3 percent treatment success in the last patient cohort of 1999.

Leprosy

Leprosy has been a major health problem in Bangladesh for a long time. Bangladesh was considered a high endemic country and was listed among ten countries with high case load one

(1992). Leprosy situation dramatically changed globally after 1981 after the introduction of MDT by WHO. After the success of MDT in many countries, WHO visualized the possibility of eliminating leprosy globally as a public health problem and fixed an achievable goal by 2000. Elimination was defined as low level of prevalence, determined as <1 case/10,000 population. Bangladesh is signatory to the 1991 WHO resolution calling for elimination of leprosy by the year 2000, i.e., to achieve prevalence to $<1/10,000$ population. The government followed up this resolution by making substantial allocations to the national leprosy elimination programme under the Fourth Population Health Project: 1991-98 and continuing it in the HPSP since July 1998.

The national leprosy programme was first launched in 1965 with the introduction of Dapsone through Government and NGO hospitals. The Multi Drug Therapy (MDT) introduced by WHO is recognized as a major technological tool for leprosy control. The MDT programme was introduced in Bangladesh in 1985 and extended phase-wise to about 120 upazilas either by the government or through NGO collaboration. Intensive MDT implementation started in late 1993 with the following objectives:

- To introduce MDT services with upazila (country wide) as the peripheral unit.
- To detect >85 percent of the estimated cases within 5 years of programme implementation.
- To provide fixed duration MDT free of cost to all registered cases.
- To achieve >85 percent treatment completion cure rate.
- To reduce deformity grade-2 among newly detected cases to <5 percent within 5 years of programme implementation.

Since 1996, 625 MDT units were established in the country. In 1993, Bangladesh was estimated to have a leprosy prevalence rate of 13 per 10,000 populations, i.e., 136,000 cases, which made Bangladesh the country with the third highest leprosy case-load in the world. The estimated number of leprosy cases was revised to 80,000 in 1996 and by the end of 1997; the estimated prevalence of leprosy was 3.5 per 10,000 populations with a registered prevalence of 1.17 per 10,000 populations. Since 1994, all registered cases are provided with MDT. Thus, the MDT coverage of registered cases is 100 percent in Bangladesh.

Bangladesh has made considerable progress in achieving the goal of elimination of leprosy at national level. The WHO goal of elimination of leprosy as a public health problem by the year 2000 is defined as to achieve leprosy prevalence (registered) to less than $1/10,000$, population. Bangladesh achieved elimination of leprosy at national level at the end of 1998 with prevalence of $0.86/10,000$, before two years ahead of target date. The present leprosy work is going on for sub-national elimination by the year 2005.

Malaria

The control strategy for malaria was revised and approved in 1995. The new strategy is being gradually implemented, and it emphasizes disease control aspects and endorses four technical elements (early diagnosis, prompt treatment, recognition of treatment failures and management of severe and complicated cases in hospitals). Emphasis is also placed on malaria surveillance, preparedness for control of malaria outbreaks/epidemics, and the introduction of insecticide impregnated bed nets. The main constraint is the reduced capacity of the core technical unit for control of vector-borne diseases to take on activities countrywide.

Other diseases

In Bangladesh, kala-azar is a re-emerging disease since the cessation of DDT spraying operations. At least 20 million people in more than 27 districts are at risk. The estimated cumulative disease specific burden is 35,000 cases. Under the project for integrated control of vector-borne diseases, an emergency plan for the control of kala-azar was initiated in 1994-95 in 22 thanas of 11 districts (population five million). This has been successful and further expansion is now planned. At least 8,000 kala-azar patients have been successfully treated to date. The major constraint is similar to that faced in the control of malaria.

Eighteen (18) million people in 12 districts are considered to be at risk of filariasis. A revised strategy for the elimination of filariasis is being pilot tested in one district. This strategy involves administering a single dose of ivermectin with albendazole yearly for a period of three years to the total population in the district.

Dengue has yet to become a public health problem; but in view of the high potential that exists, surveillance and preparedness capability have been strengthened.

To date 17 AIDS cases have been reported, but 13,000 cases of HIV infection are estimated. Current data available categorizes Bangladesh as a low prevalence country at present.

6.5 Prevention, control and management of common diseases and injuries

Acute respiratory infection accounts for about 145,000 deaths annually among children under five years. The under-five mortality rate due to ARI was reported to be 33 percent (ICDDR 1994). Forty to sixty percent of outdoor visits and 30-40 percent of indoor admissions are attributed to ARI. The programme for the control of ARI continues to be implemented on a phased basis according to the recommended WHO strategies.

Diarrhoeal diseases continue to be responsible for much morbidity and mortality, but current strategies have considerably reduced mortality. Multi-sectoral partners were involved in mobilizing the community regarding correct home-based care and timely referral. The availability of ORS has increased through the formation of ORS depot holders in the community. Constraints include inappropriate use of anthelmintics and anti-diarrhoeals, especially in the private sector, and the underutilization of health facilities including ORT corners.

The incidence of measles has dramatically declined since the introduction of measles vaccine into the immunization programme. Malnutrition still remains a problem both in urban and rural areas, with the latter being more affected. Of the non-communicable diseases, cancer and cardiovascular diseases are the leading causes of morbidity and mortality. The incidence of cancer is estimated at 200,000 per year.

7. TRENDS IN HEALTH STATUS

7.1 Life expectancy

The life expectancy at birth for both sexes increased from 56.1 in 1991 to 64.9 in 2002; male life expectancy has increased from 56.5 years in 1991 to 64.5 years in 2002 and female life expectancy increased from 55.7 years to 65.4 years during the same period. The gap between male and female life expectancies has narrowed from 0.8 years in 1991 to 0.4 years in 2002 (SVRS 2002). The gap between urban and rural life expectancy is also narrowing. The main reason for the rise in life expectancy is the decline in infant and child mortality due to the successful implementation of the immunization programme as well as disease control programmes such as those for ARI and diarrhoeal disease.

In Bangladesh, Healthy life expectancy at birth was 54.3 years in 2002 with 55.3 years for male and 53.3 years for female (The World Health Report 2004).

7.2 Mortality

Between 1991 and 2003, the infant mortality rate (IMR) has declined from 87 to 53 per 1,000 live births (BBSSVRS 2003). Under-five mortality rate is 76 per 1,000 live births in 2002 (BDHS 2004) and the maternal mortality ratio (MMR) declined from 470 in 1991 to 380 per 100,000 live births in 2002 (BBSSVRS 2003). Though mortality rates have declined, infant and maternal mortality are still high.

Main causes of Mortality in Bangladesh are given below:

Diseases	% of all deaths
Pneumonia	13.53
Diarrhoea	6.26
Respiratory failure	7.49
Hypertension disease	4.05
Accidental Poisoning by others	3.77
Pregnancy	3.74
Malaria	3.69
Intra-cerebral and other health problems	3.00
Acute myocardial infarction	2.54
Anaemia	NA

Cancer Control Programme

The cancer control programme was started in 1982 as a low-scale non-communicable disease programme. The National Institute of Cancer Research and Hospital currently carries out

institutional services and research activities. The hospital is capable of providing operative, pathological and endoscopic examination facilities to cancer patients. The present bed capacity of the Cancer Institute Hospital is limited, but there is plan for gradual expansion and introduction of other relevant facilities.

7.3 Morbidity

Ten most common causes of morbidity in hospitals in Bangladesh during 1997

Diseases	% of all cases
Diarrhoea	15.90
Intestinal worm	7.38
Skin diseases	9.3
Anaemia	9.92
Acute Respiratory Infections	6.1
Deficiency diseases	6.63
Eye diseases	4.36
Injuries	4.35
Ear diseases	3.28
Asthma	2.31

There has been an overall decline in morbidity during the period of reporting. Morbidity is mainly due to infectious, parasitic and vector-borne diseases. Some information on morbidity is available from a sample survey conducted by the Bangladesh Bureau of Statistics (BBS). However, routine reporting of disease incidence is non-existent or patchy at best, and disease surveillance has not been fully established.

8. OUTLOOK FOR THE FUTURE

8.1 Overall assessment and strategic issues

Since independence more than 30 years ago, the Government of Bangladesh has invested substantially in the institutionalization and strengthening of health and family planning services, with special attention to rural areas, and the government is committed to HFA with PHC as the key approach. For the last 30 years, there has been a substantial improvement in the health status of the people. Life expectancy at birth has increased to 64.9 (2002), CDR has declined to 5.9 (2003), and TFR reduced from 6.34 (1975) to 3.0 (2004) (Sample and Vital Registration System, and Bangladesh Demographic and Health Survey 2004). The IMR was around 53 (2002) (Bangladesh Demographic and Health Survey 2004). Despite these improvements, much remains still to be done. Mortalities rates, especially infant and maternal mortality, continue to be unacceptably high. The quality of life of the general population is still

very low. Low calorie intake continues to result in malnutrition, particularly in women and children. Diarrhoeal disease continues to be a major killer. Communicable and poverty-related diseases that are preventable still dominate the top ten causes of morbidity.

The government is aware of this situation and the major shortcomings that need to be addressed, i.e., the development of an efficient project management mechanism across the health system; improvement in the logistics of drug supplies and equipment to health facilities at district and lower levels; improvement in the production and quality of human resources for health; a system to ensure regular maintenance and upkeep of existing health facilities; and the development of a comprehensive plan to improve and assure the quality of health services provided.

8.2 Futures vision

The government has formulated a perspective plan keeping in view the needs of the health sector for the future. The formulation of a national health policy would provide strategy directives on major health issues. The future vision for the health sector would include universal access to basic healthcare and services of acceptable quality; improvement in medical education; improvement in nutritional status, particularly of mothers and children; prevention and control of major communicable and non-communicable diseases; strengthening planning and management capabilities; improvement in logistics of production/procurement, supply and distribution of essential drugs, vaccines and other diagnostics and therapeutic equipment; increase in overall life expectancy of the population; survival and healthy development of children; the health and well being of women; protection and preservation of the environment; disability reduction; and the adoption and maintenance of healthy lifestyles.

8.3 Proposed strategies

The Health and Population Sector Strategy (HPSS) introduced in 1998, which forms the basis for the future national health policy, is based on several key principles: greater orientation to client needs, especially those of women; improved quality, efficiency and equity of government health services; provision of a package of essential health services; expanded private sector role in providing health and population services; one-stop shopping via co-location of services; and expanded cost recovery and improved efficiency of resources by the public sector.

Some of the main objectives are:

- To allocate more resources to support services for poor, and vulnerable groups (women and children).
- Unifying the existing bifurcated health and family planning service delivery system.
- To achieve an appropriate balance between the public and private sectors in financing and provision of services.
- Decentralization of management through devolution of authority.

The following activities have been identified to achieve the above objectives:

- Deliver an Essential Services Package to the whole population with the aim of maximizing health benefits, relative to per capita expenditures. This is expected to

meet the felt needs of the clients, strengthen service delivery, and improve system management.

- Service delivery mechanism should be unified, restructured and decentralized, both at the thana and hospitals.
- Other services, particularly hospital-level, are proposed to be provided through partnerships with or commissioning of services to NGOs and private not-for-profit hospitals. The public sector hospital services delivery will be improved through installing greater autonomy of management, local level accountability, cost-recovery, fee retention and utilization, and a drug revolving fund.
- Integrated support systems should be strengthened.
- Introducing a sector wide approach to manage the health sector, rather than having a series of projects with their own funding, management, implementation and reporting arrangements.
- In view of the potential resource gap between the sectoral resource envelope and projected sectoral expenditures, increased reliance on cost recovery for public sector services will be considered.
- Health insurance coverage in urban Bangladesh is proposed to be increased through development of a health insurance scheme for government employees and for employees of state-owned enterprises.
- At the centre, health will be more integrated and decentralization taken to lower levels.
- Hospital level services be focused and improved.
- Policy and regulatory framework be strengthened. Existing policies will be reviewed and revised for improving accessibility, affordability and quality of services and for further improvements in affordability, quality and safety of drugs and rational use of drugs. New policies on public and private sectoral mix and financing of services will be developed

8.4 Basic Health Indicators including the U.N. Millennium Development Goals

See Annex-1

Country reported Data for Basic Health Indicators including health related MDG Indicators

Indicator	Latest available data	Year	Source	Remarks
POPULATION AND VITAL STATISTICS				
Total population (in million)	140	2005	11	
Population density (persons per sq km)	948	2005	11	
Sex ratio (males per 100 females)	106	2003	12	
Population under 15 years (%)	38	2004	3	
Population 60 years and above (%)	7	2004	3	
Crude birth rate (per 1000 population)	20.9	2003	3	
Crude death rate (per 1000 population)	5.9	2003	3	
Natural (population) growth rate (%)	1.54	2001	2	Exponential Growth Rate
Total fertility rate (per woman)	3.0	2004	3	
Urban population (%)	31	2003	12	
SOCIOECONOMIC SITUATION				
Gross national product per capita (US \$)	444	2003-04	4	
Adult literacy rate (%)	Total Male Female	49.6 55.5 43.4	2002	2
Prevalence of low birth weight (weight <2500 grams at birth) (%)	40	2005	13	
Prevalence of underweight (weight-for-age) in children <5 years of age (%)	47.7	1994-99	7	<-2SD from NCHS median
HEALTH SYSTEM				
INPUTS				
Facilities				
Number of hospital beds	51,648	2005	11	
Population per hospital bed	2571	2005	11	
Hospital beds per 10,000 population	3.43	2005	11	
Number of health centres	1385	2004	5	
Human resources				
Number of physicians	42,881	2005	11	

Indicator	Latest available data	Year	Source	Remarks
Population per physician	3169	2005	11	
Physicians per 10,000 population	3	2005	11	
Population per nurses	6442	2005	11	
<i>Budgetary resources</i>				
Total Expenditure on Health (THE) as % of Gross Domestic Product (GDP)	3.4	2003	8	
Public Expenditure on Health (PHE) as % of Total Expenditure on Health (THE)	31	2003	8	
Private Expenditure on Health (PvtHE) as % of Total Expenditure on Health (THE)	69	2003	8	
FUNCTIONS				
Pregnant women attended by trained personnel during pregnancy (%)	27.2	2004	3	
Deliveries attended by trained personnel (%)	13.4	2004	3	
Women of childbearing age using family planning (%)	58.1	2004	3	
One year olds immunized against measles (%)	77	2005	14	
Women that have been immunized with tetanus toxoid (TT) during pregnancy (%)	29	2003	6	
Environment				
Population with access to improved water source (%)	97.3	2004	3	
Population with access to improved sanitation(%)	59	2004	3	
OUTCOMES				
Life expectancy at birth (years): Total Male Female	64.9 64.5 65.4	2002	2	
Infant mortality rate (per 1000 live births)	53	2003	3	
Under-five mortality rate (per 1000 live births)	88	2003	3	
Maternal mortality ratio (per 100,000 live births)	380	2002	2	

Indicator	Latest available data	Year	Source	Remarks
Out-of-Pocket Spending on Health (OOPS) as % of Private Expenditure on Health (PvtHE)	85.9	2003	13	
GENDER EQUITY				
Life expectancy at birth ratio (females as a % of males)	101	2002	2	
Seats held in parliament (% of women)	2.0	2004	9	
Professional and technical workers (% women)	25	1992-2001	9	
Ratio of earned income (females as a % of males)	0.56	1991-2001	9	
Adult literacy ratio (females as a % of males)	78.1	2002	2	Computed
Primary school enrolment ratio (females as a % of males)	104	2002-03	10	Computed
Secondary school enrolment ratio (females as a % of males)	111	2002-03	10	Computed
MDG HEALTH RELATED INDICATORS				
G1.T2.I4 - Prevalence of underweight children (under-five years of age)(%)	47.7	2004	13	
G1.T2.I5 - Proportion (%) of population below minimum level of dietary energy consumption	30	2005	15	
G4.T5.I13 - Under-five mortality rate (probability of dying between birth and age 5)	88	2003	3	
G4.T5.I14 - Infant mortality rate	53	2003	12	
G4.T5.I15 - Proportion (%) of 1 year-old children immunized for measles	77	2004	6	
G5.T6.I16 - Maternal mortality ratio	380	2002	2	
G5.T6.I17 - Proportion (%) of births attended by skilled health personnel	13.4	2004	3	

G6.T7.I18 - HIV prevalence in 15-49 years (per 100,000 population)	100	2004	13	
G6.T8.I21b-Malaria death rate per 100,000 (all ages)	0.5	2003	5	
G6.T8.I21c - Malaria incidence per 100,000	44	2004	11	
G6.T8.I23a - Tuberculosis death (% of total deaths)	7	2002	16	
G6.T8.I23b - Tuberculosis prevalence rate per 100,000	435	2004	17	
G6.T8.I24a - Proportion (%) of Smear-Positive Pulmonary Tuberculosis cases detected and put under directly observed treatment short course (DOTS)	41	2003	5	
G6.T8.I24b - Proportion (%) of Smear-Positive Pulmonary Tuberculosis cases detected cured under directly observed treatment short course (DOTS)	84	2003	5	
G7.T10.I30a - Proportion (%) of population with sustainable access to an improved water source, rural	97	2004	3, 13	
G7.T10.I30b - Proportion (%) of population with sustainable access to an improved water source, urban	99	2004	3, 13	
G7.T11.I31 - Proportion (%) of urban population with access to improved sanitation	71	2004	3, 13	

Source:

1. Report on Vital Registration System 1999-2001 (June 2003)
2. Bangladesh Bureau of Statistics, Sample and Vital Registration System, 2002.
3. Ministry of Health, Bangladesh Demographic and Health Survey 2004 NIPORT&MA, September 2004
4. National Accounts Statistics (July 2004)
5. Country Health System Profile 2003, MIS, DGHS, Mohakhali Dhaka, Bangladesh, 2005
6. EPI Report, 2004

7. Ministry of Health, Bangladesh Demographic and Health Survey 1999-2000, Dhaka, May 2001.
8. The World Health Organization, World Health Report 2006.
9. UNDP, the Human Development Report 2004.
10. UNESCO.<http://www.unesco.org>, September 2004 Assessment.
11. Health Information Unit (MIS), Directorate General of Health Services, Mohakhali, Dhaka -1212
12. Bangladesh Bureau of Statistics, Sample Registration System, 2003 (SVRS2003)
13. Millennium Development Goals, Bangladesh Progress Report 2005, Government of Bangladesh, Dhaka
14. EPI –Evaluation 2005, Bangladesh
15. Sustainable Development Networking Project, Bangladesh
16. WHO Mortality Fact Sheet 2006
17. WHO Global Tuberculosis Report 2006

Millennium Development Goals

GOAL 1: ERADICATE EXTREME POVERTY AND HUNGER

Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger

Situational Analysis

Prevalence of underweight children¹

The prevalence of moderately² underweight children (6-71 months) has declined noticeably from 67 percent in 1990 to 51 percent in 2000, while that of severely³ underweight children of the same age group has been halved from 25 to 13 percent roughly during the same period. Also, the proportion of moderately underweight children under the age of five years decreased from 56 to 48 percent during the period 1997-2000.

Child malnutrition

Despite the progress achieved, child malnutrition in Bangladesh remains among the highest in the world, and more severe than that of most other developing countries, including the countries of sub-Saharan Africa. The proportion of underweight children in Bangladesh is 16 percent higher than 16 other Asian countries at similar levels of per capita GDP. Nearly, half the children are underweight or stunted, with 13 to 19 percent being severely underweight or stunted in terms of being more than three standard deviations below the relevant NCHS standards.⁴ This suggests that children in Bangladesh suffer from short-term acute shortfall in food intake as well as longer-term under-nutrition. Much remains to be done in this vital area.

Trends in various indicators of malnutrition in children

Nutrition Status Indicator	BBS Child Nutrition Surveys (percent Children 6-71 months)					Bangladesh DHS	
	85-86	89-90	1992	95-96	2000	96-97	99-00
Stunting (height-for-age)							
% below 2 std. Deviations	69	66	64	51	49	55	45
% below 3 std. Deviations	-	-	33	24	19	28	18
Wasting (weight-for-height)							
% below 2 std. Deviations	15	15	17	17	12	18	10
% below 3 std. Deviations	-	-	2	3	1	4	1
Underweight (weight-for-age)							
% below 2 std. Deviations	72	67	68	57	51	56	48
% below 3 std. Deviations	-	-	25	18	13	21	13

Source: Various CNS and BDHS Reports

¹The data were derived from various Child Nutrition Surveys (CNS) conducted by BBS and the Bangladesh Demographic and Health Surveys (BDHS).

²Percent below 2 standard deviations.

³Percent below 3 standard deviation.

⁴CNS 2000 and BDHS 1999-2000.

Vast differences exist in child malnutrition rates across economic groups. Child malnutrition is pervasive among the poor. More than 60 percent of the children of 6-71 months old, suffering from stunting, belong to the bottom consumption quintile. Contrary to expectation, however, nearly a third of the children from the richest quintile also suffer from malnourishment. This suggests that factors other than income play an important role in this phenomenon.

Such factors include per capita household food intake; infant feeding practices; maternal schooling and hygiene practices; access to safe drinking water, sanitation and health facilities; quality of village infrastructure; and protection against natural disasters. Presence of NGOs and public relief programmes have been found to have strong correlation with reduction in child malnutrition in the lowest consumption quintile.

Challenges

Much will need to be done to achieve the MDG target of halving the proportion of poor whose income is less than one dollar a day, and halving the proportion who suffer from hunger and malnutrition. Bangladesh has nearly 63 million poor - the third largest poor population in any country after China and India - and one of the highest rates of child malnutrition in the world. One third of the population lives in extreme poverty, and nearly half of Bangladesh's children are underweight. Demographic changes in upcoming years are likely to affect poverty and hunger in adverse ways. Achieving the MDGs within the next decade will require Bangladesh to develop and implement more ambitious and effective strategies. The primary challenges and actions needed to address them are summarized below.

Challenge 1: Addressing income poverty: Promoting strong economic growth

Various empirical analyses have concluded that economic growth is the most important factor contributing to poverty reduction. Achieving and sustaining strong economic growth will require attention on many fronts such as:

- Pursuing monetary and fiscal policies that sustain macroeconomic stability.
- Improving transparency, accountability and efficiency of the Government in all key areas, including taxation, public procurement, land administration, law enforcement, administration of justice, and regulation of banking, insurance, and the credit market.
- Enhancing government effectiveness by focusing on core state functions and delivery of public services.
- Expanding national capacity to design and enforce policies, laws, and regulations that facilitate private sector investment.
- Further liberalizing the trade regime to exploit the advantages of the rapidly globalizing world economy.
- Restructuring and privatizing state-owned enterprises and business activities under appropriate incentive and regulatory schemes, and reallocating public resources to the provision of high priority public goods.
- Accelerating development of infrastructure in key areas - such as power, ports, roads, inland water transport, and telecommunications - that have been identified as constraints on the investment climate.
- Strengthening capacity for enhanced absorption of aid resources.

Challenge 2: Reaching the poor: Promoting pro-poor growth

The initial level of inequality of income and ownership of assets and its possible further deterioration will determine the outcome of poverty. Pro-poor growth, therefore, needs to be promoted so that the positive impact of economic growth on poverty reduction is increasingly larger than the adverse impact of income inequality, and the poor are able to participate more actively in the growth process and derive increasingly higher benefits from it. Creation of more jobs and opportunities for entrepreneurship and self-employment by the poor will need to be speeded up aggressively, so as to address the massive backlog of underemployment, as well as the large annual addition to the labour force on account of demographic factors. Income growth in rural areas has proven to be pro-poor in Bangladesh, and its continuation will need to be promoted proactively. Coordinated actions will be required in areas such as:

- Building income generating capacities of the poor by pursuing social sector programmes and policies that develop their human capital. This should include improving poor people's access to the Essential Health Service Package (ESP), addressing the problem of child malnutrition, and undertaking a comprehensive programme to improve the coverage and quality of education and skill development.
- Enabling the poor to participate more actively in economic activities through initiatives to facilitate their access to markets for credit, land, and labour. Expanding national capacity to design and enforce policies, laws, and regulations that facilitate pro-poor activities of the civil society.
- Enhancing cooperation and partnership among Government, the private sector, and civil society in scaled-up efforts to implement the PRSP.
- Identifying and addressing policy and institutional biases - in public spending, taxation, trade and regulation; for example those, which may work against the rural sector and the urban poor.



Challenge 3: Protecting the vulnerable: Supporting effective and sustainable safety net programmes for the vulnerable in poor areas

The persistence of disparities in poverty and hunger warrants the evaluation of social safety net options that target particular groups and areas. Some groups of the poor and hungry are chronically vulnerable, and some face vulnerabilities that are regional or seasonal in nature. Targeted interventions will need to be designed and prioritized, taking into account their financial sustainability and the country's other demands for pro-poor spending. Trade-off between reaching the poorest and the not-so-poor, and the distinction between short-term palliatives and long-term measures, to enhance the prospects for poverty reduction, must be recognized.

Types of targeted interventions that should be introduced include:

- Identifying and promoting infrastructure investment projects with high expected impacts on employment, growth, and market access in poor (especially rural) areas.
- Supporting safety nets for protection against natural disasters and the associated hardships in disaster-prone areas.
- Undertaking targeted nutrition interventions for vulnerable groups and areas by, for example, expanding the reach and effectiveness of the National Nutrition Programme.

Challenge 4: Reducing hunger and malnutrition: Comprehensive programme of integrated actions on many fronts

Halving the proportion of people who suffer from hunger will be a challenging task. Speeding up per capita income growth and pursuing targeted safety net programmes as discussed under Challenge 1 above, are needed for the expansion of household food intake. A comprehensive programme to address hunger would include interventions in the following additional areas:

- Promoting food security by sustaining strong growth of domestic food production and implementing a liberalized regime for food imports. Promoting change in food habits for increasing the nutritional intake of vulnerable people.
- Promoting improved infant feeding practices, including breast feeding practices; supporting maternal schooling and hygienic practices.
- Improving access to safe drinking water, especially by addressing the threat of arsenic contamination of underground water.
- Improving access to sanitation.
- Improving access to basic health facilities.
- Supporting safety nets for protection against natural disasters.
- Promoting partnership among the Government, private sector and NGOs in designing and implementing interventions to promote food security.

GOAL 4: REDUCE CHILD MORTALITY

Target 5: Reduce under-five mortality rates by two-thirds between 1990-2015

Indicator 13. Under-five mortality rate
Indicator 14. Infant mortality rate
Indicator 15. Proportion of 1-year-old children immunized against measles

MDG 4 indicates that under-five mortality rate must be reduced from 151 deaths per thousand live births in 1990 to 50 in 2015.

Situational Analysis

Under-five mortality

While there has been an appreciable drop in under-five death rates from 151 deaths per thousand live births in 1990 to 88 in 2003,. From this base, it will be necessary to maintain a pace of annually reducing under-five deaths by at least three deaths per thousand live births to achieve MDG 4 by 2015.

Child mortality rate is a reflection of the care, health and nutrition status of children below the age of five years and also indicates the social, cultural, and economic progress of the country.

In the case of under-five children, neonatal and perinatal causes contribute to 48 percent of the deaths. Other factors include very low rates of institutional deliveries (8.6%), low attendance of deliveries by skilled personnel (13 %), and low utilization of antenatal care at least one visit (56 %). More than 71 percent⁵ of these neonatal deaths were due to non-communicable diseases, mainly birth-related ailments as well as neonatal tetanus.

Other major causes of under-five deaths are pneumonia (18%), diarrhoea (6%), injuries and drowning (8%), and measles with malnutrition underlying most other causes (13%). Poor care-seeking behaviour and practices are also important contributing factors. Only eight percent of parents of sick children under the age of five seek care from qualified healthcare providers.

In order to reduce deaths from diarrhoea, the oral rehydration therapy (ORT) campaign has been in effect for several decades. The use of oral rehydration solution (ORS) has increased from 62 percent in 2000 to 68 percent in 2003.



⁵ ICMH Survey 2003.

Time (Year)	1990	1993	1996	1999	2001	2005	2008	2011	2014	2015
Under Five Mortality Rate										
Data	151	139	117	87	82	--	--	--	--	-
MDG Path	--	--	--	--	--	81.24	71.08	60.93	50.77	47.4

Unit: Per 1000 births

Malnutrition contributes to over one half of child deaths, with low birth weight estimated to affect 30 to 50 percent of infants. Over the years, appropriate interventions have helped to reduce the proportion of underweight children from 66.5 percent in 1990 to 51.1 percent in 2000 to 48 percent in 2004, and child stunting from 65.5 to 48.8 to 43 percent. In spite of this, the prevalence of child stunting and underweight is still very high according to WHO criteria. To address child malnutrition, it is essential to improve the nutritional status of adolescent girls and mothers, because if mothers are malnourished, their children are much more likely to have low birth weight and remain affected throughout their lives. Although chronic energy deficiency in non-pregnant women has declined from 52 percent in 1997 to 45 percent in 2000, it still remains at high levels.

Since 1997, the prevalence of night blindness, an early indicator of Vitamin A deficiency, has been maintained below the one percent threshold that indicates a public health problem. This success has largely been due to the Vitamin A supplementation programme, which increased coverage from 41 percent in 1993 to over 85 percent in the second half of the decade by linking the distribution of Vitamin A capsules with the National Immunization Days (NID). Coverage of iodized salt increased from 19 percent in 1993 to 70 percent in 1999, and correspondingly, the prevalence of iodine deficiency fell from 69 to 43 percent.

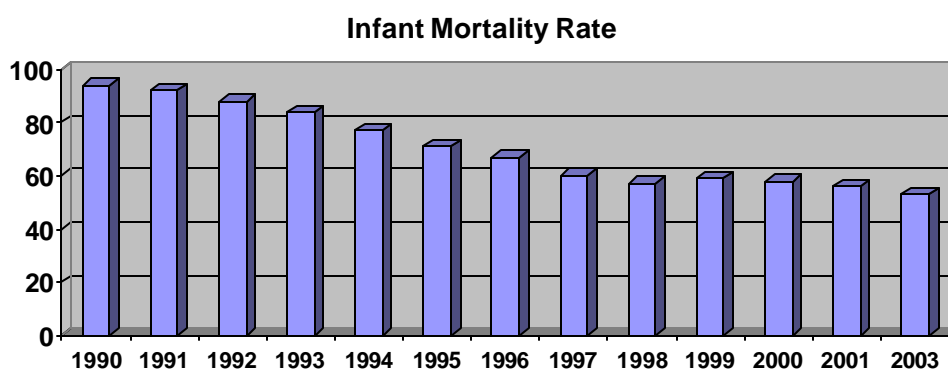
While these findings are encouraging, they mask the fact that infants and children continue to consume diets that are grossly inadequate in Vitamin A, iron and other micro-nutrients. Anaemia, which is largely due to iron deficiency, affects about 50 percent of under-five children, a prevalence level that denotes a severe public health problem. Breastfeeding is rarely exclusive for the first six months of life, and complementary foods are often introduced too early or too late and are of poor quality.

There is urban-rural difference in under-five mortality rates. In 2001, the rate in urban areas was 52 percent while in rural areas it was 89 percent. Similarly, there is also difference in under-five mortality rate between boys and girls. In 2001, the under-five mortality rate for boys was 84 percent and for girls 81 percent.

There has been an epidemiological transition of mortality pattern in Bangladesh. Due to the relative decline in deaths caused by infectious diseases, statistics now reveal that injuries and accidents are also important causes of deaths. For example, eight percent of all under-five deaths and 30 percent of total deaths among children aged 1-4 years have been found to be caused by injuries and accidents such as drowning.

Infant Mortality

The trend shows that there has been a steady decline in the infant⁶ mortality rate (IMR) from 94 per thousand live births in 1990 to 56 in 2001 to 53 per thousand in 2003.⁷ About two-thirds of infant mortality are from neonatal deaths, which are a direct consequence of factors such as low birth weight, pre-term delivery and birth asphyxia.



Time (Year)	1990	1993	1996	1999	2001	2005	2008	2011	2014	2015
Data	94	84	67	59	56	--	--	--	--	--
MDG target	--	--	--	--	--	55	48	41	34	32

Unit: Deaths per 1000 live births

It is estimated that to achieve the goal of 32 deaths per thousand live births, the current declining rate must be sustained. That is, infant death rates must be reduced annually by at least two deaths per thousand live births between 2005 and 2015.

Immunization

Access to vaccination has been among the foremost interventions that have helped reduce mortality rates in Bangladesh. NID has been observed for many years and has proved very successful. Since 2001 not a single case of wild polio virus transmission has been confirmed in the country until 2006, when there were 18 cases. The percentage of fully immunized children increased from 53 percent in the 1990s to 69 percent in 2000, but the coverage remains below expectations.⁸ Measles coverage was 77 percent in 2005.

The reasons for the low rates, from the demand perspective, include drop-out resulting from the lack of awareness of the need for immunization, lack of information on the medical aspects of the vaccines, and distance of the vaccination centers. From the supply side, the low rates arise

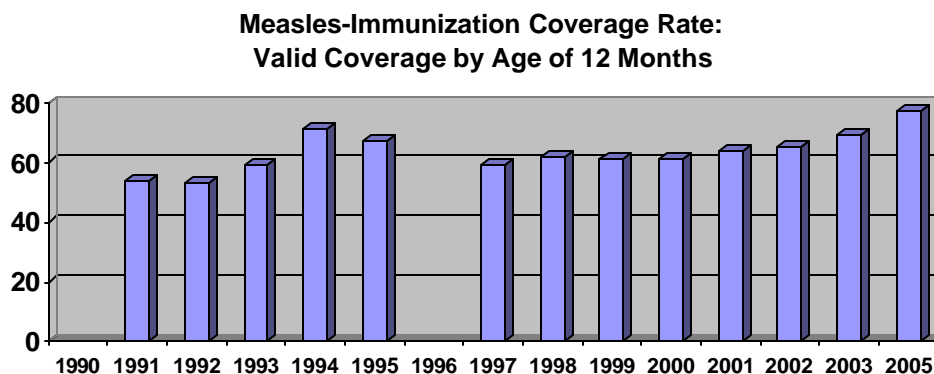
⁶Children under one year of age.

⁷SVRS, 2001.

⁸Coverage Evaluation Surveys 2000 and 2003

from the absence of medical personnel in the health centres, irregular review of the immunization programme, and inadequate supervision costs.

To offset some of these problems, supplementary immunization activities have been introduced and currently 86 percent of new-born are protected at birth against neonatal tetanus. Since 2003, under the Expanded Programme of Immunization (EPI), Hepatitis B vaccination has been introduced, along with the use of auto destruct syringes. The programme has been activated in seven districts and one City Corporation, and by 2005 will cover all districts in the country.



Challenges

Challenge 1: Cost of immunization

The multi-year EPI plan estimates that to fully immunize the under-one population at 80 percent per annum will require US \$ 57 million per year.⁹ An additional US \$ 5.2 million per year will be required for scaling up the Integrated Management of Childhood Diseases (IMCI), an important component of the Health, Nutrition and Population Sector Programme (HNPSP) that addresses childhood mortality. The nutrition component of the same programme is estimated to cost US \$ 36.9 million annually. The cost of other related programmes will add to the financial requirements.

Challenge 2: Sustaining Success

Success has been achieved in Bangladesh because of the close attention paid to infectious and parasitic diseases in the past two decades. To achieve MDG 4 by 2015, this momentum has to be sustained by:

- Consolidating and strengthening achievements in on-going interventions that address fundamental causes of childhood mortality. These include routine immunization, control of diarrhoeal diseases and acute respiratory infection, accelerating the pace of reduction in neonatal mortality through ensuring antenatal care, skilled attendance at birth, and emergency obstetric care for those in need.

⁹This includes both recurrent and capital costs of current routine vaccines and Hepatitis B, cold chain equipment, needles and syringes, and other similar logistics, as well as other recurrent costs such as staff salaries and allowances and buildings.

- Enhancing the effectiveness of interventions for reducing malnutrition among children and women, with a special focus on adolescent girls, through bridging deficiencies of both macro and micro-nutrients (especially iron and iodine).
- Exploring interventions required to address the contemporary causes of mortality, i.e., accidents and injuries, specially drowning.
- Strengthening partnerships among the Government, NGOs, specialized agencies and local government institutions.
- Integrating vertical programmes for reduction of childhood mortality such as ARI and CDD, to achieve efficiency gains for both care seekers and providers.
- Focusing on consumer awareness and communication strategies for promoting behavioural change.
- Ensuring need-based targeting of un-reached and un-served populations, especially for area-specific health and nutrition interventions in urban slums, the Chittagong Hill Tracts and coastal areas.
- Strengthening the management information system through establishing a database for informed decision support, information gaps, consistency and veracity.

GOAL 5: IMPROVE MATERNAL HEALTH

Target 6 Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

Indicator 16. Maternal Mortality Ratio
Indicator 17. Proportion of births attended by skilled health personnel

To achieve MDG 5, Bangladesh must reduce maternal mortality from 574 deaths per 100,000 live births in 1990 to 143 by 2015; and increase the proportion of births attended by skilled health personnel to 50 percent, and reduce the Total Fertility Rate to 2.2 per woman by 2010.¹⁰

In addition to the above, a third target¹¹ for Bangladesh is Reproductive Health (RH) Services for All, as this is closely linked to maternal mortality and morbidity. The indicators for RH are maternal malnutrition and median age at marriage. The target is to reduce maternal malnutrition from 45 percent in 2000 to less than 20 percent by 2015, and to increase the median age of girls at first marriage from 18 to 20 years.

Situational Analysis

Maternal Mortality

In spite of the fact that maternal mortality has declined from nearly 574 per 100,000 live births in the 1990 to between 320 and 400 in 2001,¹² the Maternal Mortality Ratio (MMR) in Bangladesh

¹⁰The two latter goals are Bangladesh national goals articulated in the Bangladesh National Strategy for Maternal Health, 2001.

¹¹This target and its indicators were agreed upon by the GoB and the UNCT during the consultative process of the MDG report preparation.

¹²Bangladesh Maternal Mortality Survey (BMMS), NIPORT, 2001. The data range is from various sources such as WHO, UNICEF, and GOB.

remains one of the highest in the world. It is estimated that 14 percent of maternal deaths are caused by violence against women, while 12,000 to 15,000 women die every year from maternal health complications. Some 45 percent of all mothers are malnourished.¹³

The population of Bangladesh is relatively young, with a third falling within the age group of 10-24 years. Nearly half the adolescent girls (15-19 years) are married, 57 percent of them become mothers before the age of 19, and half these adolescent mothers are acutely malnourished. Thus, MMR among adolescent mothers is 30-50 percent higher than the national rate.

The chief causes of maternal deaths are hemorrhage, unsafe abortion, and the ‘three delays dynamics’. The first delay, arising mainly from poverty, is in seeking professional care; the second delay is logistical as most of the health centers and private clinics are located in district towns, whereas 70 percent of the population are rural based; the third delay arises from the lack of adequate human resources and trained personnel at the service centers.



Time (Year)	1990	1992	1996	2000	2002	2005	2008	2011	2014	2015
Maternal Mortality Rate										
Data	574	470	480	400	380	--	--	--	--	--
System Trend	--	--	--	--	--	337	279	220	162	143

Births attended by skilled health personnel¹⁴

The number of births attended by skilled health personnel has increased from 5 percent in 1990 to 12 percent in 2000 to 13 percent in 2004. In the context of Bangladesh, the increase is insignificant, as the majority still do not receive such services. However, there are wide variations among income groups: 40 percent of births in the highest income quintile are attended by skilled health personnel, compared to only four percent in the lowest quintile.

¹³A Body Mass Index (BMI) of less than 18.5 indicates acute malnutrition. BMI Weight in kg / Square of height in metres.

¹⁴Definition of skilled health personnel is not standardized across countries leading to wide discrepancy in such estimates.



Total Fertility Rate

There has been significant decline in the total fertility rate (TFR)¹⁵ from 6.6 in the mid 1970s to 3.3 in the mid 1990s with regional variations in the reduction pattern.¹⁶ However, in spite of a steady increase in contraceptive prevalence rate from 45 percent in 1994 to 54 percent in 2000 to 58 percent in 2004.

Several measures have been taken to address these problems. The Essential Obstetrics Care (EOC) programme through the Maternal and Child Welfare Centres (MCWC) was introduced in the early 1990s. Subsequently, a more holistic approach was adopted through the National Maternal Health Strategy 2001, which takes a rights-based approach to maternal health with Safe Motherhood as its central theme. The Strategy has been integrated into the Health and Population Sector Programme (HPSP 1998-2003), and into its follow-up, the Health, Nutrition and Population Sector Programme (HNPSPP 2004-2006).

Interventions such as Safe Motherhood Services that provide iron, folic acid and vitamin A supplements to the target population¹⁷ have been included in the HNPSPP, with the objective of reducing maternal malnutrition to below 20 percent by 2015. Other interventions under this project include training programmes for skilled health personnel.¹⁸

Both the Government of Bangladesh and the donors are giving priority to the promotion of safe motherhood from the grassroots level upwards, through antenatal care, safe delivery, pre-natal care, essential obstetrical care and family planning.

Challenges

¹⁵TFR is the average number of children a woman produces.

¹⁶TFR in Sylhet is 4.0; in Chittagong 4.1; in Khulna 2.7; and in Rajshahi is 3.0.

¹⁷PIP of HNPSPP (July 2003-2006).

¹⁸Here, skilled health personnel cover all medical professionals, including nurses, midwives and Skilled Family Welfare Visitors (FWVs).

Challenge 1: Reducing the Total Fertility Rate

If the population of Bangladesh stabilizes by 2035, there will be over 40 million women of reproductive age (15-45 years) in 2015 who will be the target population for preventive and awareness raising programmes on safe motherhood. In order to further reduce TFR, studies must be conducted to analyze the causes of its current stagnation. Advocacy programmes must be introduced on population stabilization.

Female Population of Reproductive Age (in millions)									
Time (Year)	1993	1996	1999	2002	2005	2008	2011	2014	2015
Stable Pop by 2050	30.69	32.21	33.64	34.94	36.18	37.38	38.60	39.97	40.43
Stable Pop by 2045	30.69	32.21	33.64	34.94	36.18	37.38	38.60	39.97	40.43
Stable Pop by 2035	30.69	32.21	33.64	34.94	36.18	37.38	38.60	39.97	40.44

Unit: Persons of Age 15 to 45

Challenge 2: Achieving MDG 5 -Target 6: Reduce the maternal mortality ratio to 143 per 100,000 live births by 2015

If MMR is to be reduced to 143 per 100,000 live births by 2015, the decrease will have to be at substantial rates:

- During 2005-08 MMR must be reduced by 5.6 percent points a year.
- During 2008-11 MMR must be reduced by 7 percent points a year.
- During 2011-14 MMR must be reduced by 8 percent points a year.
- During 2014-15 MMR must be reduced by 12 percent points a year.

Meeting this challenge will require the following:

- Bringing about a fundamental change in knowledge, attitude and behaviour towards safe motherhood and gender equality through an advocacy campaign on safe motherhood involving 13 relevant ministries.
- Increasing access to quality health facilities through public, private and NGO initiatives.
- Increasing financial investments in the health sector including in skills development.
- Specifically targeting the poor for reproductive health interventions, as maternal mortality and morbidity is highest in the lower income groups.
- Accelerating the reduction of malnutrition, especially for females of reproductive age.



Challenge 3: Rapidly increasing the proportion of births attended by skilled health personnel

If population is stabilized by 2035, 2.52 million children will be born in 2010; 2.56 million in 2013 and 2.6 million in 2015. The 2001 Bangladesh National Strategy for Maternal Health calls for 50 percent of all deliveries to be attended by skilled health personnel by 2010. This implies that 1.26 million deliveries will be attended by skilled health personnel in 2010. To achieve this target, there must be a rapid increase in the rate of growth of births attended by skilled health personnel, which will in turn require an accelerated increase in the number of trained personnel.

Challenge 4: Increasing by two years the median age of girls at first marriage

There is a significant relationship between delayed marriage and lower fertility and greater health seeking behaviour. Thus, increasing the median age of marriage of girls by two years can significantly lower adolescent fertility, reduce MMR, slow the rate of population growth, and improve the nutritional level of young mothers and children.



This can be achieved by providing greater access to higher education for adolescent girls through scholarship and stipend programmes. Such interventions must be accompanied by advocacy and awareness raising campaigns on safe motherhood to promote changes in attitudinal and cultural behaviour.



Challenge 5: Providing reproductive services to all by 2015¹⁹

In addition to the MDG 5 global targets, Bangladesh will also attempt to achieve the following RH target by 2015²⁰:

¹⁹The Bangladesh Interim-Poverty Reduction Strategy Paper (IPRSP) stated Access to Reproductive Health to all by 2015 as a means for achieving MDG 5.

- Halve maternal morbidity
- Halve maternal malnutrition
- Reduce TFR to 2.2
- Improve adolescent reproductive health
- Eliminate violence against women

Constraints

In aiming for such ambitious targets some constraints need to be taken into consideration:

- Reliable national estimates are not available for morbidity. Age specific female mortality rates will serve as proxies until better parameters are identified.
- The maternal malnutrition is severe in Bangladesh - 45 percent of all mothers are malnourished and only one percentage point decline has been achieved per year. In a business-as-usual scenario, by 2015, about 25 to 30 percent of mothers will still remain malnourished. It is expected that the new HNPSp will address some of the challenges relating to maternal malnutrition.
- Adolescent reproductive health (ARH) has to receive increased attention to ensure an improved health life cycle, and to put early preventive measures to the threat of the spread of HIV/AIDS. As data on ARH is scanty, teenage (15-19 years) pregnancy and motherhood can be used as a proxy. A survey carried out in 1999-2000 shows teenage pregnancy to be as high as 35 percent. A comprehensive strategy has to be developed if it is to be almost eliminated by 2015.
- Violence against women is a major concern for health, productivity, dignity and maternal mortality in Bangladesh. It is estimated that 14 percent of maternal deaths are caused by violence. Inclusion of this indicator when monitoring the MDGs will help raise awareness of this national problem. It will also promote quantitative methods for monitoring the progress towards the elimination of violence against women.



GOAL 6: COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES

²⁰The Government of Bangladesh is still to formally adopt indicators for monitoring Reproductive Health; this list is a tentative one, agreed to after some discussions with various stakeholders including GoB.

Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

Indicator 19: Condom use rate
Indicator 21: Prevalence and death rates associated with malaria
Indicator 22: Proportion of population in malaria risk areas using effective malaria prevention and treatment measures
Indicator 23: Prevalence and death rates associated with tuberculosis
Indicator 24: Proportion of tuberculosis cases detected and cured under Directly Observed Treatment Short Course (DOTS)

Situational Analysis

It is estimated that the prevalence rate of HIV infection among adults (15-49 years) is less than 0.1 percent. The Ministry of Health and Family Welfare reported a total of 363 cases at the end of November 2003. However, as there is no functional reporting system on HIV/AIDS and the information remains incomplete, Bangladesh is classified as a low HIV prevalence country. Nevertheless, latest surveys indicate a rapid increase of HIV positivity among injecting drug users (IDUs) from 1.7 percent in 2000 to four percent in 2002. Such concentrated HIV epidemic can have far reaching implications on HIV transmission to other vulnerable populations in the community.

Based on the HIV/AIDS situation in the country, and because of the absence of data on global indicators of HIV pregnancy age and HIV/AIDS orphans, additional indicators have been selected for monitoring this target in Bangladesh. These are:

- Percentage of HIV positivity among the most vulnerable groups: IDUs, female sex workers (SW), and men who have sex with men (MSM).
- Percentage of condom use among most vulnerable groups: SW, MSM, rickshaw-pullers, and truck drivers.
- Percentage of needle sharing among IDUs.
- Percentage of blood being screened for HIV before transfusion.
- Percentage of health facilities at the different levels (tertiary, district and sub-district) with adequate capacity for screening blood for HIV before transfusion.

Percentage of HIV positivity among the most vulnerable groups²¹

Among IDUs surveyed in Central-A Bangladesh, the HIV sero prevalence has risen from 1.7 percent in 2000 to four percent in 2002. There was no HIV detected in IDUs surveyed from other sites.

The HIV infection rate among sex workers surveyed was 0.2, 0.7 and 0.5 percent in Brothel SW in Central-B, Central-D and Southwest-B respectively. Furthermore, 0.2 percent of Street and Hotel based SW in Central-A were found HIV positive.

²¹Information is collected through the National HIV and Behavioural Surveillance (NHBS). This has been in operation since 1998 at specific sites in the country.

Of the MSMs tested in Central-A, 0.2 percent were positive during the fourth round of surveillance.

Percentage of condom use among most vulnerable groups

Consistent condom use is only two and four percent for brothel and street based sex workers, respectively. Among their clients, 75 percent of truckers reported that they did not use condoms the last time they purchased sex, and only 2 percent of rickshaw-pullers reported using condoms consistently when having sex with sex workers. The majority (two thirds) reported that they had never used a condom. Out of 101 college/university students, 30 percent reported consistent condom use during the past year.

Percentage of needle sharing among IDUs

Two thirds of IDUs reported receptive needle sharing (i.e., receiving a shared needle to inject drugs) in Central Bangladesh. The rate was higher (75%) in the southeast. However, in northwest, where there is an active needle exchange programme, only 25 percent reported needle sharing and HIV prevalence at this site remains zero.

Percentage of blood being screened for HIV before transfusion

Although 98 blood transfusion centres have been set up throughout the country, a comprehensive policy and strategy to ensure safety of blood and blood products is yet to be finalized and implemented. There is need to establish the baseline information on percentage of blood being screened in the 98 centres and in all the other facilities that carry out blood transfusion.

Percentage of health facilities at different levels with adequate capacity for screening blood for HIV before transfusion

Minimum standards and requirements for health facilities to qualify and be authorized to screen blood for HIV before transfusion should be defined by the National Policy and Strategy on Blood Safety.

The Government and donor initiatives include developing a National Strategic Plan (NSP) for comprehensive and integrated action in response to HIV/AIDS. The NSP will also elaborate a national Monitoring and Evaluation System that will strengthen follow up of MDG and UNGASS indicators. Besides these, interventions targeted at most vulnerable groups are being scaled up; HIV/AIDS advocacy and blood safety campaigns are underway; and a Global Funds for Aids Tuberculosis and Malaria (GFATM) assisted project on HIV/AIDS and the Adolescents and Young People is in progress.

Challenges

- While Bangladesh has a relatively low HIV prevalence, there are many factors that make it particularly vulnerable to HIV/AIDS. They include socio-economic and cultural factors that can only be addressed effectively through a multisectoral and multi-dimensional approach. Sentinel surveillance remains key to follow trends of HIV infection and behaviour change as well as to monitor the outcome and impact of responses to HIV/AIDS.
- Essential policy review and legal/law reform to enhance enabling environment and the impetus for HIV/AIDS prevention, care and support need to be promoted and facilitated by the different stakeholders.

- Initiatives should be intensified to mainstream HIV/AIDS into different public and private sectors and to ensure effective leadership support and involvement at all levels in advancement of appropriate measures to deal with HIV/AIDS. Since HIV/AIDS is a development concern, all development and health programmes such as PRSP, SWAP and HNPSP are expected to accord due prominence to and coverage of HIV/AIDS.

Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and tuberculosis

To achieve this target, Bangladesh will have to halve the one million people annually afflicted by malaria and reduce the number of deaths from one percent to half a percent by 2015. Also, by 2005, Bangladesh will have to increase the success rate of detection of tuberculosis cases under DOTS from 34 percent in 2000 to 70 percent, and the cure rate from 84 percent to 85 percent.

Situational Analysis

Malaria

Malaria is one of the major public health problems in Bangladesh. Out of 64 administrative districts, 13 belong to the high-risk malaria zone.

Prevalence and death rates associated with malaria

A total of 14.7 million people are at high-risk, and drug resistance to chloroquine and sulphadoxine-pyramethamine is posing a problem. The Malaria and Parasitic Diseases Control Unit in the Directorate General of Health Services implements control interventions based on the Revised Malaria Control Strategies, viz. Early Diagnosis and Prompt Treatment (EDPT), Selective vector control, Promotion of Insecticide Treated Mosquito Nets (ITMN), Epidemic preparedness and response, and community involvement and partnerships with NGOs and private sector. The Roll Back Malaria initiative was piloted in one district and is now being extended to three hill districts. There is an increasing trend of case incidence and deaths in the border districts, particularly in the hard-to-reach areas.

Proportion of population in malaria risk areas using effective malaria prevention and treatment measures

An estimated one million clinical cases of malaria are treated every year. During 2002, the Annual Parasitic Incidence was 4.2 in the high endemic districts, leading to 61,495 laboratory confirmed cases, and 598 reported deaths. Plasmodium falciparum is the predominant infection (61-71%) and Anopheles virus the principal vector. The current programme aims to reduce by 50 percent the incidence of cases and the number of deaths from malaria by the year 2015.

Data on Malaria

• 13 out of 64 districts are high endemic.
• 14.7 million people are at high risk.
• 60,000 - 75,000 lab confirmed cases per year.
• Estimated 1.0 million clinical cases annually.
• Focal outbreaks in eastern border are not infrequent.

- **Drug resistance (CO, SP) reported in CHT; Data needs validation; drug policy to be updated.**

Challenges

Scaling up ITMN programme to achieve coverage up to 70 percent of 14.7 million high-risk populations, especially in the remote areas, and poor and tribal families, remains a major challenge. To overcome the problem of drug resistance, effective treatment and rapid diagnostic tests need to be introduced. To be fully effective, the current programme must substantially increase the number of trained manpower and malaria experts, at various levels.

Tuberculosis

Prevalence and incidence

Bangladesh ranks fourth on the list of the 22 highest TB burden countries in the world. In 2002, the incidence of all cases and of new smear-positive cases was estimated to be 233 and 105 per 100,000 respectively.²² About 70,000 patients die of TB each year. Bangladesh is committed to the 2005 international targets of detecting 70 percent and curing 85 percent of the detected smear-positive patients. To further decrease incidence and prevalence of TB, the momentum must be maintained (or increased) beyond 2005. The survey of 1986-88 found a 0.7 percent prevalence of sputum smear-positive TB in adults. The countrywide prevalence/incidence survey planned for 2004-05 will provide the baseline for monitoring progress towards achievement of the MDG 2015 target. This survey will also provide information on the male/female ratio among TB patients.

Proportion of cases detected and cured under DOTS

Eighty-four percent of cases diagnosed in 2001 were cured under DOTS. In 2002, the case-detection rate of new smear-positive cases was 34 percent. Of the new smear-positive patients, the M/F ratio was 1:0.44, which indicated an under-diagnosis of female cases. Increased detection and cure of females will have a considerable impact on maternal mortality as TB has been found to be a major cause of maternal death in high TB burden, low income countries.

Challenges

The major challenge is to simultaneously increase case detection, maintain a high cure rate, and improve the quality of the diagnostic services. This calls for strengthening the management of National TB Control Programme (NTP) at central, divisional and district levels, intensifying effective partnerships and collaboration, expanding diagnostic and treatment services, implementing quality assurance of smear microscopy and BCG strategies, and strengthening monitoring and evaluation. Other essentials include human resources development and uninterrupted supply of drugs and laboratory provisions.

²²WHO, 2002.

It is estimated that \$ 33 million will be needed to achieve the 2005 international targets of 70 percent case-detection and 85 percent cure. Of this, \$ 12 million is expected to be Government contribution, \$ 4 million NGO contribution, and \$ 17 million must come from external resources.

GOAL 7: ENSURE ENVIRONMENTAL SUSTAINABILITY

Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

Indicator 29: Proportion of the population with sustainable access to an improved water source
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Indicator 30: Proportion of population with sustainable access to improved sanitation

In the case of Bangladesh, the target is to increase coverage of safe water from 99 percent to 100 percent in urban areas and from 76 percent (arsenic-adjusted estimate) to 96.5 percent in rural areas by 2015.

In addition, access to improved sanitation must be increased from 75 percent to 85.5 percent in urban areas, and from 39 percent to 55.5 percent in rural areas by 2015.

In the case of Bangladesh, MDG 7 - Target 10 was modified to highlight the crucial role that access to water and to sanitation play in maintaining a healthy and productive population. Besides the global indicator of the proportion of population with sustainable access to an improved water source, a second indicator was included, i.e., the proportion of urban and rural population with access to improved sanitation.

Proportion of population with sustainable access to an improved water source

This indicator is defined as *the percentage of the population who use any of the following types of water supply for drinking: piped water, public tap, borehole or pump, protected well, protected spring or rainwater*. By this definition nearly 100 percent of the population in Bangladesh has access to water. However, over the last few years, thousands of tube-wells have been found to be contaminated with naturally-occurring arsenic at higher than WHO-recommended levels. If quality is taken into account, access to safe water drops to only 72 percent in rural areas. In spite of the fact that this is good coverage by developing country standards, it implies that 30 million people remain without access to safe water.

Proportion of the urban and rural population with access to improved sanitation

In rural areas, access to improved sanitation has increased from 11 percent in 1990 to 29 percent in 2002 to 55 percent in 2004. In the case of urban areas, however, the situation has deteriorated, the coverage dropping from 71 percent to 56 percent in 2002 and in 2004 it is 71 percent. This is mainly due to unbridled and unplanned urbanization that has been taking place in recent years.



Although technologies such as sewers, septic tanks, pour-flush latrines, simple pit latrines, and ventilated improved pit latrines contribute towards the achievement of target 10, additional factors also need to be taken into consideration. For example, it is essential in the case of simple pit latrines that excreta are adequately treated before being discharged into the environment. Even in towns and cities with sewerage systems, discharges are passed untreated directly into the environment. Solid waste disposal remains an environmental sanitation hazard, especially in the urban areas.

Access to Improved Sanitation				
	1990	2002	2004	2010 (target)
Rural	11	29	55	100
Urban	71	56	71	100

The Government recognizes the importance of increasing access to sanitation. Following a major initiative that culminated in the SACOSAN Conference in Dhaka in October 2003, the Government declared its own target of achieving 100 percent sanitation coverage by 2010, and has allocated two percent of its annual development budget for the task.

Challenge 1: Ensuring 100 percent coverage of safe water

To ensure nearly 100 percent coverage by 2015, at least 25 million people must gain access to arsenic-free, safe water over the next 10 years. This is a considerable challenge, since at present there is no effective solution for communities, which are highly affected by arsenic. Technologies for removing arsenic from water are in the process of being introduced on a large scale. However, as each option has some disadvantage, communities and individuals will have to learn to use water from different sources for different purposes, if their water demands are to be met at a viable cost. This requires a level of sophistication by the consumer, which has not been necessary in the past. Resources will therefore be required, not only to support the installation of water sources, but also to raise awareness and train communities in appropriate water use.

In the longer term, other issues are likely to arise in relation to access to safe water. In particular, there is growing concern regarding the availability of groundwater. Currently, groundwater is used widely for irrigation, leading to a lowering of the water table. A proper groundwater management strategy will be necessary to safeguard the resource. Other problems include water salinity in coastal areas.

Challenge 2: Ensuring access to basic sanitation

If the health benefits of sanitation are to be fully realized, good hygiene practices such as hand washing at critical times are crucial. It is important therefore to monitor indicators that include latrine coverage, the condition and use of sanitary facilities, and the adoption of good hygiene practices. Regular national sanitation surveys can be used for tracking these indicators including the treatment of sewage and the collection and disposal of solid waste.

Challenge 3: Resources needed to meet Target 10

It is estimated that US \$ 64 million will be required to meet the water and sanitation goals by 2015.

To be most effective, national processes such as Poverty Reduction Strategy, the Pro-Poor Strategy and the Sector Development Framework should coordinate efforts by the Government, NGOs and other stakeholders to achieve and even surpass the targets for water and sanitation under the various development initiatives.

Those sections of population who continue to be excluded from programmes that provide access to safe water and sanitation should be especially targeted. Strategies need to ensure that the poor and marginalized, such as slum dwellers in urban areas, are supported in appropriate ways.

Target 11: Significantly improve the lives of at least 100 million slum dwellers by 2020.



The global indicator for Target 11 is the proportion of households with access to secure tenure. Four additional dimensions of this target²³ have been identified by UN Habitat: i) access to safe water; ii) access to sanitation; iii) durability of housing; and iv) sufficient living area.

Situational Analysis

Access to safe water

In 1999, on average, 45 percent of the urban population had access to safe drinking water. This access varied regionally: 94 percent of households in the capital city of Dhaka had access to drinking water compared to 71 to 85 percent in the three²⁴ other major cities. Water supply from public sources was better in Dhaka and Chittagong, than in Khulna and Rajshahi where there was a much higher dependency on private water suppliers. The lack of adequate public water supply

²³ The definitions here are taken from UN Habitat, 2003. A slum is a contiguous settlement where the inhabitants are characterised as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city; secure tenure is the right of all individuals and groups to effective protection by the State against unlawful evictions. A slum household is a group of individuals living under the same roof that are lacking in at least one of the components of access to sanitation, access to safe water, secure tenure, durability of housing and sufficient living area.

²⁴Chittagong, Khulna and Rajshahi.

however has greater negative impact on the poor - 91 percent of poor²⁵ households in Khulna and 65 percent in Rajshahi used private water suppliers.²⁶

Access to sanitation

Access to sanitation and to sanitation services also varies according to region. While 43 percent of urban households use water sealed latrines, only 14 percent of slum households in metropolitan cities have access to any type of sanitary latrines, the majority (85%) using hanging latrines. Regional variations exist, with households in urban metropolitan areas having better access to sanitation than those in the rural areas.

Secure tenure/Durability²⁷ of housing

In 1999, nearly half the urban population lived in marginal or informal settlements with little or no rights to public services such as water, sanitation and electricity. About 26 percent of urban poor households owned a dwelling unit, although only 18 percent owned any land.²⁸ The majority (75%) of the houses of the urban poor are built of temporary material, and on average 22 percent have access to electricity.

Challenges

Urban population in 2000 was estimated to be 26 million. Under the assumption that population growth will stabilize by 2035, and that current rate of rural-urban migration is maintained, it is estimated that urban population in 2015 will reach nearly 50 million. The majority will be living in the four major cities of Dhaka, Chittagong, Khulna and Rajshahi. To achieve Target 11 by 2015, health, water and sanitation services must be reached to 50 million urban dwellers, while ensuring that the services also reach urban slum dwellers.

²⁵Those reporting monthly income of less than Taka 2000.

²⁶World Bank, Score Card, 2002.

²⁷A house is considered "durable" if it is built on locations free from floods, industrial pollution, noise pollution from railway lines, main roads, power lines, etc.; is constructed from quality material and follows building standard compliance; and protects its inhabitants from the elements.

²⁸Households may own the structure but not the land on which it is constructed.