

Revisiting Health of the Population: Agenda for the Future*

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Introduction

Health status in Bangladesh has shown a steady improvement since independence, especially in the last decade. Life expectancy has increased by 15 years, the total fertility rate (TFR) has declined by more than half, and the infant mortality rates (IMR) have fallen by almost half. Health indicators now compare favourably with those in the region and with other countries at a similar or higher GNP.

The food and nutrient intake pattern in Bangladesh is generally far from satisfactory. The present average Bangladeshi diet is not only deficient in total energy by about 10% (actual intake 1,868 kcal vs. desirable intake 2,050 kcal). The diet is also seriously imbalanced; 82% of total calories of this diet come from cereals. On the other hand, the intake of fruits and vegetables, the major vitamin and mineral providers, is seriously low. As such, people suffer from both energy and micronutrient deficiencies, which finally result in protein-energy malnutrition (PEM). Women of reproductive age and young children aged under-5 are the worst victims of malnutrition.

Review of the existing situation

Bangladesh is the most densely populated country in the world, having a landmass of 144,000 sq. km. (861 persons/sq. km. in 1997). With a population growth rate of 1.8%, Bangladesh ranks 144th out of 175 countries with an estimated GDP per capita of US\$ 357 as of 1998-'99. At least 70 million people live in absolute poverty and 35-50 million forms the extreme ultra poor group (BIDS, 1990; '92). Forty-seven percent of the adult population is illiterate and two-thirds of them are women; 20% of the primary school-age children (6-11 years) do not enroll in school at all (ADB, 1997; BBS, 1997a). The life expectancy at birth is still only 60 years; indeed, Bangladesh is one of the few countries in the world where the life expectancy is lower for females than for males. The infant mortality remains high at 66 per thousand live births (BDHS 1999-2000). Poverty, illiteracy, and gender discrimination combined with violence within and outside home contribute to the adverse effect on women's health. As many as six of every 100 women (28,000 women annually) die from pregnancy related causes (Kamal et al, 1993). Only 25% of the pregnant women receive antenatal care. Trained midwives attend only 14% of the

births. A meagre 39% of the district hospitals and 56% of the Thana Health Complexes (THCs) have the potential to offer adequate basic obstetric services. More than one-third of the 3.33 million infants born annually weighs less than 2.5 Kg, the threshold for low birth weight (lbw). Two-thirds of the children under six years of age are either under-weight or stunted and some 17% are moderate-to-severely wasted (BBS, 1997b). Of the approximately 20 million under-five children, an estimated 380,000 die from pneumonia, diarrhoea, measles and neonatal tetanus every year (Abedin, 1997; Baqui et al., 1998). Nation-wide, one-third of the deaths in children under five years of age occur during the first month of life (BBS, 1996; Mostafa, 1996). The average daily calorie consumption is only 80% of the recommended level (World Bank, 1995) and in 25% of rural households, the average daily consumption is still less than 1,800 calories, the minimum for extreme poverty (World bank, 1998a). Although the use of safe sources for drinking water is almost universal, only 44% of the population use a sanitary method of excreta disposal (BBS, 1997a).

Access to public health facilities

Less than 40% of the population of Bangladesh has access to modern primary health care services beyond immunization and family planning (Abedin, 1997). Utilization of the public health care system has declined from 20% in 1981 to 12% in 1994. The large majority of the health care-seeking population goes to the unqualified practitioners of various kinds for treatment that is frequently sub-standard, ineffective or harmful (Begum, 1996). Reasons cited for non-use of public facilities are: inadequate attention given by the physician (28%), non-availability of medicines (26%), distance to the nearest health facility (9%), and factors like long waiting time, absence of doctor, ineffective treatment and the charging of informal and extra fees (24%) (Khan et al., 1988). Even though the 'official' cost of the services is zero, the 'hidden' cost may be substantial and beyond the reach of the poor.

Government expenditures on health and family planning activities have never exceeded 3% of its budget including donor support (GOB, 1998a). Preventive care as part of Primary Health Care (PHC) seems to have even less priority. Two-thirds (66%) of the Ministry Of Health and Family Welfare (MOHFW)'s expenditure is for hospital services, including the THCs. One-quarter (24%) of MOHFW expenditures are for tertiary health care services at the medical college hospitals and at specialised hospitals. On the other hand, the great majority of

international financial support is given for PHC including family planning. Thus, MOHFW has a very marginal position in the delivery of PHC services and in 1990-95 devoted no more than 8% of the resources to preventive care (Data International, 1998). Public health facilities are running at only 50% of capacity (IBRD, 1995). A 1996 survey of THCs found that doctors were working as little as 15% of their designated hours (IBRD, 1996).

Current government expenditure amounts to about \$ 3.50 per capita for all health and family planning purpose, while the World Bank estimates that an essential package of basic services for a country like Bangladesh would cost around \$12 (UNICEF, 1997). Of this expenditure, payment and allowances take a greater portion of the spending than health care delivery service expenses. User fees for government services amounted to less than 1% of the government health expenditures. Benefits from public health spending represents only 0.5% of rural household income. However, the incidence of such spending, as proportion of income, is highest for the poorest decile (2.9%), declining almost secularly to 0.2% in the case of top two deciles. The relative proportion of the public and private health expenditure indicates that public expenditure only fills 15% of the health care demand (Sen, 1997).

State of urban health care services

The urban population of Bangladesh has increased rapidly from around 8% in 1971 to around 20% in 1997, following a growth rate of approximately 6% in the past two decades (MOHFW, 1996). Around 60% of this growth is due to poverty and disaster related migration from the countryside. A major consequence of the surge in urban population is the rapid growth of slums and squatter settlements. It is estimated that there will be about 16 million 'poor' and 9 million 'hard-core poor' in urban Bangladesh by the year 2000. About half of the population of Dhaka (amounting to about 4.5 million) can be categorized as living below poverty line. While the urban poor population is not confined to slums, these do present an aggregation of the poorest section of the urban population and due to overcrowded, unsanitary and sub-standard dwellings, are thus at high risk of contracting communicable diseases.

Some data on current health status

Table: Selected Health and Demographic indicators in historical perspective

	1972-'73	1989-'90	1999-2000
CBR (/1000)	47	33.5	23.6*
CDR (/1000)	17	12.0	8.0*
Pop Growth Rate	2.70	2.15	1.8
TFR (per woman)	---	4.9	3.31
Contraceptive prevalence (any method)	---	39.0	53.8
% Immunized (12-23 months, All EPI)	---	75.0	60.4
IMR (/1000 live births)	150	94	66.3
MMR (/1000 live births)	30	6	4
Life Expectancy at Birth (yrs)	45	54	60
Universal access to drinking water	---	89	97
Universal access to sanitary excreta disposal	---	21	40 ('97)

Sources: Five-year plans, WD Report 2000/'01, UNICEF 1998, BDHS 1999-2000

**BDHS 1996-1997*

Socioeconomic and Gender Equity in Health:

Table: Significant difference in selected health outcomes between the highest and lowest income groups

	Poorest quintiles	Richest quintiles	Poor/Rich Ratio
IMR	96.3	56.6	1.7
U5MR	141.1	76.0	1.8
Delivery attendance (%)	1.8	29.7	0.06
DPT3 coverage	60.4	83.2	0.72

Source: Towards a poverty strategy for the health sector, Research note no.21, HEU, MOHFW (pp11)

Table: Gender difference in selected health outcomes among under-five children

	Male	Female
IMR*	78.1	75.4
U5MR*	8.9	10.1
DPT3 coverage (12-23 months)	75.9	67.8
Ht-for-Age <-3SD	17.3	19.4
Wt-for-Age <-3SD	11.7	14.4
Wt-for-Height	1.0	1.1

Source: BDHS 1999-2000; *BDHS 1996-1997

Public Health Financing (BIDS, HEU of MOHFW.):

- 3.9% of GDP (US\$ 10.6 per capita) is spent on health by Bangladesh in 1996-97
- This was financed by:
 - Public sources (including foreign assistance), 34% (equivalent to US\$ 3.50 per capita)
 - Households and the private sector, 64% (73% for purchasing medicines, 7% for consultation with non-qualified or traditional providers, 10% for qualified medical providers; a significant proportion for visits to nominally free government facilities)
 - NGOs, 1%
- 66% of the Government expenditures on health are for hospital services, and 24% of this is for medical college and specialised hospitals; only 8% is for preventive services
- Benefits from public health spending represents only 0.5% of rural household income; however, as proportion of income, it is highest for the poorest decile, 2.9%
- Overall, 17% of total government health subsidies benefit the poorest quintile of the population, while 25% benefits the richest quintile

Nutritional Status:

The deteriorating nutritional status of the population over the last 40 years is manifested by the gradual decrease in the consumption of both the calories and the proteins as shown below.

Table: Nutrient consumption in historical perspective

	1962-64	1975-76	1981-82	1995-96
Calorie (kcal)	2218	2094	1943	1868
Protein (gm)	55.3	58.5	48.4	46.9
Vitamin A (I.U)	1670	730	763	1668
Vitamin C (mg)	39.9	9.5	13.0	32.8
Iron (mg)	9.4	22.2	23.4	11.4

Chronic energy deficiency in women

Chronic energy deficiency is widespread among women in the country. The prevalence of severe undernutrition (Body Mass Index or BMI<16) is 10.6% in urban slums and 8.4% in rural areas. However, the prevalence of mild to moderate under-nutrition is much higher in rural (38.3%) than in urban areas (30.1%). Surprisingly, the proportion of women having BMI \geq 20 are almost double in urban areas (27.6%) than in rural areas (15.9%), indicating high rural-urban disparity in energy deficiency among women in Bangladesh.

Table: Chronic Energy Deficiency in adults by area of residence

	Rural	Urban
BMI<18.5		
Women	49.7	25.5
Men	47.2	24.7

Source: BBS 1999

Low birth weight

The average birth weight of infants in Bangladesh is 2.5 kg, which is similar to WHO cut-off for LBW. This implies that half of the children are born with low birth weight. The lower weight gain during pregnancy in rural mothers is reflected by having higher percentage of LBW babies in rural areas (46.7%), compared to urban areas (27%) (UNICEF 1995). However, a recent study in an urban slum of Dhaka City showed the prevalence of LBW as 39.0%. These figures are one of the highest in the world and are a matter of great concern.

Protein-energy malnutrition in children

Protein-energy malnutrition (PEM) is highly prevalent among children under-5 in Bangladesh, with much higher prevalence in rural than in urban areas. Only 8.2% of rural children are normally nourished compared to 13.9% of urban children (BBS 1999).

Table: Prevalence of under-weight, stunted and wasted children under five years of age

	INFS			HKI	
Year of survey>	1962-64	1975-76	1981-82	1994-95	1999
Indicators					
Underweight (weight-for-age <-3sd)	---	---	---	64.2	61.9
Stunted (height-for-age <-3sd)	---	91.9	84.1	60.4	54.7
Wasted (weight-for-height t<- 3sd)	---	66.7	53.1	17.0	14.4

Micronutrient deficiency

Micronutrient deficiencies are a major public health concern in Bangladesh. As elsewhere in the world, deficiencies of vitamin A (including beta-carotene), iodine and iron are the most common and widespread in the country with related health consequences.

Iron deficiency anaemia: More than 70% of women aged 15-49 years and children aged 0-14 years suffer from anaemia. The highest prevalence is observed in pregnant women (56%), while its prevalence in adult men is also quite high, 69%.

Vitamin A deficiency: According to a recent national survey, the prevalence of nightblindness among pre-school children in Bangladesh was 0.67%. This is less compared to the prevalence of 3.5% in 1982-83.

Iodine deficiency disorders: According to the latest IDD survey (1993), the total goitre rate (TGR) (grade 1+grade 2) in Bangladesh is 47.1%. The women of childbearing age (15-44 years) and girls aged 5-14 years are most affected with TGR of 55.6 and 53.0%, respectively. Nearly 69% of the total population in Bangladesh suffer from physiological iodine deficiency (urinary iodine excretion <10 micro gm/dl). In this parameter also, the females of both age groups are more affected than their respective male counterparts (8-9). The prevalence of cretinism in the country is 0.5%. This means that around 500,000 people in Bangladesh suffer from mental retardation due to iodine deficiency in their early life.

Major interventions

I. Health and Population Sector Project 1998-2003 (HPSP)

The Essential Service Package (ESP) under this project was designed to deliver cost-effective interventions that would benefit the poor disproportionately. This is because the ESP addresses many of the diseases of the poor while the service provision was to concentrate on the facilities of thana and below that are used more frequently by the poor, than services at higher levels of the system. However, a mid-term review in November 2000 found that while HPSP has had some success in channelling resources in services likely to be used by the most vulnerable, there was much evidence that the poor find it difficult to access quality services despite the development of targeted ESP.

One of the objectives of the project was to integrate health and family planning wings of the MOHFW at the grassroots level and provide integrated services through community clinics.

While the merger has been achieved at the administrative level, question remains how successful it have been in delivering the services as intended. Long-term effects on TFR due to withdrawal of doorstep FP services remain to be seen. Moreover, when experiences with the existing UFHWFC remain mostly unfavourable, the wisdom of opening a large number community clinics raises many unanswered questions.

II. National Integrated Population and Health Programme 1997-2004 (NIPHP)

This USAID funded project aims “to enhance the quality of life of the poor and underprivileged members of the society by helping to reduce fertility and improve family health”. In collaboration with MOHFW, it works thorough Rural Service Delivery Partnership (RSDP) and Urban family health partnership (UFHP) and delivers a high quality high impact ESP (lesser version) in a clinic-based one-stop setting, targeted to the whole family. These clinics are supposed to be readily accessible to the poorer and socially disadvantaged segments of the population, particularly in the under-served and poor-performing areas of the country. However, in practice, how far of this has been achieved remain to be evaluated.

III. BINP (1996-2001) and NNP 2001-'10

Funded by GoB and WB and with technical assistance from UNICEF, BINP was lunched in 40 thanas to cater to the urgent problem of highly prevalent malnutrition in the community. The three core components were: community-based nutrition activities, national level nutrition activities and inter-sectoral nutrition programme. Analysis of project experience showed that a community-based nutrition programme like this could make rapid and significant impact on severe malnutrition. These encouraging findings have paved the way for scaling up BINP and led to the development of a 10 year NNP for the entire population with WB financing and UNICEF technical assistance. The project will be managed by the MOHFW as part of the HPSP through partnership with NGOs, along with the involvement of relevant government ministries.

IV. New initiatives for the Urban poor (Slum and non-Slum)

There have not been any major government or private programmes specifically targeted at the primary health care needs of the urban poor, especially those living in the urban slums. Some

new initiatives have recently been taken in the urban health sector to improve the current state of urban health, with particular focus on the slum and non-slum poor. These include:

a) UFHP under NIPHP: The partnership comprise of JSI, FPSTC, CWFP and BCCP. The UFHP delivers clinic based lesser version of ESP through 24 NGOs (117 static clinics, 35 in City Corporations and 65 in other municipalities; 2 satellite clinics per static clinic). It covers approximately 25 million urban people.

b) Urban PHC Project 1998-2002 (ADB funded): To cater to the needs of urban poor, a five-year, US\$ 60 million Urban PHC project was launched through MLGRDC in four city corporations of Bangladesh (Dhaka, Chittagong, Khulna and Rajshai) targeting 9.5 million urban poor, representing 41% of Bangladesh's urban population.

c) Urban immunisation by BASICS (Basic support for Institutionalising Child survival): BASICS assist GoB to develop and implement strategies to extend supply and demand for EPI in selected municipalities, with special emphasis on urban poor living in the slum areas. Five steps for this strategy are: map slum areas and identify health resources available, strengthen local coordination among EPI service providers, improve access, study EPI related health behaviour of the slum community, and adopt communication interventions to raise demand for EPI services and improve case identification and reporting.

NGOs: another key player in the health scenario

The dynamic NGO sector existing in Bangladesh has carved an important niche for itself in the provision of health and family planning services at the grassroots level. This has been possible due to two factors: delivery of relatively high quality services at a reasonable cost, and innovative ways to involve local community to change it's own health in a sustainable manner. Many NGOs have close relationships with the communities they serve, and are therefore, in a better position to identify and reach vulnerable individuals and groups than government institutions. These NGOs range from large international organizations (e.g., CARE, Save the

Children and World Vision) to large national ones like BRAC, *Ganashasthya Kendro*, Grameen Health Programme, FPAB etc., to hundreds of smaller local NGOs.

An illustrative case: the experience of BRAC

BRAC, perhaps the largest NGO in the world (with over 25, 000 full time staff and an annual Budget of US\$ 132 million as of December 2000) has extensive experience in developing community-based health and family planning services. Targeted mainly to its programme participants, BRAC's health programmes aim to achieve a sustained impact through reducing maternal, infant and child mortality and fertility; and by improving the nutritional status of children, adolescents and women. To achieve these goals, BRAC provides critical services in reproductive health and disease control, mobilizes women in health activities through training, and collaborates with the public sector in implementing national programmes of common interest. The core person in BRAC's health programme is the community health volunteer, the Shastho Shebika (SS), who is selected from among the BRAC's VO members. Most of these women are aged 25-35 years, illiterate, and from the poorest households. They are trained to identify and cure some common diseases, refer patients who need professional medical attention to formal medical services, and provide services on family planning and rural sanitation. Increasing the health and nutrition awareness of the members is another important task of the Shebika. Each Shebika is responsible for about 150-200 households and visits some 15 households per day and provides services. She receives certain incentives such as access to credit or small profits from the sale of drugs or slab latrines, and is held in high esteem by the community in which she lives. The activities of the SS are supervised by BRAC field office staff who eventually visits 25% of her households (BRAC, 1997a; RHDC, 1997; Chowdhury, 1997).

The health-related policies

The proposed health policy calls for continued efforts to reach "Health for All" and for equity of access for all citizens, especially the rural population and the urban poor (GOB, 1998). It places the concept of PHC at its core for providing essential services to the population. Under the policy, non-profit and for-profit private sectors are encouraged to work as a "complementary force" to the government's efforts. The policy calls for the involvement of all types of

practitioners, both modern and traditional, and their professional associations in strengthening the availability and the quality of services. It further stipulates that the Government should assist traditional practitioners in improving the quality of their services. It calls for decentralization of services and increasing awareness of the community with regard to their health rights, responsibilities and interaction with the local health authorities. The policy proposes to improve the quality of care at the government health centres through the development of standards for, and monitoring of, service quality.

The National Policy on HIV/AIDS and STD affirms the full human rights of persons with HIV and AIDS and calls for the development of a strong and comprehensive national HIV/AIDS prevention and control programme. Improving awareness about sexually transmitted diseases and access to facilities with high-quality STD services is a key component of the national policy as is the widespread promotion of condom use, establishment of an HIV/AIDS surveillance programme, and improvement in the safety of transfusion of blood and blood products (Choudhury et al., 1997). The National Food and Nutrition Policy sets as its goal the national daily average per capita intake of 2,279 calories by the year 2000, which is the recommended daily minimum. The policy recommends a stronger role for the Bangladesh National Nutrition Council in national and regional policy formulation, in nutritional surveillance, and to promote the inclusion of nutritional components in all development programmes (BNNC, 1997).

Issues for the future

Bangladesh continues to face a number of significant challenges in the health sector despite some progress since independence. Despite considerable declines in IMR and MMR, death rates continue to be unacceptably high compared to many other developing countries. The quality of life of the general population is still very low. Low calorie intake continues to result in malnutrition in a large proportion of women and children. Preventable communicable and poverty-related diseases still dominate the top 10 causes of morbidity and 65% of all morbidity in 1996 were due to these diseases. Resurgence of malaria, kala-azar and other re-emerging diseases as well as emerging diseases like HIV/AIDS, substance abuse etc. are increasing the disease burden of the population. Environmental degradation due to air, water and industrial

pollution, deteriorating living conditions in the urban slums, and increased concentration of arsenic in subsoil water reported recently in some areas of the country, etc., poses significant adverse outcomes for public health. There is evidence that the health of the poorest has not improved as much as it has for richer groups. Major challenges remain in the following fields:

- Persistent high MMR among the poor
- One of the world's highest rates of LBW
- Stagnant TFR
- Highly prevalent malnutrition among women and children
- 'Income-erosion' effect of ill health, especially for the poorer section of the population
- Achieving/reducing socioeconomic and gender in health
- Emerging and re-emerging infectious diseases
- Arsenic poisoning
- STDs and AIDs related diseases
- Adolescent health problems
- Public Health Financing, etc.

Poverty-health interface

- 'Income-erosion' from illness for the poor households, especially the poorest
- Sudden and unanticipated health related shocks lead to around 10% of the ultra-poor's income
- Health hazard-related risk events explain, on average, 16% of causes of deterioration along the poverty spiral experienced by households during the 1990-94 period
- For non-poor households who slipped subsequently into hard core poverty, the share of health related causes are as high as 21%

Emerging/Re-emerging infectious and environmental diseases

Among the emerging diseases are arsenic poisoning, malaria, dengue, filaria, TB, leprosy, kala-azar, etc.

Conclusions

We are confronted with the challenging task of providing equitable, accessible, efficacious and high quality health care services to the population at large, the majority of whom live at or below the poverty line. Although Bangladesh has a formidable public sector health and family planning infrastructure, it is under-utilised, inadequately managed, and of poor quality. There needs serious re-thinking on the part of the policy makers and programme implementers for building sustainable healthy Bangladesh in future.

The conclusions can be drawn in terms of some key messages:

Concerning past experiences:

1. Though HPSP succeeded in channelling resources in services likely to be used by the most vulnerable, the problem of accessibility for the poor remains.
2. Health of the 'ultra poor' has not improved as much as it has for the rich and the better off poor
3. Management and accountability of the public sector health programme remain a major challenge
4. Public sector health care financing: source, and balancing between operating cost and creating new capacities. Over the last 20 years, the operating costs in terms of salaries and allowances have been increasing, pushing the other expenses down.
5. Gender inequity in health and nutrition remains a major concern

Concerning current status:

1. Persistent high MMR, IMR, high LBW prevalence, stagnant TFR though impressive gains in CPR are major challenges for policy formulation and programme designing
2. Highly prevalent malnutrition among women and children severely compromises health of the nation
3. 'Income-erosion' effect of ill health, especially for the poorest section of the population remain largely un-addressed
4. The problem of developing targeted health care services for the poor and the 'ultra-poor'

Issues for future direction:

1. Has the integration of health and family planning services produced better results? If not, what should be done? How can the resources for health care financing be diversified to increase per capita health expenditure?
2. How best the health needs of the most vulnerable sections of the population, i.e., women, children and poor can be met in the shortest possible time? How to address the targeting of the poor and the ultra-poor? How can the HCPs be made sensitive to the health needs and rights of the poor and the ultra-poor?
3. What will be the roles of the public, private and NGO sectors in delivering high impact health services in the most effective and efficient way?
4. Decentralisation of public health care system to local government: will the accountability of the health providers improve?
5. Given the fact that a large number of people seek health care overseas, should we allow foreign health practitioners to operate in Bangladesh?