

PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

Comprehensive case study from Bangladesh



Alliance for
Health Policy and
Systems Research



World Health
Organization

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WHO/HIS/HSR/17.35

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Suggested citation. Primary health care systems (PRIMASYS): comprehensive case study from Bangladesh. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

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Editing and design by Inis Communication – www.iniscommunication.com

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Acknowledgements

The research team acknowledges and gratefully thanks all of the sector experts in Bangladesh who generously gave their time to speak with us and share their experiences and honest perspectives on different aspects of the primary health care system.

Special thanks go to Dr Mushtaque Chowdhary and Dr Henry Perry for reviewing the case study and providing suggestions for improvement.

Abbreviations

DGFP	Directorate General of Family Planning	NGO	nongovernmental organization
DGHS	Directorate General of Health Services	PHC	primary health care
DOTS	directly observed treatment, short course	SWAp	Sector-wide Approach
DPT	diphtheria–tetanus–pertussis	UNICEF	United Nations Children’s Fund
GDP	gross domestic product	USAID	United States Agency for International Development
HIS	Health Information System	WHO	World Health Organization
ICD-10	International Classification of Diseases and Related Health Problems, 10th Revision		

Background to PRIMASYS case studies

Health systems around the globe still fall short of providing accessible, good-quality, comprehensive and integrated care. As the global health community is setting ambitious goals of universal health coverage and health equity in line with the 2030 Agenda for Sustainable Development, there is increasing interest in access to and utilization of primary health care in low- and middle-income countries. A wide array of stakeholders, including development agencies, global health funders, policy planners and health system decision-makers, require a better understanding of primary health care systems in order to plan and support complex health system interventions. There is thus a need to fill the knowledge gaps concerning strategic information on front-line primary health care systems at national and subnational levels in low- and middle-income settings.

The Alliance for Health Policy and Systems Research, in collaboration with the Bill & Melinda Gates Foundation, is developing a set of 20 case studies of primary health care systems in selected low- and middle-income countries as part of an initiative entitled Primary Care Systems Profiles and Performance (PRIMASYS). PRIMASYS aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness

and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance.

The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries. Furthermore, the case studies will serve as the basis for a multicountry analysis of primary health care systems, focusing on the implementation of policies and programmes, and the barriers to and facilitators of primary health care system reform. Evidence from the case studies and the multi-country analysis will in turn provide strategic evidence to enhance the performance and responsiveness of primary health care systems in low- and middle-income countries.

1. Case study on primary health care in Bangladesh

1.1 Background to primary health care in Bangladesh

Bangladesh made a commitment to primary health care (PHC) and providing health for all in 1978 when it became a signatory to the Alma-Ata Declaration on Primary Health Care, just seven years after independence. Forty years on, and in spite of some occasional political back-stepping from different governments, public programmes in PHC have grown considerably, driven initially by a dynamic post-independence national development programme and later influenced by international initiatives such as the Millennium Development Goals, by international donors, and by the growing momentum towards universal health coverage, which is now linked to the government's commitment to the Sustainable Development Goals.

The government is one of four main groups involved in PHC provision, the others being the for-profit private sector, nongovernmental organizations (NGOs or non-profit private organizations), and donor agencies (representing overseas governments, intergovernmental organizations and private charities). The government takes lead responsibility for national policy, planning and decision-making for all health care and sees itself, through the Ministry of Health and Family Welfare, as the major health service provider. However, this perceived remit conflicts with two of the main challenges to the provision of PHC in Bangladesh. The first is that the government's PHC system was designed for rural areas only, and this is still the case, with almost no public PHC infrastructure in urban areas. Some of the gaps in urban areas have been filled by NGOs but mostly by private for-profit facilities, which have flourished in an unregulated market. The second challenge, as this suggests, is that Bangladesh's health system is now extremely pluralistic and the government's capacity and willingness to coordinate and regulate both itself and other health actors is still seen as weak.

This governance role will be further tested as a result of new initiatives to support the goal of universal health coverage, most funded with investments from overseas donors. One of the foremost aims of these initiatives is to strengthen the private sector and develop new sustainable financing models for health care, some based on social enterprise ideas. The challenge for the government lies with coordinating the diverse range of health actors and development partners involved, and reconciling the potentially conflicting perspectives and approaches these different actors bring. This situation is not new to Bangladesh, given that the country's health achievements since independence have largely been attributed to a dynamic and pluralistic health sector, but a much greater alignment of efforts is needed.

The continuing dynamism across the health sector, however, and the government's commitment to universal health coverage, give reason to be optimistic that further health gains will come – especially if the government can address some of its own internal bottleneck issues and move towards implementing the Fourth Health, Population and Nutrition Sector Programme 2017–2022. This considered and comprehensive strategy aligns ambitious and aspirational health objectives with the health-related Sustainable Development Goals.

1.2 Approach taken to compiling the case study

The purpose of the report is to provide an overview of Bangladesh's PHC system. Key informant data were used to provide a critical review of some of the main strengths and weaknesses regarding the sector's structure and governance, financing, human resources, planning and implementation, regulatory processes, and systems for monitoring and data management. The research team followed the framework and template provided by the Alliance for Health Policy and Systems Research, slightly

adapted for the local context as data collection proceeded. This framework adopts what could be called the “medical model” of PHC, which focuses on the provision of medical care to ambulatory patients. Given that it is the 40th anniversary of the Alma-Ata Declaration and that so much of PHC provision in Bangladesh has sought to follow the social model of health care, some commentary on this aspect of PHC in Bangladesh is provided.

The report draws on perspectives provided from in-depth interviews with a diverse range of 26 key informants who were interviewed in Bangladesh in 2016. The goal was to speak with a wide range of stakeholders to ensure different perspectives were represented. These included health system policy-makers and administrators, health service providers from government, the private sector and NGOs, researchers from government, civil society and academia, as well as foreign donor representatives. While each interview with key informants explored the same range of issues, key informants were also asked about issues specifically related to their roles and areas of expertise. Interview data were initially sorted using a simple framework approach. Emerging issues were compared between informants as interviews proceeded, and then followed up in subsequent interviews to try to understand differing perspectives. These perspectives were used to reflect

on the official policies, reports and quantitative data and analyses gathered from secondary sources and data sets, as well as peer-reviewed literature. Further literature was consulted for fact-checking purposes at the write-up stage. The report’s authors have tried to present an accurate reflection of the current situation, whilst balancing different perspectives. The Bangladesh health sector contains many stakeholder groups from different constituencies, and it is acknowledged that this sample cannot claim to be entirely representative of them all. The study protocol was reviewed and passed by the Ethical Review Board of the James P. Grant School of Public Health, BRAC University. Informed consent was taken before interviewing.

Bangladesh’s vibrant health research sector and the involvement of international donors and implementers means there is no shortage of good-quality research and data about the health system to which readers can turn for more detail than is presented here.

The study was conducted by Dr Julie Evans, a researcher at the James P. Grant School of Public Health at BRAC University, in partnership with Imtiaz Alam Tanim, an independent consultant.

Figure 1 provides a map of Bangladesh.

Figure 1. Map of Bangladesh



2. Bangladesh: demographic, macroeconomic and health profile

2.1 Context and historical development of primary health care in Bangladesh

Geographically, Bangladesh is located in South Asia with a southern border onto the Bay of Bengal, shared borders on three sides with India, and a smaller border with Myanmar to the east. Although Bangladesh only came into being as a country in 1971, it is a region with a long and rich cultural history dating back thousands of years. Modern Bangladeshis are united by a deep-rooted love for their country and language, and a shared national consciousness born from the sacrifices and successes experienced during the fight for independence. With a population of more than 160 million people in a land area of 147 570 square kilometres, Bangladesh is one of the most densely populated countries in the world. Mirroring demographic patterns internationally, the country has seen a rapid migration of people from rural to urban areas, driven by increasing economic opportunities. While it is estimated that by 2035 the majority of the country's population will live in urban areas, currently the majority of people – 63.4% (105 million) – still live in rural areas. However, this figure is thought to be close to peaking. The urban population is about 36.6% (60 million), and a population growth rate of 1.37% means that this number is expected to increase by over 50% by 2035 to reach 94 million (1).

For years after independence Bangladesh was known as a country of poverty, cyclones and famine,

but since 2000 the country has seen considerable development and is now also recognized for its impressive health improvements and economic growth, as well as for being the birthplace of microfinance and the home of the world's largest NGO (BRAC), and for its large garment manufacturing industry. Between 2000 and 2016, gross domestic product (GDP) rose from US\$ 400 per person to US\$ 1384 per person, placing Bangladesh well within the lower middle-income country category. At the same time, the percentage of people living below the international poverty line has declined from 34.8% to 14.8%. An economic growth rate of 7.05% (at constant prices) means that Bangladesh's growth already outstrips that of Pakistan and might surpass India's in 2018 (reflecting also India's economic slowdown). A relatively low fertility rate of 2.1 children (per woman aged 15–49 years) (2, 3) compared to Pakistan's fertility rate of 3.4 means average income per person in Bangladesh is growing faster than in Pakistan. This places Bangladesh on track to have a higher GDP than Pakistan by 2020 (4). Economic development is not shared equally, however. Recent data from the Bangladesh Household Income and Expenditure Survey show that the poorest 5% of the population holds only 0.23% of the country's income, whilst the top 5% holds 27.89% (5). These data show that inequality has increased slightly since the previous data published in 2010.

Table 1 summarizes key demographic and economic indicators.

Table 1. Key demographic and economic indicators

Indicator	Results	Source of information
Total population of country	166.37 million	United Nations, Department of Economic and Social Affairs, Population Division (1)
Sex ratio (male/female)	1.026	Ministry of Health and Family Welfare (2)
Population growth rate	1.37%	Ministry of Health and Family Welfare (2)
Population density (people/square km)	1090	Ministry of Health and Family Welfare (6)
Distribution of population (rural/urban)	Rural: 63.4% Urban: 36.6%	United Nations, Department of Economic and Social Affairs, Population Division (1)
GDP per capita (US\$)	1384	World Bank (4)
Income or wealth inequality (Gini coefficient)	32.4	World Bank (7)
Life expectancy at birth (years)	Average: 71.6 Male: 70.3 Female: 72.9	Bangladesh Bureau of Statistics (3)
Literacy rate	> 7 years: male 73%, female 68.9% > 15 years: male 75.2%, female 69.5%	Bangladesh Bureau of Statistics (3)

In spite of continuing poverty and inequalities, Bangladesh has invested heavily in the health of its people and is rightly known for its history of innovation and success in health and development. Life expectancy and literacy rates have improved dramatically since 1971. Life expectancy has risen from 47 years to 72 years (74 for women, 72 for men), whilst the female literacy rate, for example, has risen from about 18% in 1981 to almost 70% in 2016. The adult male literacy rate has risen from 39.7% in 1981 to 75.6% in 2016 (3). The increases in the numbers of females receiving an education and participating in the workforce have been key factors in Bangladesh's growth.

The most celebrated health gains have been in fertility, family planning, maternal mortality, the mortality of children aged under 5 years, and infant

mortality (Table 2). Since the mid-1970s, the fertility rate in Bangladesh has been cut from an average of more than six children per female to just over two children in 2018. Maternal mortality has been reduced from 574 deaths per 100 000 live births in 1992 to 176 deaths per 100 000 live births in 2015 (2). Under-5 mortality has been reduced from 146 deaths per 1000 live births in 1990 to 35 deaths per 1000 live births in 2016 (3), and infant mortality has been reduced from 100 deaths per 1000 live births in 1990 to 28 deaths per 1000 live births in 2016 (3). The country's Expanded Programme of Immunization has been successful in achieving coverage for children under 12 months and 24 months of age. From a near zero baseline in the 1980s, diphtheria–tetanus–pertussis (DTP) coverage for children aged 12–23 months, for example, has reached 97% (2).

Table 2. Health indicators: fertility rate, and maternal, infant and child mortality

Indicator	Figure	Source
Total fertility rate (per woman aged 15–49 years)	2.1	Ministry of Health and Family Welfare (2)
General fertility rate (live births per 1000 women aged 15–49 years per year)	69	Ministry of Health and Family Welfare (2)
Maternal mortality (per 100 000 live births)	176	World Bank (8)
Infant mortality (per 1000 live births)	28	Bangladesh Bureau of Statistics (3)
Under-5 mortality (per 1000 live births)	35	Bangladesh Bureau of Statistics (3)

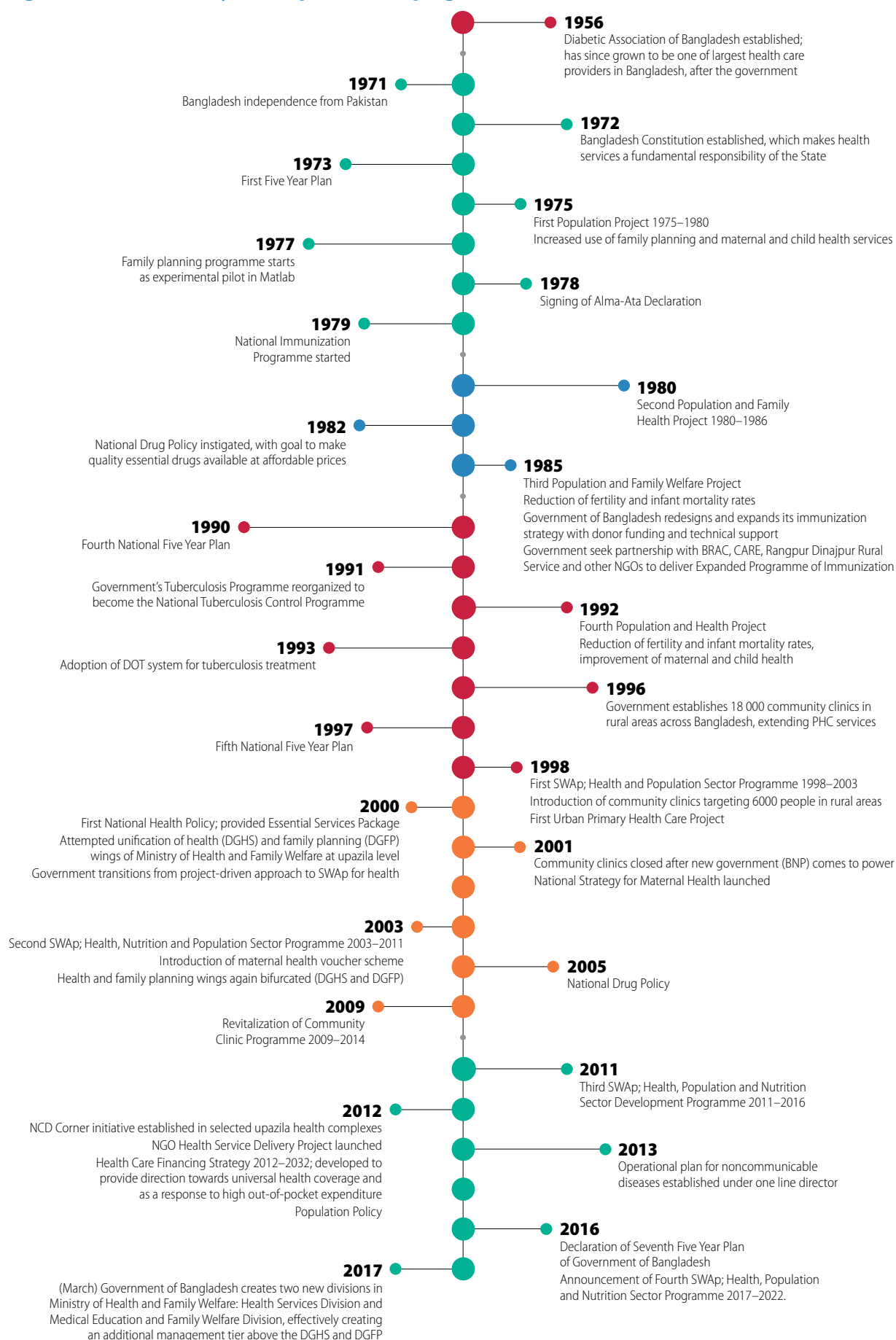
These successes have been the result of a combination of policies. After independence, and supported by foreign aid, the government launched major programmes to address priority health issues (including diarrhoea, cholera, population/family planning, tuberculosis and immunization), and adopted innovative approaches to delivery. These approaches involved the government partnering with NGOs such as BRAC, the International Centre for Diarrhoeal Disease Research (now known as icddr,b), and Gonoshasthaya Kendra to deliver health services at scale across the country, mobilizing a massive cadre of female community health workers to deliver health information and services directly to people's doors, and frequently adapting how the community health workers were organized and incentivized in the light of local and national circumstances. These partnerships were possible because the government had allowed a diverse and vibrant health and social sector to flourish after independence. Also important was the development and adoption of new health treatments, often the outcome of research conducted at icddr,b (including oral rehydration therapy) and field-based research

conducted by BRAC in the 1980s (for example, the tuberculosis control programme using DOTS).¹ The launch of Demographic and Health Surveys in the country meant that the impacts of health programmes were being regularly evaluated, and these provided essential data on progress and on which treatments and services needed improvement. By the 1990s, the government had also established a network of rural community health centres across the country, which formed the backbone of the PHC system. By this stage NGOs were essential providers in the health care sector.

Figure 2 presents a timeline of key health policy and programme developments in Bangladesh. Further analysis of the development of Bangladesh's advancements in health can be found in the *Lancet* series of papers that was published in 2013 (9–13), and in Perry's book on the history and development of the PHC system in Bangladesh, which provides a particularly useful analysis of the community-focused nature of PHC in the country (14). In addition, further information on the evolution of Bangladesh's policies, programmes and innovations for health can be found in the appendix to El Arifeen et al. (13).

1 DOTS = directly observed treatment, short course.

Figure 2. Timeline of key health policies and programmes



2.2 Outstanding and emerging health challenges

Bangladesh's investments in health have had the greatest impact on the key mortality rates, discussed above, and on life expectancy, but more work still needs to be done in maternal, child and adolescent health, and the country continues to face a relatively high prevalence of infectious disease, especially from malaria and tuberculosis, whilst also being challenged by the rapidly growing problem of noncommunicable diseases caused by changes in people's diet and exercise regimes, and environmental pollution and climate change. Cardiovascular disease is the number one cause of death and morbidity in Bangladesh, but health policies and services have not caught up with the need to help people to manage these kinds of illness (Table 3). Despite the Diabetic Association of Bangladesh being the second largest health care provider in Bangladesh, and its persistent efforts for over 60 years, the number of people with diabetes is reaching epidemic levels, having more than doubled in 10 years to approximately 10% of the population. Another 23% are estimated to be at the pre-diabetes stage (15). A major national programme is needed to provide both prevention and treatment, and to educate people and help them to improve their lifestyles and eating habits.

Accidents, especially road traffic and work-based accidents, are also in the top 10 causes of death and

morbidity, as well as neglected issues such as arsenic poisoning. Arsenic poisoning has been a serious but unaddressed problem in Bangladesh since the 1970s, when wells were dug across the country with the goal of providing rural communities with much-needed fresh water for drinking and sanitation (16). Whilst the programme provided the required access, people did not know that the aquifer level in possibly 60% of wells contained arsenic. United Nations Children's Fund (UNICEF) data from 2008 found that only 39% of wells had been declared safe out of the 55% of wells that had been tested.

Despite great improvements in maternal and child health and efforts to expand emergency obstetric care at district and upazila levels, there are still many unmet needs in this area. Skilled medical attendants, for example, deliver only 42% of babies in a health facility (17). Undernutrition and stunting remain critical problems, with 36% of children aged under 5 years being reported as stunted in 2014, though this is a slight decrease compared to 51% in 2000 (18). Malnutrition is the third cause of infant deaths, after pneumonia and respiratory disease, and the fifth cause of deaths for children aged under 5 years (3). Malnutrition is also a serious issue amongst adolescent girls, limiting their ability to fight infections and creating serious health issues, especially during and after pregnancy. It has been estimated that more than 22% of urban female adolescents and 10% of rural female adolescents have a body mass index that places them in the "severely thin" category (19).

Table 3. Top causes of mortality and morbidity across all ages

Top causes of mortality	Top causes of morbidity
1. Cardiovascular disease	1. Cardiovascular disease
2. Diseases of the respiratory system	2. Pregnancy and associated complications
3. Cerebrovascular disease (stroke)	3. Infectious diseases
4. Infectious diseases	4. Diseases of the digestive system
5. Poisoning	5. Injury due to assault or road traffic accident
6. Injury due to assault or road traffic accident	6. Diseases of the respiratory system

Source: Ministry of Health and Family Welfare (2), based on combined reports from all types of public hospitals in Bangladesh and classified according to the International Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).

Reductions in fertility suggest that Bangladesh is on track to achieving a replacement level of fertility in the near future. These figures hide disparities in coverage for family planning services, especially for adolescents and unmarried young people in urban areas who face severe challenges accessing contraception because of conservative social and gender norms towards sex, and especially towards unmarried sexual relations. Addressing this requires further efforts in training and in the promotion and provision of family planning services.

Another important issue affecting the health of people in Bangladesh is that an estimated one third of the current urban population live in slum settlements, of whom more than two thirds are categorized as having incomes that place them within the lowest two wealth quintiles. The growing urban population will certainly increase the numbers living in informal slum settlements but there is currently no urban strategy to address the diverse health, housing and sanitation needs of this population. Inadequate planning and unregulated building across cities is having a chronic environmental impact on infrastructure and residents. This results in extreme congestion, concentrated air and water pollution, annual flooding and waterlogging, heat island effects, and the vast majority of urban dwellers living in buildings without adequate light, ventilation or sanitation.

2.3 Adolescent health and gender norms

Aggregated mortality figures for the whole population for women's health and women's involvement in education and the economy hide large inequalities and details of persistent gender norms that discriminate against women in every sphere of life. One area that needs urgent investigation is the prevalence of adolescent suicide. Figures show that suicide is a major cause of death amongst adolescents, and is more prevalent amongst females than males. Work by Nahar and colleagues (20) found that suicide is the major cause of death amongst women aged 15–19 years, with maternal

mortality being the second highest cause. The causes of suicide are complex but there are no reasons to believe that people in Bangladesh are more clinically prone to suffering depression than elsewhere. Rather, the causes are more likely to be situational, wrapped up in the growing tensions brought about when poverty and the traditional repressive expectations of gendered behaviour meet with the promise and dangers offered by a rapidly modernizing society, where even the poorest adolescents have a view of the wider world through their access to mobile phones and the Internet, or through their involvement in the workplace. This is a country where almost 60% of girls are married before the age of 18 years, and 22% are married by the time they reach 15 years (21). The consequences of pregnancy and motherhood for adolescents' health, education and economic prospects are stark. Child marriage, in most cases, can be understood as a protective measure for girls who are seen as vulnerable to both exploitation and poverty. Eliminating it, therefore, requires tackling the underlying determinants. Although women's empowerment is widely seen as one of the key factors contributing to Bangladesh's growth and health gains, Bangladesh remains a patriarchal society and much work needs to be done to give women equal social, economic and legal status in a fast changing economy and rapidly evolving society.

The importance of addressing adolescent health for girls and boys, and female adolescent health in particular, cannot be overemphasized. This is the largest population group in the country and Bangladesh's future prosperity rests on their ability to thrive. The PHC system has an important role to play but the whole health system – across all sectors and funders – needs to provide leadership to start mainstreaming gender in recruitment, in policies, in budgeting and planning, and in disaggregating data collection and analysis. It has long been established, for example, that using aggregated data for household income to make assumptions about the availability of money within households for women from men's incomes (or even women's incomes)

presents an inaccurate picture, but the practice still persists and leads to misdirected policies not just in health planning but also in economic and urban planning. It will be a continual struggle to improve girls' and women's lives if the data used for planning consist of indicators that only represent men without demonstrating the unequal situation and distribution of resources between men and women.

2.4 Summary indicators of the Bangladesh PHC system

Table 4 presents summary data on various aspects of the PHC system in Bangladesh, to be discussed further in subsequent sections.

Table 4. Summary indicators of the Bangladesh PHC system

Indicator	Figure	Source
Total health expenditure as proportion of GDP	3.5%	Ministry of Health and Family Welfare (22)
Public expenditure on health as proportion of total health expenditure	23.1%	Ministry of Health and Family Welfare (22)
Out-of-pocket payments as proportion of total health expenditure	63.3–67%	Ministry of Health and Family Welfare (22)
Voluntary health insurance as proportion of total health expenditure	5.3%	Ministry of Health and Family Welfare (22)
Proportion of households experiencing catastrophic health expenditure	14.2%	Khan, Ahmed and Evans (23)
Human resources for health skills mix: doctors/nurses	2:1	Ministry of Health and Family Welfare (2)
Number of doctors per 10,000 population	5.3	Ministry of Health and Family Welfare (2)
Number of nurses per 10,000 population	2.9	Ministry of Health and Family Welfare (2)
Relative geographical distribution of doctors/nurses (rural/urban) per 10 000 population	Doctors: rural 1.1, urban 18.2 Nurses: rural 0.8, urban 5.8	Ahmed et al. (24)
Community health workers per 10,000 population (estimates)	a) 13.7 b) 4.8	a) El Arifeen et al. (13) b) World Health Organization (25)
Geographical distribution (rural/urban) of community health workers	Government: rural 3.6, urban 2 NGOs: rural 49.5, urban 10.1 (figures are per 10 000 population)	Ahmed et al. (24)
Proportion of informal providers, and practitioners of traditional complementary and alternative medicine, out of the total health care workforce	Semi-qualified (allopathic): 4.29% Unqualified (allopathic): 2.39% Traditional: 6.42% Homeopathic: 0.59% Others: 0.17%	Ahmed et al. (24)

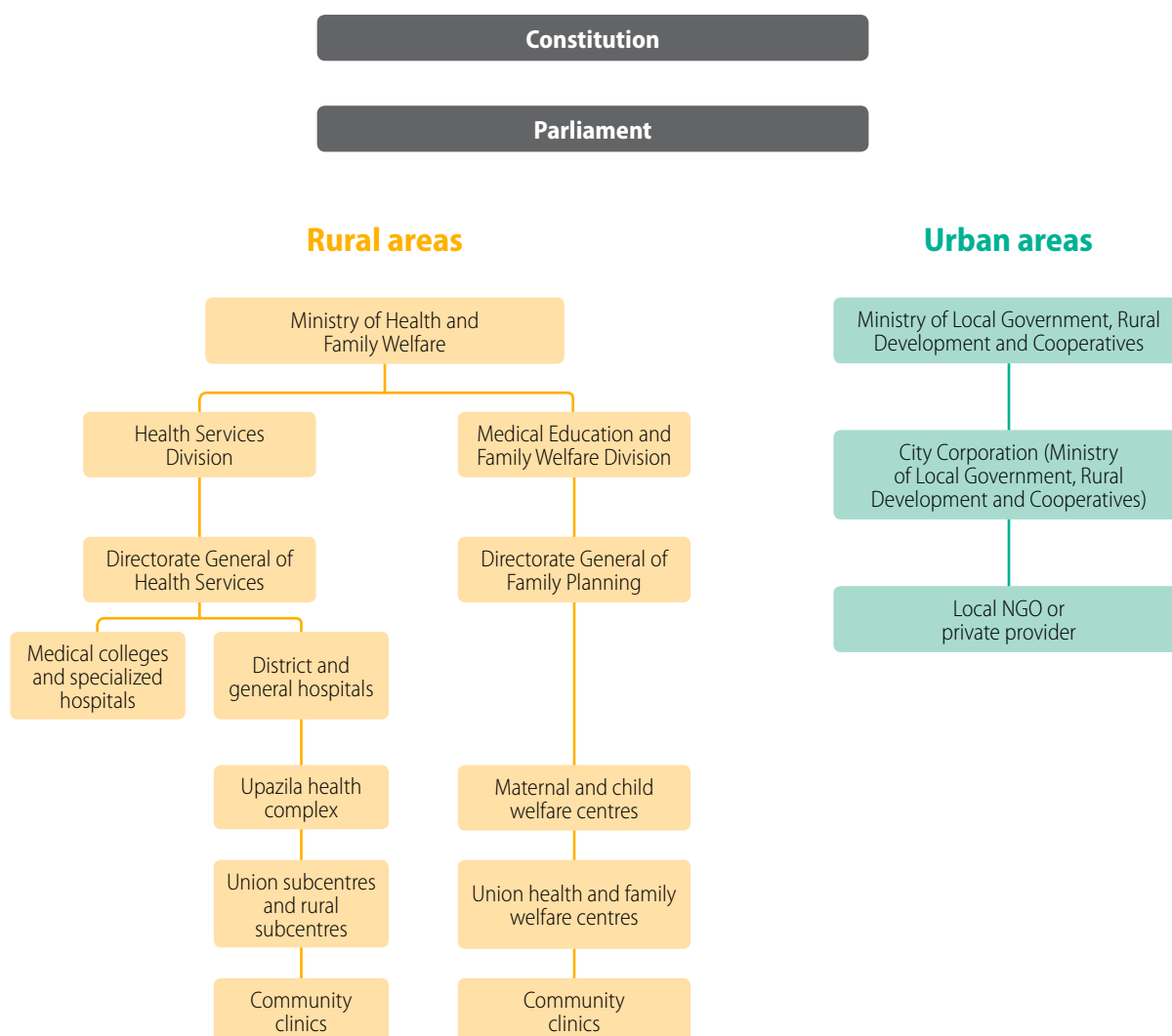
3. Primary health care structure and services

Of the three main groups involved in primary health service delivery in Bangladesh, the government remains the largest in terms of infrastructure and coverage. The government's PHC services are located almost entirely in rural areas and administered through a three-tier system called the upazila health complex, consisting of the ward level, union level and upazila level ("upazila" is the term used for an

administrative geographical region). These three lower tiers of the health system are intended to provide free health care to Bangladesh's estimated 105 million people living in rural areas, and provide a referral system up towards more specialist treatment.

Figure 3 shows the organizational structure for government health service delivery.

Figure 3. Government health service delivery organizational structure



3.1 Primary health care coverage in rural areas: government services

Government health services at primary level in rural areas comprise the following:

- community clinics (ward level): 13 442, with a stated intended coverage of 6000 people per clinic in rural areas, supposedly reaching 78 420 000 people (2, 26);
- union-level health facilities: 1399 (2);
- upazila-level facilities: 490, with a stated intended primary care coverage of 114 480 000 people (2, 26).

At the ward level, a total of 13 442 community clinics provide mostly preventive services, with the goal of taking health care closer to people's doorsteps. Community clinics are intended to offer maternal, neonatal and child health services, integrated management of childhood illness, reproductive health and family planning services, vaccinations through the Expanded Programme on Immunization, basic treatment for acute respiratory infections, nutritional advice and supplements, identification of severe illnesses such as tuberculosis, malaria, pneumonia, and influenza, obstetric emergencies, and referrals to higher facilities. Community clinics are the government's flagship grass-roots health services, jointly managed in collaboration with their local community representatives through community groups. The government has been conducting a programme to revitalize community clinics since 2009, and the latest Bangladesh Health Bulletin (2) reports an average of 9.5 million to 10 million patient visits across the country each month. In reality, there are questions about how functional community clinics are in offering these services, given reported problems with limited staffing and expertise, drug availability, and continuing evidence of low usage (27–29).

At the union level, there are union subcentres (1399) and upazila health and family welfare clinics (87), which offer normal birth delivery (that is, without complications), basic emergency obstetric

care services, and referral for complicated cases, along with provision of long-acting contraception methods.

Facilities at the next level up, the upazila level, are the first referral centres in the system and offer both inpatient and outpatient services along with diagnosis and some basic operative care in a total of 490 facilities, most of which are hospitals.

Every upazila health complex (ward, union, upazila level) is required to provide the same suite of services, but their budget allocations are based on hospital bed numbers in the facilities at upazila level rather than on an assessment and costing of local needs at the community level, including usage and geographical particularities. Respondents for this case study argued that health services needed to be better tailored to the needs of the local populations. In south-west Bangladesh, across the Ganges delta areas, for example, salination problems mean that many people have skin diseases and hypertension-related illnesses. In addition, they are living in areas with very poor infrastructure, and community clinics tend to be few in number, distant, and difficult to access. Upazila health managers know what the needs of local populations are but they are required to implement a standard package of services with little room for tailoring to local needs. Nor do local health managers get the opportunity to contribute to health planning processes.

One of the anomalies in the government health system, and the cause of a number of challenges for the delivery of PHC services at the community level, is the ongoing existence of two branches of health services within the Ministry of Health and Family Welfare. Until 2017, these branches were known as the Directorate General of Health Services (DGHS) and the Directorate General of Family Planning (DGFP). The DGFP was established in the 1970s in the early days of independence when population control was one of the country's priority concerns. Since then, there have been several attempts to unify the two wings but these have been strongly resisted, reportedly by the DGFP.

The DGHS and DGFP have several areas of overlap, with each implementing reproductive and sexual health services, adolescent health, maternal, newborn and child health, and nutrition services. The Health, Population and Nutrition Sector Development Programme 2011–2016 outlines the areas where the DGHS and DGFP are intended to collaborate and mainstream services according to operational plans, as well as sharing expertise and facility space. However, under the direction of the Ministry of Health and Family Welfare, the DGHS and DGFP govern their own health cadres at upazila, union and community clinic levels. This creates problems in a number of areas, including data collection and report writing for monitoring and supervision, and referral of patients between services. The DGHS and DGFP write separate reports without collaboration yet provide services from the same facilities working side by side. This presents a skewed picture of needs, probably overestimates the number of users, and could result in each side assuming that the other side is providing particular services. For example, when complicated cases are brought into a clinic, if DGFP staff do not have the facilities and skills to help, they need the support of DGHS facilities and staff. Patients are referred from the DGFP to the DGHS but it has been reported that they are not always received cordially because of the rivalry between the two sides. An analysis of the rivalry between the two departments can be found in the 1990 booklet *A tale of two wings* (30).

The Government announced in April 2016 that two new divisions would be created within the MoHFW: (a) the Health Services Division, and (b) the Medical Education and Family Welfare Division, which became official in March 2017. The two divisions form an additional administrative layer above both the DGHS and DGFP, and responsibilities between each division appear to remain similar to the previous arrangement. At the time of writing, the process of transition is continuing. The relationship between the DGHS and DGFP, described above, is unlikely to improve with the creation of two divisions, because there will still be a separation of decision-making,

double bureaucracy and competition for resources, with little incentive to collaborate. The government's decision to create two health divisions, as well as three other new ministries in other sectors, is reportedly related in a large part to government-wide demand from civil servants for promotional opportunities. That this move will result in more money at the top of the health system, and less efficiency and less equity at the bottom, suggests a conflict between the government's ambitions for improving health and the role that the government's health bureaucracy needs to play in achieving these goals.

Many of the respondents interviewed for this case study, both inside and outside government, strongly advocated decentralization in the health system to give managers at the primary care level greater flexibility to manage resources based on local needs. Currently, all requests for new resources – whether for recruitment to an approved position, for a new broom, or for repairs to a clinic – are centralized and have to be processed through central offices in the Ministry of Health and Family Welfare, leading to considerable delays for requisitions to be fulfilled. The same considerations apply also to recruitment, resulting in a large number of unfilled vacancies because of the bureaucracy involved. One respondent pointed out that although decentralization promises improved efficiency and effectiveness, previous attempts to decentralize in the 1980s failed because staff at lower levels did not have the capacity or the managerial training to be able to take on the additional responsibilities. That attempt apparently led to a chaotic situation, with 20 civil surgeons losing their jobs because of corruption. Perhaps the issue is not whether decentralization is a good thing, but rather how much decentralization is needed and what should be the process for achieving it. Geopolitical issues within the bureaucratic system results in numerous problems, such as with procurement processes. There have been many pilot projects but implementation is difficult because so many interests are involved. As one respondent commented, decentralization

involves transferring power to others but no one will agree to give up their power. Any plans to restructure or decentralize the health bureaucracy need to take into consideration the Ministry of Health and Family Welfare's relationship with the growing role of NGOs and the private sector in health service delivery.

Even if simpler processes could be decentralized to a more local level, respondents commented that many managers at the upazila level and below do not currently have the education or training to manage these processes, nor to undertake needs assessments and write strategic, operational or implementation plans. Capacity needs to be built at the local level to ensure resources are managed properly. There has been little investment in developing the management skills of primary care staff, in a system where there are a large number of unfilled vacancies anyway. Procurement, supply and inventory systems have received continuing investment, for example through the World Bank's sector support projects, with the aim of computerizing systems and making them more efficient, and reducing opportunities for corruption.

Going forward, both Ministry of Health and Family Welfare insiders and sector experts want to see donors providing and funding technical assistance, such as supporting Ministry of Health and Family Welfare staff to develop the management and business skills needed to create realistic, accurate and smart implementation plans, and to be able to then put them into action. One positive example given by a respondent was from the early planning process for the Expanded Programme of Immunization. The programme has been a major success story in Bangladesh and serves as an example to other countries. In the early stages, donors took Government of Bangladesh officials to other countries to learn what had been achieved elsewhere in other health systems, and what management and public health technical assistance was needed. This particular experience proved to be very useful, enabling participants to apply it directly into the implementation process for the Expanded Programme of Immunization in Bangladesh.

One continuing issue within the PHC system in both the public and private sectors is the non-functioning nature of the referral system. Patients can consult with doctors at any level for even minor problems and will typically bypass community clinics to present themselves at an outpatients' department of a tertiary hospital. Patients do this because of the perceived, and often actual, poor quality of services at community clinics. Patients choose whichever is the most convenient facility for them, based on a mixture of factors including location, affordability and level of urgency.

The private sector has developed its own approach to increasing their numbers of patients through the widespread use of brokers. These are marketers and intermediaries whose job it is to generate business for private health facilities. Brokers hang around at the gates of public sector facilities, warning patients against using the services by telling them horror stories and then luring them away to private facilities instead. Brokers also act as gatekeepers within health facilities, charging patients to guarantee them an appointment with a doctor or to ensure they have clean sheets, or access to any number of the things that are needed during an appointment or a hospital stay (31). This practice serves to increase the out-of-pocket expenses incurred by the poor.

3.2 Primary health care in urban areas

Urban PHC is officially the responsibility of the Ministry of Local Government, Rural Development and Cooperatives, which functions separately from the Ministry of Health and Family Welfare but with reporting lines for interaction. The Ministry of Local Government, Rural Development and Cooperatives itself acknowledges that it does not have the resources or capacity to build an urban PHC system, or the capacity to provide oversight of the private health sector, which is the only provider of health services in urban areas, except for the outpatient services offered through government hospitals, dispensaries, and school-based health clinics. The absence of government PHC services in urban areas has necessarily been filled by a rapidly growing

private sector, including an extensive number of drug stores, and by patient use of tertiary hospitals. Drug stores are the first point of access for health care in urban areas, as they are for people in rural areas.

The lack of quality and affordable PHC services in urban areas, and the health care needs of a rapidly growing poor urban population, are recognized to some extent by the Ministry of Health and Family Welfare. The Third Health, Population and Nutrition Sector Development Programme (26) acknowledged the issues, stating that one of the new areas of focus would be to emphasize the mainstreaming of maternal, newborn and child health services in Bangladesh's urban slums through a separate operational plan. The main proposal was that the government's urban dispensaries would be expanded to provide PHC services, and these could act as referral points, directing people on to second- and third-level hospitals located in urban centres. However, there is little evidence that these goals are being operationalized or achieved. The plans lack details about how these services are to be delivered in urban areas, how DGHS and DGFP staff are to work together, and how they will collaborate with the Ministry of Local Government, Rural Development and Cooperatives as well as with the NGO and private sectors. It is also not clear how these goals are related to initiatives such as the Urban Primary Health Care Project, discussed below.

There have been initiatives to deliver urban primary health services through public–private partnerships, most notably through the Urban Primary Health Care Project, which started in 1998 with funding from the Asian Development Bank and is currently in its third phase, with additional financing planned for 2018–2023 (32). The Urban Primary Health Care Project operates in nine city corporations and four districts, with a catchment area of 10 million people. The project is dependent on donor funding from the Asian Development Bank with no realistic possibility that the Ministry of Local Government, Rural Development and Cooperatives, or any other body, will receive the increased allocation of funding from government to take over management of the mechanism. The Urban

Primary Health Care Project has led to the important development of Bangladesh's first National Urban Health Strategy (33), but this has not yet been taken up by the government as a call for action. The Urban Primary Health Care Project embraces pluralism in its management approach, with different stakeholders involved, and through its delivery model, which contracts out services to not-for-profit NGOs on a competitive basis. The health service delivery side of the Urban Primary Health Care Project is reportedly successful but the project has become known for its complicated governance structure, which has left implementing NGOs with little independence and having to work with government agencies who do not understand their motives and are distrustful of them.

3.3 Private sector and the role of NGOs

NGOs have made a major contribution to improving health in Bangladesh through their community-based networks of services and health workers, and leadership roles in national programmes. As a sector, NGOs continue to be one of the biggest providers of health care and social welfare programmes in the country. BRAC, for example, has led the way in reaching vulnerable populations and engaging communities in health care, taking health services to people's doorsteps through a massive network of female community health workers. One of the interesting things commonly noted about the extensive role that NGOs play in health care is that NGOs and the Ministry of Health and Family Welfare have not, on the whole, got in one another's way. The government recognizes the role that NGOs play and their ability to work with communities, and has occasionally sought the help of NGOs, such as asking BRAC for advice on the promotion of family planning. But there is a need for much greater collaboration in the pursuit of universal health coverage. Some of the key challenges towards this goal include the need to find mechanisms to improve and maintain quality, expand the range of essential services available, and identify sustainable ways to fund health services

without donor funding, while at the same time providing health care for the poorest.

There are examples of collaboration in the contracting out of health services, which include the Urban Primary Health Care Project referenced above, and the NGO Health Service Delivery Project.

3.3.1 NGO Health Service Delivery Project

The NGO Health Service Delivery Project provides an interesting insight into the Ministry of Health and Family Welfare's contracting relationship with NGOs, and the role of NGOs in PHC service delivery targeting the poor. Up until November 2017, the NGO Health Service Delivery Project network included 392 static clinics and 10 186 satellite clinics, operated between a network of 26 different NGOs. The clinics and the network are known as Surjer Hashi (Smiling Sun) clinics and were most recently led by Pathfinder International. The management framework included provisions that each clinic would work closely with their local community through community health workers and volunteers; local government upazila health and family planning officers would be involved in local level planning; the cold chain for clinics would be maintained by the government's health science unit; there would be an annual planning session between the Ministry of Health and Family Welfare and NGOs; and annual peer quality audits would be held with representatives from BRAC, the NGO Health Service Delivery Project, and Marie Stopes International. A key goal of the NGO Health Service Delivery Project was for the network to recover 40% of costs at the end of the project. Across Bangladesh, the Surjer Hashi network developed a strong brand that was well known and had a good reputation from users of their services.

Despite this considerable infrastructure and the contractual relationship with the Ministry of Health and Family Welfare, senior staff from the NGO Health Service Delivery Project felt that the ministry did not take NGOs seriously as service providers because it saw government as the only body having legitimacy to provide health services in Bangladesh. Project

staff, on the other hand, suggested that government should see NGOs as resources.

One of the key challenges facing the NGO health sector is that it is mostly donor dependent for funding, and some commentators have suggested that this dictates the kind of work that they do. The next phase for the Surjer Hashi health network will be developed through the Advancing Universal Health Coverage project, which specifically plans to address this and other issues.

3.3.2 Advancing Universal Health Coverage project 2017–2022

Starting in November 2017, the Advancing Universal Health Coverage project, funded at US\$ 19.7 million by the United States Agency for International Development (USAID), will develop the clinics that were part of the NGO Health Service Delivery Project but take them in a very new direction. Whilst still aiming to deliver quality health services, the project is tasked with transitioning the Surjer Hashi network of clinics into a self-sustaining private social enterprise. The goals are to improve the quality of health facilities and services through performance-linked funding mechanisms, expand the range and use of health services through partnerships with existing private providers, and develop sustainable financial systems to help expand coverage whilst trying to ensure equitable access to health services for the poorest.

This is the first project in Bangladesh to really explore these mechanisms and to do so with such a diverse range of stakeholders. The new models and ideas that the project will test could offer the health sector valuable lessons. Health programmes developed and run by the NGO and private sectors have been the source of considerable innovation, which has contributed to Bangladesh's health gains. There is a danger with these externally funded and externally managed programmes that parallel systems become established which duplicate existing efforts and run independently rather than working with government and other key health providers. The programme will certainly offer lessons for the rest of the health system.

4. Financing

4.1 Modalities for funding primary health care provision

The main health provider groups in Bangladesh – government, private for-profit sector and NGOs – are financed mostly from different sources of funds. Government health services are funded from tax income and foreign aid. NGOs are funded mostly by foreign aid and some out-of-pocket expenditure. Private for-profit health providers are funded by patients' out-of-pocket expenditure at the point of service.

The Government of Bangladesh's budget allocation for health amounts to just 3.5% of total GDP as a part of the government's total budget (for all government departments, such as education, defence, and foreign affairs). This is widely criticized as inadequate and compares unfavourably with other countries in the region. Only Pakistan and Myanmar have lower investments in health, at 2.6% and 2.3%, respectively (34). Of the budget allocated by the government to health to be spent by the Ministry of Health and Family Welfare on the Health, Population and Nutrition Sector Development Programme 2011–2016, 72.95% comes from financial contributions from the government and 27.05% from development partners (26). Looking at the total amount of money that is spent on health in the country (total health expenditure), the government's contribution is 23.1%, whilst 63.3% comes from individual out-of-pocket expenditure (27). Voluntary health insurance schemes make up about 5.25% of total health expenditure.

The Ministry of Health and Family Welfare allocates and disburses budgets for primary care to the upazila health complexes based on the number of inpatient beds, bed days and allocated staff size. Outpatient facilities in the upazila health complexes oversee PHC. In the public health sector, budgets are allocated in each fiscal year, allocated proportionately

to the Ministry of Health and Family Welfare and the Ministry of Local Government, Rural Development and Cooperatives. The third Health, Population and Nutrition Sector Development Programme (26) acknowledged the need to develop budgets based on “the extent of poverty, disease incidence, population” (page 3) and local topography, rather than the number of beds in a health facility, but there is no evidence that this more efficient practice for allocating funds has yet been started.

Prior to 2012, unspent funds were a major problem in the public health sector. This was recently been reported as resolved (27), but respondents suggested it was still an issue. Problems with underspending of budgets were blamed on the slowness with which departments spent down funds, and available data also provide evidence that planned health programmes are not getting implemented. The Ministry of Health and Family Welfare itself called the financial performance of the health sector “a conundrum” in the last Health, Population and Nutrition Sector Development Programme, acknowledging the contradiction of having unspent funds whilst simultaneously seeing services underfunded and health needs unmet (26).

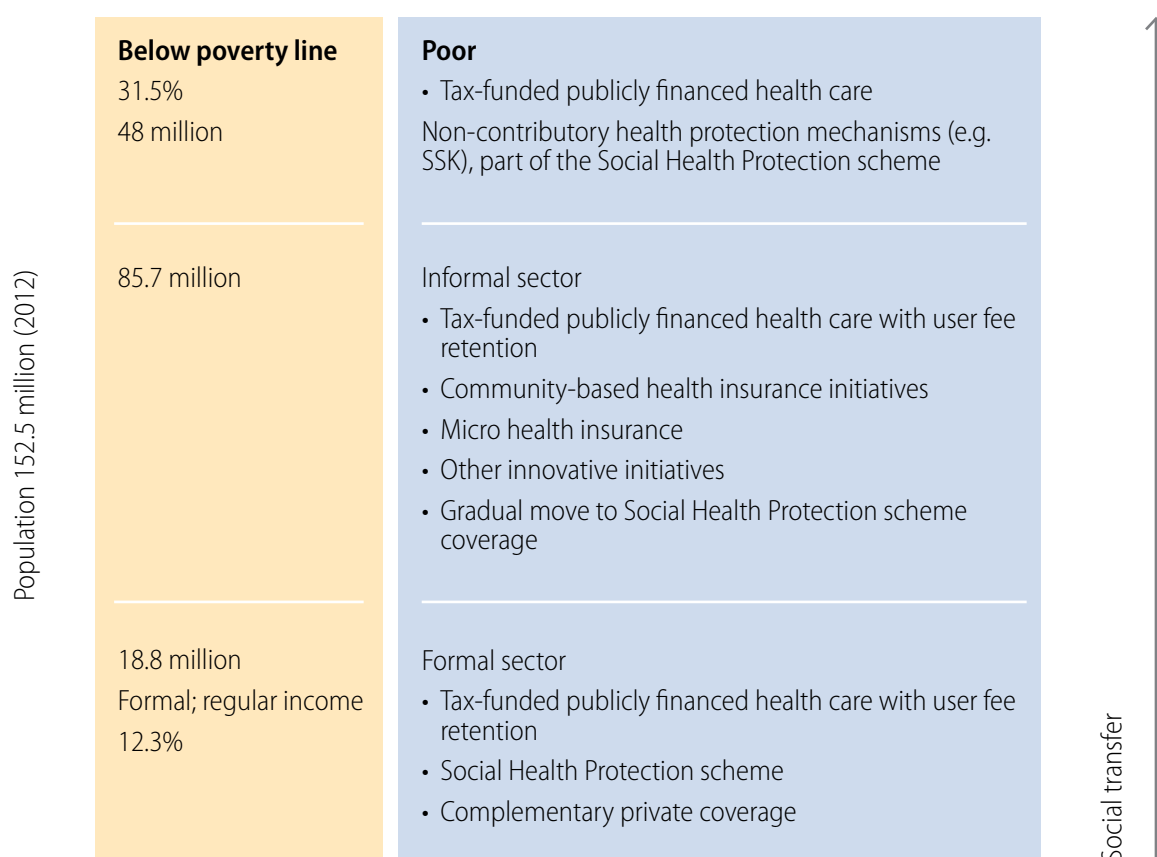
The Health Care Financing Strategy 2012–2032 was launched in 2012 by the Health Economics Unit of the DGHS to “deepen and broaden the resource base for health in the country” in order to address the large out-of-pocket expenditure, the absence of health insurance programmes, the inequitable health service coverage, especially for the poorest populations, and increasing disparities in health care access and affordability (34). Currently, the Health Economics Unit is running three pilots on health care financing: one investigating health care insurance schemes, one to improve maternal and child health-related demand-side financing, and one related to the provision of free health services in the upazila health complexes.

The proposed insurance programme, or social protection scheme, from the Health Economics Unit classifies the population between those living below the poverty line, estimated to be 31.5% of the population, and those working in the informal sector, which is the largest segment of the population (56%). These are people who have some income but whose work is informal and does not provide health coverage. The remaining 12.3% are those people working in the formal sector whose employment can provide, or has the potential to provide, private health insurance (Figure 4).

Whilst this model seems simple on paper, the likelihood of it being implemented in the near to medium term is low. Expert opinion is that people are not ready to pay for services they might not

use, especially the poorest, even if they already pay out of pocket for drugs or services at the point of need. Where the private sector is developing health insurance schemes, they are almost entirely directed at the middle class and not at the poorest and neediest in the country. The Sajida Foundation's Nirapotta (Safety Net) programme is an example of a health insurance scheme intended to help lower-income, lower middle-income, and middle-income households at a ratio of 20%, 20–40% and 40–60%, respectively. In reality, the programme has not been as successful as it had hoped in recruiting the poorest households. The experimental models and ideas being explored in the USAID-funded Advancing Universal Health Coverage project for achieving more equitable health coverage might offer lessons going forward.

Figure 4. Population coverage and proposed financial mechanisms of social protection scheme for health (Health Economics Unit, Ministry of Health and Family Welfare)



Sources: Bangladesh Population and Housing Census 2011 (Bangladesh Bureau of Statistics) for population below poverty line; and for size of formal sector, see Maligalig DS, Cuevas S, Rosario A. Informal employment in Bangladesh. ADB Economics Working Paper Series No. 155. Manila: Asian Development Bank; 2009.

One sector economist posed a key question – What socioeconomic groups in society are consuming most of the public health-funded benefits? It should be the poorest and those most in need, but this is thought not to be the case.

4.2 Role of donors and development partners

Despite reports that Bangladesh is dependent on aid to sustain its health care system, there was general consensus from government health officials, development partners and sector experts that the Ministry of Health and Family Welfare does not need to rely on development partners any more because the financial contribution from donors is relatively small in comparison with the ministry's own budget, even though there is a massive shortfall between the government's financing and the estimated cost of implementing the Health, Population and Nutrition Sector Development Programme. This implies that development partners no longer exert so much influence over policies and implementation. Some experts suggested that donors now focus instead on working with senior figures in the Ministry of Health and Family Welfare in order to influence decision-making. Or, as with the USAID Advancing Universal Health Coverage project, working outside the government system by funding market-based projects that explore experimental solutions for expanding health coverage.

Many sector representatives, inside and outside government, called for the Ministry of Health and Family Welfare to split its joint purchaser–provider role in health care. At the moment, the government is the main provider of health services, which it also

funds, but it is felt that the current system prevents accountability from service providers. In the past, this arrangement was normal, but health systems around the world have been moving towards separating these roles, which would involve the government contracting out the actual delivery of health services. Doing this in Bangladesh would, in theory, enable the Ministry of Health and Family Welfare to have greater control over health service providers to make them accountable for the services they offer. This would be done through various monitoring mechanisms, ultimately linking payment to performance. Whilst the health services provided by the NGO projects, discussed above, are often referred to as being contracted out, this is not really the case since it is donors who fund these projects. The Ministry of Health and Family Welfare is looking to develop a performance-based system amongst its health service providers, linking funding to the achievement of performance-based targets (26). The development of the Ministry of Health and Family Welfare's Health Information System would facilitate this possibility, but implementing performance-based targets in a system that is already suffering from an absentee workforce is unlikely without considerable management restructuring within the Ministry of Health and Family Welfare.

Official health plans, such as the Health, Population and Nutrition Sector Development Programme and other Ministry of Health and Family Welfare documents, demonstrate there is no shortage of honest analysis and innovative ideas in government, but the lack of implementation and adoption demonstrates the biggest challenge facing reformers. There is not enough will in government, and within different tiers, to bring about change.

5. Human resources for health HERE

Bangladesh continues to face a health workforce crisis at every level of the health system, but especially in primary care. This is characterized in public health facilities by a large number of unfilled vacancies, widespread absenteeism, especially of doctors, an inequitable skills mix, an inequitable distribution of health workers between rural and urban areas, and an absence of regulation to oversee the health workforce, including the growing private sector in urban areas. Across the entire health workforce of Bangladesh, figures from the DGHS in 2015 suggest that 60.27% of health workers belong to the private sector, 36.73% work within the Ministry of Health and Family Welfare, and 3% work in other ministries (35). However, these figures need to be treated with caution because of the practice of dualism, which is when doctors work simultaneously in both the public and private sectors.

The World Health Organization (WHO) recommends a skills mix ratio in a health workforce of approximately one doctor to three nurses to five paramedics (1 : 3 : 5 ratio). Whilst countries have valid reasons for varying the skills mix according to a country's health behaviours, Bangladesh's health workforce skills ratio differs markedly. Figures from 2017 show there were approximately two doctors to every nurse. No clear figure was available for the number of paramedics in the 2017 Health Bulletin but figures from 2013

show that the number was considerably lower than recommended and it is unlikely that these figures have changed dramatically in the period since 2013 (Table 5).

The figures in Table 5 need to be read as estimates because numbers for different health workforce groups are not reported consistently in public reports from year to year, and how the health workforce is counted also differs between some reports and even within reports. The *Bangladesh human resources for health country profile*, for example, states that the category of paramedic "should be taken to include other health professionals such as pharmacists, dentists, opticians, medical technologists, and biomedical engineers", but does not then use this definition for calculating the health workforce numbers in the tables of the same report (36). These inconsistencies make comparison between health workforce categories and changes in figures from year to year difficult and unreliable.

Table 6 shows that there is a considerable unfilled vacancy rate for sanctioned posts in the public sector. Current figures indicate that there is a 17.56% vacancy rate for doctors in the public sector, and a 17.47% vacancy rate for nurses.

The percentage of unfilled vacancies increases the further a facility is from the capital, Dhaka. Given that

Table 5. Bangladesh human resources for health: actual compared to WHO recommendations

Category	Total required, 1:3:5 ratio, 2021 (36)	Health workforce	Actual registered, 2017 (2)
Doctors	115 000	Registered MBBS + dentists with BDS + diploma medical assistants	107 303
Nurses	345 000	Registered BSc + diploma nurses	54 459
Doctor–nurse ratio 2 : 1			
Paramedics	575 000	Registered medical technologists and pharmacists, figure from 2013 (36)	22 117
	NA	Registered practitioners in alternative medicine, from 2013 data (36)	32 697
Total	1 035 000		216 576

by far the greater portion of the public health system is located in rural areas, these figures therefore reflect unfilled vacancies for rural areas.

There are several reasons why there are so many unfilled vacancies in the public sector. A centralized and bureaucratic recruitment process was cited as the main reason. It was suggested that vacancies might get filled more quickly if the recruitment process was decentralized and local managers were supported to manage recruitment. Upazila health complexes are intended to be the administrative heart of the primary care system, with responsibility for overseeing services at the community, union and upazila levels, but they have no authority to recruit health workers and very little decision-making or budgetary power. They can only implement the plans given to them with the resources allocated.

In addition to improving recruitment processes, rural postings need to be made more desirable and viable as a career option for health workers by providing financial incentives, better working conditions and equipment, and career development options so that health workers can support both a career and their family life. Absenteeism of doctors in public facilities is also a widespread problem. The reasons offered for why doctors do not report to work are mixed but include the same reasons thwarting recruitment, combined with the common practice of dualism whereby health workers take up jobs in both the public and private sector simultaneously.

Government doctors go absent from their public sector post to moonlight in the private sector and enhance their income. Recent research has shown the negative impact this has on the availability and quality of care in public sector health facilities and that the problem and its impact are systemic, requiring a system wide response (24, 37). Other types of health workers have even fewer incentives than doctors to stay in rural areas, but they also have far fewer options. Community-level health staff are known to be overburdened with work due to their involvement in a wide range of health-related field activities which leaves them juggling multiple demands on their time. This situation is made worse by absentee colleagues and vacant posts.

The Bangladesh Medical and Dental Council is the body that should regulate health staff and hold them accountable for absenteeism, but it has limited power to enforce rules because approval is needed from the Ministry of Health and Family Welfare to conduct investigations. Local health managers can establish their own investigatory processes which the Bangladesh Medical and Dental Council are required to follow. Many of the people interviewed for this report commented that lobbying on behalf of doctors by the Bangladesh Medical Association meant that penalties for absentee doctors were rarely enforced. Respondents cited this as an example of the power that doctors held within the health system, and of how this thwarts attempts to improve the quality and effectiveness of health care.

Table 6. Vacancies in the public sector under Ministry of Health and Family Welfare

Category	Sanctioned	Filled	Vacancy rate	Date & source
Doctors	24 989	20 602	17.56%	2017 (2)
Dentists	541	473	12.56%	2017 (2)
Nurses (diploma)	33 239	27 432	17.47%	2017 (2)
Medical assistants (SACMO)	5 368	3 886	27.6%	2017 (2)
Pharmacists	2 895	1 609	44.4%	2017 (2)
Medical technologists	6 428	5 105	20.6%	2013 (36)
Total	73 460	59 107	19.5% (14 353)	

Sector experts, even within government, noted that there is an overemphasis on doctors in the health system, and on recruiting doctors to health positions at the expense of other, perhaps more suitable, health workers such as nurses and technicians. The bias towards having doctors fill posts is the result of having so many doctors working as health administrators and planners in the Ministry of Health and Family Welfare, as well as the influence of the Bangladesh Medical Association, which opposes plans to strengthen other health cadres. The country's obsession with doctors, and associating them with quality health services, also feeds into the growing market for medical training and the expansion of private medical colleges, most of which are operating without regulation over the quality of the medical degrees they are offering.

There are a number of continuing initiatives to try to counter these problems, but not much progress is being made. One key area raised by respondents was the need to expand nursing education. The challenge is to elevate nursing as a respected profession with graduates being recognized as having high-level medical skills, whilst simultaneously trying to open up entry points into nursing at the lower levels to enable access and attract people without the traditional statutory level of education. Unfortunately, nurses currently hold very little status in Bangladesh. Nursing is seen as servile, dirty work that is only done by women. A huge, sustained effort is needed to address the ingrained sexism, and pervasive misogyny, that prevents nurses and the nursing professions being taken seriously. Getting better representation of nurses on all decision-making bodies would be a start. Foreign donors could play a particularly useful role in pushing to raise the status of the nursing profession and supporting initiatives to increase the number of nurses. The situation is even more perverse in light of Bangladesh's widely recognized health successes, which have come about as a result of community-based health care. The vast majority of this health care was delivered, and continues to be delivered, by front-line health

workers who are not doctors, but are community health workers and other health professionals.

Private sector health services have been growing rapidly in Bangladesh, especially in urban areas, in response to an ever-increasing demand that is not being met by the public sector. It is an extremely diverse part of the health sector, employing well over 60% of the health workforce, but little research has been done to understand the characteristics of this sector. The private health sector includes both for-profit private entities as well as non-profit NGO services. Most of the private sector consists of drug stores and informal services or traditional doctors. These flourish in poor urban areas because of their easy access and extended opening hours. People spoken to for this report commented that the private health sector has difficulty recruiting qualified health staff and also faces considerable shortages of human resources for health. Qualified nursing staff, for example, are in short supply and hard to recruit because providers cannot afford to pay them the rates paid at large hospitals. Recent research on the role of the private sector in urban areas found that only 36% of private providers had any formal academic medical qualifications (37). The limited capacity of regulatory agencies means it is rare for the owners of these services to be held accountable for operating health services with unqualified staff. Whilst the private sector very much needs to be regulated, this sector also needs support from government to help it improve the quality of its services, something private providers have themselves been asking for.

The traditional health care sector includes complementary and alternative medicine, such as ayurvedic practitioners and homeopaths, as well as unqualified practitioners offering traditional medicine or plain quackery. The complementary health sector is included in Ministry of Health and Family Welfare strategy documents, such as the Health, Population and Nutrition Sector Development Programme, and acknowledged for its role, but some sector experts also view the traditional health sector as marginalized in the current health system. A number of respondents highlighted the need to investigate

this sector to better understand its role and find ways to bring it into the mainstream. Whilst it may continue to play a role in rural areas, recent research conducted on private sector health providers in urban areas suggests that traditional practitioners are not as common as they once were (37).

Public sector health workers have expressed frustration with the corruption in the health system and bemoan the lack of any clear career development. The lack of opportunities for recognition and advancement contributes to staff being less motivated in their jobs, and encourages further moves towards working in the private sector. However, health workers who work in the for-profit or NGO health sector have even fewer options for career advancement and many want to join the public sector due to the steady pay, paid leave and longer-term benefits, such as a pension scheme. The lack of motivation in the public sector is a classic problem with unreformed bureaucracies, where job security is guaranteed, there is no internal market

and there are no mechanisms for performance measurement and accountability.

Within the Ministry of Health and Family Welfare, respondents talked about a crisis of leadership across all units. The right people are not employed in the right place. Doctors are promoted into ministry administrative positions but they are often ill suited to them. Whilst government positions come with attractive longer-term benefits, such as a good pension, doctors tend not to enjoy these administrative jobs because they come with much less freedom and remove the possibility of earning extra money through direct patient services. As doctors, they are trained to practice medicine, not to be administrators and managers in a health bureaucracy. They do not have the training or management skills to manage resources, plan for change, and get things done. The bureaucratic nature of the civil service means that getting anything done is difficult, and this environment wears down even the most motivated of people.

6. Planning and implementation

The government's current objectives for PHC (up to the current date) were presented in the fourth Health, Population and Nutrition Sector Programme 2017–2022. This is a comprehensive planning and strategy document developed with input from a range of stakeholders, but mostly by high-level representatives. It sets out the country's health and health system needs, articulates the strategies for improving and strengthening coverage and services and, importantly, highlights what the key challenges are to improvement. Aligned with the Health, Population and Nutrition Sector Development Programme, there are operational plans representing different priority areas for each of the 38 line directors overseeing the implementation of each plan.

Since 1998, public health services have officially been planned through a Sector-wide Approach (SWAp) led by the Ministry of Health and Family Welfare in partnership with donors, with funds being pooled for development programmes. Whilst the use of the SWAp suggests a consultative and collaborative planning procedure, and one supposed to provide safeguards and broader perspectives, the findings of this study suggest that planning and decision-making are still highly centralized. The official story of the health SWAp in Bangladesh is, therefore, different to common perceptions and is an area worth further investigation to better understand how the planning process works centrally and the extent to which the SWAp contributes to planning and decision-making. This is especially pertinent given the government's Joint Cooperation Strategy, signed in 2010 (38), and the continuing changes in the health sector.

The focus of PHC through the SWAp has been on delivering an essential package of health, population and nutrition services, particularly for vulnerable population groups, including poor women and children. Prior to the health SWAp, developments in the health sector were being implemented through 128 separate projects. The SWAp is, therefore, a major

step forward in attempting to coordinate health services, even if the process has proven difficult. (39, 40).

Whilst the SWAp is about ensuring sector-wide horizontal representation in health planning, there is still a gap in vertical representation in the Ministry of Health and Family Welfare planning processes. Planning in the ministry is conducted at a central level, with no involvement of PHC staff from the upazila level or below. It has been suggested that this results in plans that are not responsive to local health needs, or realistic about the capacity of local health staff and facilities. This is offered as a contributing reason for the failure of implementation to achieve the goals laid out in original plans.

Almost all of the people involved in central planning are doctors by training and come from the administrative career cadre. They have less understanding of the realities of priority health needs and services for primary care than either project staff or primary care staff. There have been calls for planning processes to include the expertise of a much broader cross-section of health sector professionals beyond the medical doctors working in administration; staff from the upazila level and below, for example, plus nursing staff, health programme experts, health services research experts, and social scientists. A broader group of people were reportedly involved in the most recent SWAp planning process but it remains to be seen whether this contributes to improvements in service and programme delivery.

A study on how to improve the use of evidence in policy-making in Bangladesh (and three other countries) found that decision-makers were not making sufficient use of evidence and current efforts at building the capacity of individuals and institutions were unlikely to achieve sustainable change (41). The paper recommended that institutional capacity needed to be built but in ways which focused on

the “norms and rules that govern decision-making”, in contrast to building organizational capacity which means strengthening infrastructural systems so organizations can operate more effectively and efficiently. The same study also found that there were few opportunities for researchers and policy-makers to meet and share evidence but when they did, policy-makers reported not being able to understand the data presented by researchers. This reflects badly on the SWAp structure, and also suggests that donors are either not aware of, or not promoting, best practices. Evidence-sharing mechanisms need to be built into the process, given their importance to policy formulation in the health, population and nutrition sector.

It was commonly noted by respondents that expertise and available data are not being used to their full extent. The government and the Ministry of Health and Family Welfare have access to many resources, tools and institutions that could help them to improve their planning of health services, decision-making, implementation and governance, including experts from the National Institute of Population Research and Training and the National Institute of Preventive and Social Medicine, as well as numerous experts in the research and implementation sectors, but they are underused. Thanks to the work of Professor Dr Abul Kalam Azad, there is now a Management Information System in Bangladesh that collects data from across the health system. Those data are available for the government and the Ministry of Health and Family Welfare to access, but again these resources are not being sufficiently utilized.

Some financial and decision-making powers have been transferred to line directors, but the managers who are responsible for managing the upazila

health complexes have no role in decision-making and planning. Instead, managers in upazila health complexes have to implement the decisions and plans made at a higher level. This also raises important questions about what happens to the data that are collected from the facilities at the upazila, union and community levels for monitoring purposes, and how they are used (or ignored) in planning. If there is indeed a disconnect, as suggested, between plans and real needs, then why is the evidence generated in upazila complexes not being used?

National surveys conducted in 1999, 2000 and 2003, and compared against a baseline from government surveys of user attitudes and experience of activities delivered under the Health and Population Sector Programme 1998–2003, found that services had actually retracted during and after the reform period. It was also found that unmet health needs had increased, the use of government services had decreased, and users were choosing to use unqualified private practitioners above government services (29). Only 10% of people surveyed rated the government health system as “good”, compared with 37% before the health sector reform started.

A final question raised by several respondents, which is relevant to governance as well as planning, is to consider how the Ministry of Health and Family Welfare and the health sector are represented at the national planning level (at cabinet level). The budget allocation for health is much lower than for other sectors and the health sector is not represented on the Executive Committee of the National Economic Council. Respondents made anecdotal comments about the health sector lacking sufficient power at national-level budget meetings to be able to argue for resources.

7. Regulation

The main regulatory bodies of the health sector are the Bangladesh Medical and Dental Council, the Bangladesh Nursing Council, the State Medical Faculty, the Bangladesh Board of Unani and Ayurvedic Systems of Medicine, and the Bangladesh Pharmacy Council.

Bangladesh has passed a comprehensive range of acts and ordinances to regulate both public and private health services, professional health education (including traditional ayurvedic health practices), and the manufacture and supply of pharmaceuticals. Directorates and departments exist in the Ministry of Health and Family Welfare to enforce these laws, but without the necessary resources and, in some cases, the motivation, these bodies are unable to fully meet their responsibilities. Some respondents also suggested that professional medical bodies, such as the Bangladesh Medical Association, have played a role in preventing enforcement of regulations against doctors who are absent or guilty of malpractice.

Medical education has seen a large expansion of private medical colleges in recent years because medical degrees are popular and extremely profitable for colleges. There is no monitoring of the quality of education being offered at these colleges and concerns have been expressed about the poor standard of medical graduates being produced. Postgraduate medical licensing exams and procedures should provide a mechanism to sift through the poorly trained medics but these exams are reportedly passed according to political connections rather than from having achieved a standard of excellence in the exams.

The lack of monitoring of the growth of private medical colleges, and the graduates they produce, also skews resource planning for the health workforce, adding to the already skewed ratio of medics compared with the very small number of nurses and technical workers, as outlined in section 5. Undoubtedly, the majority of graduates from private

medical colleges will work in the private sector, in urban areas, and in tertiary facilities. Few will take up posts in primary care.

Pharmaceuticals are regulated by the Directorate General of Drug Administration. Three main problems were identified relating to drug regulation. The first is that it is possible for anyone to purchase almost any drug without prescription in Bangladesh at one of the thousands of private drug stores across the country. Whilst this open access means that people can freely access drugs relatively cheaply, and this has contributed in some measure to Bangladesh's health gains, it also means that there is a massive problem with the overuse of drugs, especially of antibiotics, which is increasing the problem of drug resistance. Second, there is a continuing problem with counterfeit drugs being manufactured on an industrial scale and being sold without consumers being able to distinguish between real and counterfeit drugs. There have been some initiatives to introduce checking mechanisms at the point of sale, such as handheld devices to check for authentic barcodes, but these are pilots and conducted on a small scale. The third and main issue is the lack of capacity to regulate.

A Citizen Charter for health care was first published in 2007 with the purpose of ensuring citizens' participation and voice within the health sector (42). Also, community clinics were established with the intention that they should be managed through community committees whose membership is partly made up of local representatives from the communities they serve. It has been reported that few of these committees are functional, but it is difficult to know the extent to which any of these committees are actively fulfilling their intended purpose. However, even if all community committees were functional, there remains the question of how community perspectives are referred upwards to decision-makers, given that existing policy-making processes are currently highly centralized.

8. Health information systems and monitoring

There has been an impressive development and expansion of the health information system infrastructure in Bangladesh, all the way down to community clinic level. Until recently, the four main operational aspects of the Ministry of Health and Family Welfare – human resources, finance, logistics and health services – were represented independently at each facility level. In addition, data collection was paper based – each location filled out forms and sent these to upper levels where data were manually processed and analysed by statisticians, and then stored, unlikely to be retrieved again after initial analysis. The reports produced were not used in planning.

Professor Dr Abul Kalam Azad, currently the Director-General of the DGHS and Director of Management Information Systems under the Ministry of Health and Family Welfare, recognized the enormous potential of the data that were being collected across the public sector health system and how they could, and should, be used as a management tool for monitoring all aspects of health and health care throughout the health system and for planning evidence-based health services going forward.

Professor Azad successfully lobbied the government on the health information system project and managed to secure government funding to get it started. It has been a monumental step forward for the Ministry of Health and Family Welfare, and no external funds were used, which remains an impressive achievement. Now the system is established, external funds are being used to expand its use and functionality, and to develop other health information system and e-health initiatives, including online dashboards for management purposes, electronic patient records and a dedicated central human resource information system for the DGHS. The current and continuing challenge is to train the health workforce to use the system and use the data. Line directors are now required to present their data

and answer questions at monthly meetings, which is a major step forward in accountability. If data do not make sense, investigation is needed. A respondent told us that, on one occasion, a line director reported that the maternal mortality rate in their region was 500, which would have been extremely high. After some investigation, it turned out to be a mistake made by a statistician who did not understand the measurement for maternal mortality and had inserted the wrong number from a miscalculation.

The health information system initiative, which started as a pilot, can help ensure that decision-making is evidence based and can act as a catalyst for change as frequent evidence across a wider range of indicators starts to provide a clear picture of where the shortcomings in the system are. It is, therefore, a big step towards developing tighter monitoring and accountability of providers. The health information system programme and related initiatives could also help to better integrate operations and data between the DGHS and DGFP, but there are considerable challenges to getting staff to adopt new processes, such as data collection procedures, to ensure consistency and quality of data collected across the PHC network. Overall, local staff do not have the training and experience to manage the procedures and ensure quality, but training efforts are under way. It is not just at the data collection end of the information system where challenges lie; equally large challenges lie in getting planners and policy-makers to use the data for their work to ensure strategies and plans are evidence based.

The development of the Health Information System demonstrates how change can be achieved in a cumbersome health bureaucracy when there is a determined and charismatic person leading the way. But there is still much to be done. The Ministry of Health and Family Welfare, and its various departments, need to improve the consistency of how health and health system indicators are

reported in periodic publications such as annual or biannual reports.

The government is not the only health provider in Bangladesh and the work done by Professor Azad's programme needs to be expanded to the rest of the health sector so that the collection of health information can be coordinated for planning and policy across providers. Managers from the Surjer Hashi (Smiling Sun) network of health clinics talked proudly about the health information system they

had developed across their network, but outsiders criticized the initiative because it had established a parallel health information system running separately to that developed by the Ministry of Health and Family Welfare. The new incarnation of the Smiling Sun programme – the Advancing Universal Health Coverage project – is a perfect opportunity for the government and the NGO sector to collaborate and share expertise in this area, which is so vital for monitoring and accountability.

9. Research needs

Staff within the Ministry of Health and Family Welfare (in collaboration with colleagues in the research, donor and NGO communities) have developed a series of strategies that acknowledge and address the key challenges that need to be overcome to strengthen the health system. There is no shortage of critical or innovative thinking behind most of these strategies; the biggest puzzle is why more change does not happen. The third and fourth Health, Population and Nutrition Sector Development Programmes (2011–2016, and 2017–2022, respectively) and other policy documents from the Ministry of Health and Family Welfare provide clear insights into problems in the system, but these insights, and the ideas that are put into strategies, are not being translated into action and implementation. The inability to bring about the reforms that are needed, or to motivate cadres of health administrators and health staff to change, are the big research and capacity gaps that are often discussed but still need to be more clearly understood.

A recent study by Hawkes and colleagues (41) suggests that there is a need to better understand and address the norms and rules around how decision-making is conducted within the Ministry of Health and Family Welfare and across government, rather than only focusing on strengthening the operational systems and individual capacity of personnel. This requires understanding how culture and politicization influences the behaviour of health administrators and officials at different levels of the health system. Politicization across the health sector is as pervasive as graft, and interconnected with it also. There is a need to understand what factors influence the motivation of the health workforce in the three tiers of the government PHC system, and what incentives, beyond money, could work to motivate people to do their work and participate in reform. It is noticeable that the research, evaluation and programmatic literature on health system strengthening in Bangladesh and other LMICs

makes little, if any, use of evidence and theories from organizational psychology and management in health services. Yet these important fields underpin research and practice into health care organization and reform in high income countries. This is a gap which undermines the investments being made by both the MoHFW and international donors. The absence reflects the different approaches taken by those people working in health system strengthening in low-income countries, who all tend to come from university departments or organizations which label their work “international health” and who tend to be trained first in public health-related topics rather than in health services and organizational management. Bringing these two groups together to share expertise would be of great benefit to both sides.

Leadership is often lauded as the key factor for successful change programmes but a few individuals cannot be expected to be responsible for sector-wide adoption of innovations, and for bringing about, embedding, and sustaining reform. It would be useful to understand the factors that influence and motivate administrators in the Ministry of Health and Family Welfare and also health workers in the three PHC tiers. Within the ministry, it would be useful to explore the impact of previous interventions that have sought to strengthen health sector governance, including any capacity-building programmes and trainings at different levels, looking at their goals, the approaches taken, and what has worked, or not, and why. There is a need to better understand what has been tried previously before further ideas for reforming governance are planned and implemented. For health workers in the PHC system, it would be useful to know if there are any incentives that might motivate staff to stay in their jobs and do them well, other than money.

A better understanding is needed of how innovations that have demonstrated some traction in the health

system are diffused and adopted, such as Professor Azad's health information management programme. In-depth analytical case studies of (and with) recognized change-makers, which follow through and analyse their experiences of trying to introduce innovations and get them adopted and scaled up, would prove illuminating. One small current study is the work being done to promote the adoption and management of the *Urban health atlas* (43).

Related to this, research is needed on the influence and role of medical organizations in and on regulation. Bodies such as the Bangladesh Medical Association are extremely powerful in their ability to influence and prevent any proposed changes that may affect the standing of their members. This presents a real obstacle for enforcement of quality standards and regulations by the Bangladesh Medical and Dental Council, which also needs more resources and power to do its job.

In the Bangladesh context, PHC is narrowly defined and does not take into consideration the different underlying determinants of health, which could be targeted in interventions and achieve a greater impact on health outcomes than the provision of medical services alone. This is something that the NGO sector, and BRAC in particular, excels at. It might prove useful to explore the capacity of different

ministries to contribute to improving the quality and range of PHC services to suit current health needs, and increase awareness of these services amongst communities.

Many NGOs have been exploring how to use the traditional health sector and other alternative health cadres to manage PHC at the point of first contact to satisfy patients' health needs whilst providing these practitioners with a formal and recognized role in the health sector that could offer career development. This is not a new topic but little is known about the feasibility of this model.

Whilst we know what public health facilities exist and where across the country, we do not have a clear idea of what private health facilities exist in the country, where they are located, what services they offer, and who uses them. Such a survey would provide important information for planning purposes. The National Institute of Population Research and Training conducts a Health Facility Survey (44) of both public and private facilities in the country, but this only reports information about the preventive and curative treatments available. It does not provide information on how many private facilities are available, where they are located, the health personnel involved, what services they offer or who uses them.

10. Ways forward

There is some consensus that strengthening PHC in Bangladesh requires the government to build on and further enable those strengths that have pushed health care forward in the country: leveraging the NGO sector, which leads the way in community-based initiatives and reach; leveraging the private sector as a resource, but one that needs coordination and regulation; and continuing to push with focused initiatives that nudge the Ministry of Health and Family Welfare into reform and the adoption of new practices, such as with the health information system programme. But this leaves the question of what the main role of the government should be in health service delivery. Is the goal still for government to be the main provider of PHC services and how realistic is this? The government's health infrastructure in rural areas is considerable, but this infrastructure is struggling from a lack of investment in its facilities, in its health workers and in improving the quality of its services. At the same time, Bangladesh is becoming increasingly urban, but the government's role in establishing a PHC infrastructure to deliver services in urban areas is uncertain and unlikely. Most commentators want to see the government considerably strengthen and fulfil its governance role in overseeing and monitoring all aspects of health services, and coordinating critical strategic developments, especially around finding solutions to how health care is to be financed. Regarding the non-State sector, both the NGO and private sectors could be given specific tasks that are measurable, whilst developing guidelines and operational plans to help the government, donors, NGOs and the private sector work in a more coordinated manner.

Many sector experts have been calling for greater inter-ministry and intra-ministry coordination and collaboration for a long time, especially between the DGHS and DGFP, and between the Ministry of Health and Family Welfare and the Ministry of Local Government, Rural Development and Cooperatives, which is responsible for urban health services. Some

sector experts would like to see wholesale reform of the Ministry of Health and Family Welfare to modernize its structure and practices and create a ministry that is fit to guide and govern the development of a modern PHC system in Bangladesh. But it is also acknowledged that this level of restructuring is unlikely to happen in the current political climate, however dynamic the rest of the health sector is. Any serious changes within the Ministry of Health and Family Welfare can only be brought about by decisions at the highest level of government, but these are people whose interests are mainly with political power, rather than with bureaucratic reform and the health care of the poorest.

A starting point for reform would be to ensure that a much wider range of health personnel are included in health planning: women and men with an understanding and experience of PHC needs and services at community, union and upazila levels, and who can represent different qualifications and areas of expertise. Increasing the representation of women in management and decision-making within the Ministry of Health and Family Welfare should be a priority, along with serious efforts to mainstream and institutionalize gender equality to improve understanding, thinking and practices in the operations of units and departments across the ministry.

Similarly, there is a need to focus on expanding and developing the non-doctor health cadres to meet the immediate PHC needs of people in Bangladesh, and provide these professions with strong career plans for further growth. Nurses and medical technicians are two key professional groups that need investment and augmentation.

The referral system at the primary care level needs to be strengthened. This requires training of staff and investing in primary care facilities so that the public trusts the quality of services, and chooses

to use primary facilities rather than going direct to drug stores or presenting at tertiary-level facilities. Improving the referral system also requires better communication between staff at different levels of facilities. Union health facilities are intended to act as referral hubs but many of their buildings and facilities are reported to be non-functional, with services not properly maintained, and staff absent.

The current dynamic climate around health care in Bangladesh offers opportunities to explore the possibilities for more equitable financing mechanisms, especially for the poorest. A more inclusive and equitable health system will never be achieved whilst out-of-pocket expenditure on health is as high as 67%, pushing an estimated 5 million people into poverty each year (6). There is a need to increase public awareness and understanding about the possibilities of health insurance but this needs to be matched with insurance schemes that

make sense for people. If better-quality services are available then people might be more interested in using health insurance schemes. This is an area where a bold and innovative approach is needed. There have been a number of civil society efforts around promoting universal health coverage through health insurance. New partnership arrangements currently being explored through the USAID Advancing Universal Health Coverage project are experimental but can offer lessons for what might be possible. If the expertise of people in the Ministry of Health and Family Welfare, such as the Health Economics Unit of the DGHS, can be brought together with people who have a deep understanding of realities on the ground, as well as innovators from the NGO and private sectors, it is hard not to dream that good things will happen – but stronger leadership is needed, with the supported authority to direct and coordinate these efforts.

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This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, as part of the Primary Health Care Systems (PRIMASYS) initiative. PRIMASYS is funded by the Bill & Melinda Gates Foundation, and aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance. The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries.



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