

PRIMARY CARE SYSTEMS PROFILES & PERFORMANCE (PRIMASYS)

Bangladesh Case Study

Overview

Bangladesh has an estimated population of 160 million people.^{1,2} The rural population remains the largest population group in the country but is expected to peak at 105 million (66.5%) in 2016, and decline thereafter. Whereas, the urban population is rapidly growing; estimated at 54 million people (33.5%) it is expected to increase by more than 50% to 79.5 million by 2028. By 2039, the majority of Bangladesh citizens will be urban dweller.³ Currently, one third of the urban population are thought to live in slum settlements, and comprise the bulk of the lowest two wealth quintiles.

The top five main causes of death compiled from reports from all public hospitals in Bangladesh and categorised according to the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD 10)⁴ are given as⁵: diseases of the circulatory system, perinatal conditions, diseases of the respiratory system, external causes⁶, and injury and poisoning, and diseases

of the nervous system. Maternal mortality is 176 per 100 000 live births⁷, infant mortality is 31 per 1000 live births⁸ and under-5 mortality lies at 38 per 1000 live births, according to 2015 data.⁹

Bangladesh is ranked among the poorest countries in the world with a gross domestic product (GDP) per capita of US\$ 1211.¹⁰ per year and an income/wealth inequality expressed as the Gini coefficient of 32.1.¹¹ Economic indicators show the total health expenditure as a proportion of GDP is 3%¹², and that 23.1% of this total is derived from public health spending. Almost two thirds of total health spending comes from out-of-pocket-payments.¹

As of 2006, there were 0.14 nurses and 0.26 doctors registered per 1000 population, with gross inequity in rural–urban distribution, both in terms of numbers and range of skills.¹³

1 Government of Bangladesh (2015). *Health Bulletin 2015*. Ministry of Health and Family Welfare (MoHFW), Dhaka.

2 Calculation based on a 1.37% population growth rate and 2011 national census data.

3 United Nations, Department of Economic and Social Affairs, Population Division (2015). *World Urbanization Prospects: The 2014 Revision*, (ST/ESA/SER.A/366). New York.

4 WHO. (1992). *International Statistical Classification of Diseases and Related Health Problems 10th Revision*. Geneva. Available at: <http://apps.who.int/classifications/icd10/browse/2010/en>

5 Government of Bangladesh (2014). *Health Bulletin 2014*. Ministry of Health and Family Welfare (MoHFW), Dhaka.

6 External causes in ICD 10 (Ch XX) refers to a wide range of accidental injuries from road transport, machinery, fire, drowning, animals, and forces of nature. This classification is intended to be used in addition to a classification of 'Injury and poisoning' (Ch XIX). The fact that these two categories come 4th and 5th in the list of causes of death suggests perhaps that this linking has not been made or hospitals have used the classifications inconsistently. It also suggests the possibility that these two categories contain duplicate records for the same deaths. If the two categories do not contain duplicate death statistics they serve to highlight the large number of deaths from injury. Combining these figures together places injuries as the second most common cause of death.

7 The World Bank. World Development Indicators (2015). *Maternal mortality ratio (modeled estimate, per 100,000 live births)*. [Data file]. Retrieved February 8, 2016 from <http://data.worldbank.org/indicator/SH.STA.MMRT>

8 The World Bank. World Development Indicators (2015). *Mortality rate, infant (per 1,000 live births)*. [Data file]. Retrieved February 8, 2016 from <http://data.worldbank.org/indicator/SP.DYN.IMRT.IN>

9 The World Bank. World Development Indicators (2015). *Mortality rate, under-5 (per 1,000 live births)*. [Data file]. Retrieved February 8, 2016 from <http://data.worldbank.org/indicator/SH.DYN.MORT>

10 The World Bank. World Development Indicators (2015). *Bangladesh GDP per capita*. [Data file]. Retrieved from <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=BD>

11 UNDP (United Nations Development Programme). (2015). *Human development report 2015: Work for human development*. New York.

12 2012 data from: Government of Bangladesh (2015). *Bangladesh National Health Accounts 1997-2012*. Research Paper no.42a, Dhaka: Health Economics Unit, Ministry of Health and Family Welfare. Dhaka.

13 WHO 2006. *World health report 2006: working together for health*. Geneva.

Table 1 Key demographic, macroeconomic and health indicators of Bangladesh

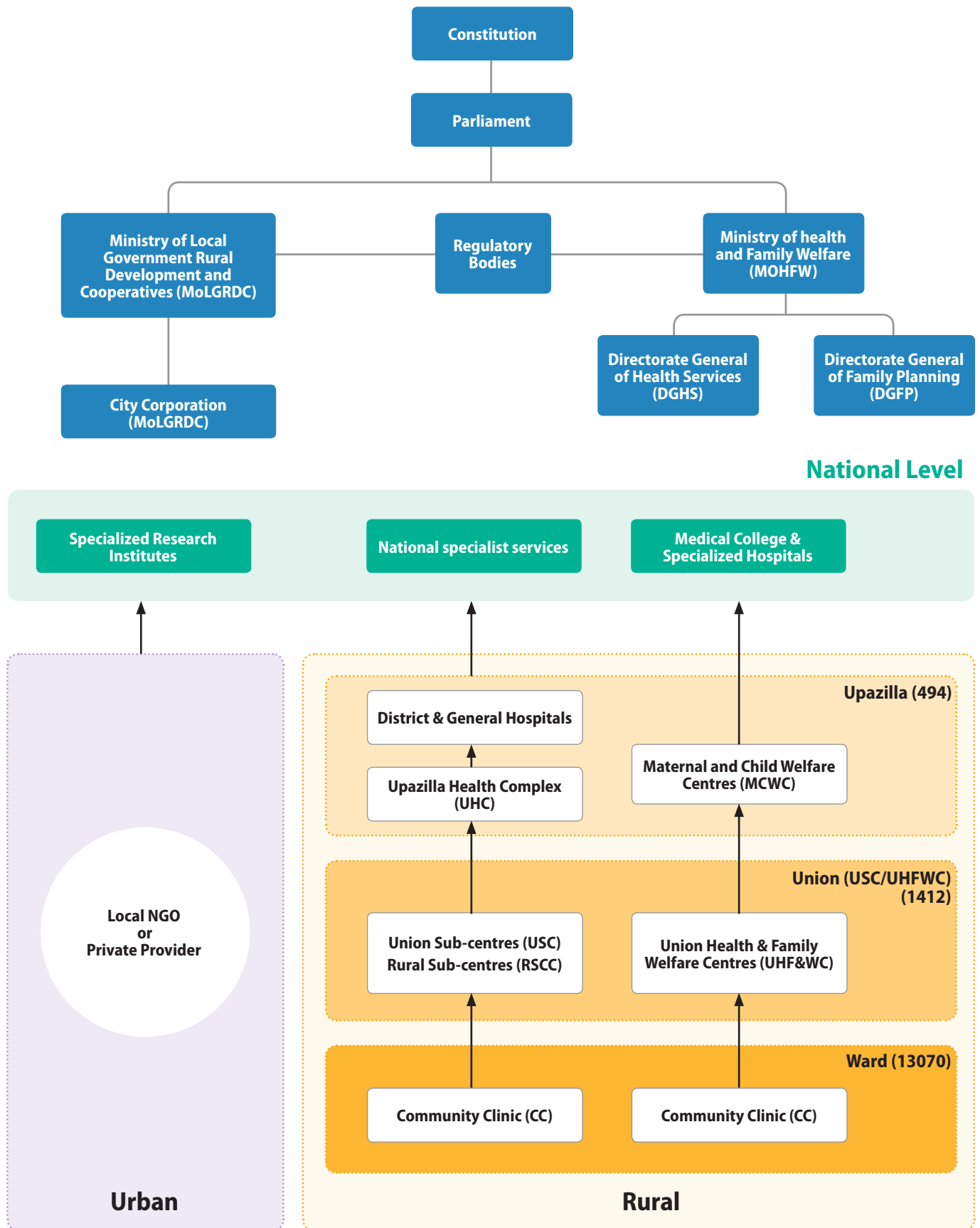
	Results	Source of information
Total population of country	159.71m	Bangladesh Health Bulletin 2015 ¹
Sex ratio: male/female	1.026	Bangladesh Health Bulletin 2015 ¹
Population growth rate	1.37%	Bangladesh Health Bulletin 2015 ¹
Population density (people/sq km)	1108	World Statistics Pocket Book Series 2015 ¹⁴
Distribution of population (rural/urban)	Rural: 66.5% Urban: 33.5%	World Urbanization Prospects: 2014 Revision. ³
GDP per capita US\$	1211.7	The World Bank. World Development Indicators (2015). <i>Bangladesh GDP per capita</i> . [Data file]. Retrieved from http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=BD
Income or wealth inequality (Gini coefficient)	32.1	Human Development Report 2015 ⁹
Life expectancy at birth	Average: 71.6 (male: 70.4, female: 72.9)	Figure for 2014 taken from the UN Human Development Report 2015 ⁹
Top five main causes of death (ICD - 10 classification)	Diseases of the circulatory system (33.2%) Perinatal conditions (15.93%) Diseases of the respiratory system (13.9%) External causes (injuries) (11.02%) Injury & poisoning (9.26%) Diseases of the nervous system (3.89%)	Bangladesh Health Bulletin 2014. Figures based on combined reports from all public hospitals in Bangladesh and classified according to ICD 10.
Total health expenditure as proportion of GDP	3%	2012 data from: Government of Bangladesh (2015). <i>Bangladesh National Health Accounts 1997–2012</i> . Research Paper no.42a, Dhaka: Health Economics Unit, Ministry of Health and Family Welfare. Dhaka.
Public expenditure on health as proportion of total health expenditure	23.1%	As above, p21.
Out-of-pocket payments as proportion of total health expenditure	63.3%	As above, p21.
Voluntary health insurance as proportion of total health expenditure	0.1%	Government of Bangladesh (2015). <i>Bangladesh National Health Accounts 1997–2012</i> . Research Paper no.42a, Dhaka: Health Economics Unit, Ministry of Health and Family Welfare. Dhaka, p21, Table 7.
Proportion of households experiencing catastrophic health expenditure	9%	Rahman MM et al. (2013). ¹⁵
Number of doctors per 1000 population	0.26	WHO 2006. <i>World health report 2006: working together for health</i> . Geneva.
Number of nurses per 1000 population	0.14	WHO 2006. <i>World health report 2006: working together for health</i> . Geneva.
Estimated number of community health workers per 1000 population	1.37	El Arifeen, S., Christou, A., Reichenbach, L., Osman, F. A., Azad, K., Islam, K. S., Ahmed, F., Perry, H. and Peters, D. H. (2013). Community-based approaches and partnerships: innovations in health-service delivery in Bangladesh. <i>The Lancet</i> , 382, 2012–2026. DOI: http://dx.doi.org/10.1016/S0140-6736(13)62149-2
Relative geographical distribution (rural/urban) of doctors/nurses/ community health workers (CHWs), respectively	Doctors: 1.1 /18.2 Nurses: 0.8 / 5.8 CHWs: Govt - 3.6/2, NGO - 49.5/10.1	Ahmed SM et al. ¹⁶ Figures are per 10,000 population.
Proportion of informal providers, and practitioners of traditional complementary and alternative medicine (TCAM), out of the total health care workforce	Semi-qualified (allopathic):4.29% Unqualified (allopathic): 2.39% Traditional: 6.42% Homeopath: 0.59% Others: 0.17%	Ahmed SM et al. ¹³
Maternal mortality (per 100 000 live births)	176	The World Bank. World Development Indicators (2015). <i>Maternal mortality ratio (modeled estimate, per 100,000 live births)</i> . [Data file]. Retrieved February 8, 2016 from http://data.worldbank.org/indicator/SH.STA.MMRT
Infant mortality (per 1000 live births)	31	The World Bank. World Development Indicators (2015). <i>Mortality rate, infant (per 1,000 live births)</i> . [Data file]. Retrieved February 8, 2016 from http://data.worldbank.org/indicator/SP.DYN.IMRT.IN
Under-5 mortality (per 1000 live births)	38	The World Bank. World Development Indicators (2015). <i>Mortality rate, under-5 (per 1,000 live births)</i> . [Data file]. Retrieved February 8, 2016 from http://data.worldbank.org/indicator/SH.DYN.MORT

14 UN Department of Economics and Social Affairs (2015). World Statistics Pocket Book Series 2015. Series V, No. 39. New York.

15 Rahman MM et al. (2013). Health-related financial catastrophe, inequality and chronic illness in Bangladesh. *PLoS One*. 8(2):e56873. (doi: 10.1371/journal.pone.0056873).

16 Ahmed SM et al. The health workforce crisis in Bangladesh: shortage, inappropriate skill mix, and inequitable distribution. *Human Resources for Health*. 2011; 9:3. (doi: 10.1186/1478-4491-9-3).

Governance and health service architecture



Despite progress in primary health care (PHC) since the *Alma Ata Declaration* in 1978, challenges to the provision of primary health care in Bangladesh still remain. Although the Government takes lead responsibility for national policy, planning and decision making for all health care and is – through the Ministry of Health and Family Welfare (MoHFW) – the major health service provider, a PHC structure is still non-existent in urban areas. The health system is pluralistic and weak in terms of cross-sectoral operation. Government PHC services are administered in rural areas through the ‘Upazila health complex’, which consists of three tiers: at sub-district level (the Upazila level), the union level, and the ward or community level. These three lower tiers of the health system are intended to reach Bangladesh’s estimated 105 million people living in rural areas, and provide an upward referral system towards more specialised treatment. Every Upazila complex is required to provide the same suite of services, with their budget allocation based on patient bed numbers in their health facilities, rather than local needs at the community level, including usage and geographical particularities. In reality, there are uncertainties about how functional community clinics actually are in offering these services, particularly in light of limited staffing and expertise, drug availability, and significant evidence of low usage.^{17,18,19}

The lack of unity between two distinct branches of health services within the MoHFW – the Directorate General of Health Services (DGHS) and the Directorate General of Family Planning (DGFP) – causes a number

of problems within the public health system. Despite advocacy for decentralisation and greater flexibility for PHC-level managers to manage resources based on local needs, staff at lower levels still lack adequate capacity and managerial skills. In addition, the referral system is continually undermined by patients’ ability to consult with doctors at any level, and for any condition, reflecting ongoing referral challenges in both the public and private sectors.

The Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC) is responsible for urban PHC. However, the MoLGRDC operates largely separately from the MoHFW, and does not have the resources or capacity to build an urban PHC system, leaving a huge gap in PHC infrastructure and services in the rapidly expanding urban areas of the country.

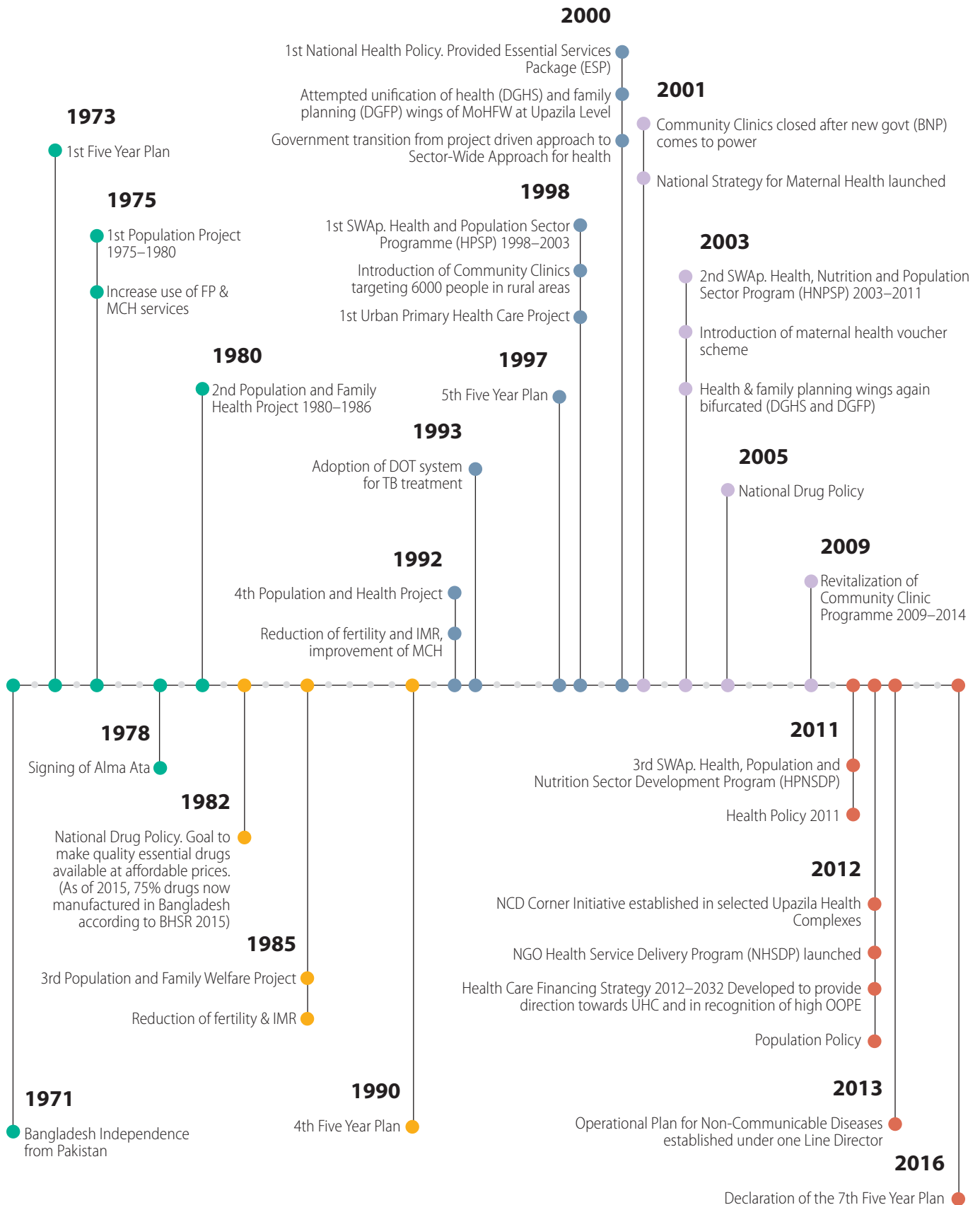
Some gaps have been filled by a growing private sector, including through the use of unregulated pharmacies as a first point of access, and by direct use of tertiary facilities by patients. There have been some initiatives aimed at delivering PHC services through public–private partnerships, most notably 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.

17 World Health Organization (2015). *Bangladesh Health System Review 2015*. Health Systems in Transition, Vol.5 No.3. Geneva.

18 NIPOORT (2013). *Utilization of community clinic*. MoHFW, Dhaka.

19 Cockcroft, A., Milne, D., & Andersson, N. (2004). *Bangladesh Health and Population Sector Programme, 1998-2003: The Third Service Delivery Survey, 2003: Final Report*. CIET Canada and Ministry of Health and Family Welfare, Government of the People’s Republic of Bangladesh. Retrieved February 04, 2016 from http://www.ciet.org/_documents/200622495850.pdf

Timeline of relevant policies to PHC



** Announcement that the MoHFW will be split into two ministries, in order to generate new posts for senior civil servants who have been waiting years for promotions. This reverses years of efforts to move towards a merger of Health Services and Family Planning to streamline services and make more accountable. The creation of two ministries will inevitably cost considerable amounts of money which could be spent on improving services. This decision sums up all the challenges of getting things done for improving PHC in Bangladesh.

Health care financing

The Government budget allocation for health amounts to 3.5% of total GDP. This is widely criticised as inadequate and does not compare favourably with other countries in the region. Only Pakistan and Myanmar have lower investments in health, at 2.6% and 2.3% respectively. As a proportion of total health expenditure (THE) the Government contribution represents 26%, while individual out-of-pocket expenditure account for 64%. Other resources, including voluntary health insurance schemes and charitable funding, jointly make up about 8% of THE.²⁰

Regarding financing data specific to primary health care, the MoHFW spent BDT10.4 billion (US\$) on public health facilities at the Upazila level in 2007, which was 24.1% of the total MoHFW's expenditure.²¹

Expenditure in private/nongovernmental hospitals in 2007 was BDT 23.4 billion (US\$339 million), which constitutes just over half (54.5%) of total national spending on hospital services. In 2007, MOHFW allocated BDT 3.7 billion (US\$54 million) to district and general hospitals across the country.

Human resources for health

Bangladesh continues to face a health workforce crisis at every level of the health system, but especially in PHC. This crisis is characterised in public health facilities by a large number of unfilled vacancies, widespread absenteeism (especially of doctors), inequitable skill mix and health worker distribution in rural and urban areas, a growing private sector in urban areas, and a significant absence of regulatory implementation. Latest available health workforce data suggest 60% of health workers are located in the private sector, 36% are employed by the MoHFW, and other ministries account for about 4%.²² However, these figures need to be treated with caution

because many doctors work across both the public and private sectors.

Figures from 2012 indicate there are 23 doctors for every 1.5 nurses and every 1 paramedic. This suggests far too few nurses and paramedics.²³ The Bangladesh health workforce is not simply skewed towards doctors, figures from the MoHFW also show that there are considerable unfilled vacancies for public sector posts, as well as widespread absenteeism of doctors in public facilities. Various causes have been proposed, including a lack of financial and career incentives, poor working conditions, and non-functioning accountability and regulatory mechanisms resulting in no penalties for absentee staff.

An overemphasis on doctors in the health system and on recruiting doctors to health positions at the expense of other – perhaps more essential – health workers, such as nurses and technicians. The preoccupation to have doctors fill posts is most likely the result of having many physicians working as health administrators and planners in the MoHFW, and the influence of the Bangladesh Medical Council, which opposes plans to strengthen other health cadres. The country's enthusiasm for doctors, and associating them with quality health services, also feeds into the growing market for medical training and the expansion of private medical colleges, which are also largely unregulated.

Planning and implementation

Since 1998, public health services have been officially planned through a sector-wide approach (SWAp) led by the MoHFW in partnership with donors, and with funds being pooled for development programmes. The focus of PHC, as planned 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 implemented through 128 separate projects. The SWAp is, therefore, a major step forward in attempting

20 Government of Bangladesh (2012). *Expanding Social Protection for health: Towards Universal Coverage. Healthcare Financing Strategy 2012–2023*. Ministry of Health and Family Welfare, Dhaka. (http://p4h-network.net/wp-content/uploads/2013/10/2012_10_HCFS_Bangladesh_2012-2032.pdf, accessed 30 August 2016).

21 Government of Bangladesh (2010). *Bangladesh National Health Accounts 1997–2007*. Research Paper no.39a, Dhaka: Health Economics Unit, Ministry of Health and Family Welfare. Dhaka, p3.

22 Government of Bangladesh (2011). *Human Resources Data Sheet 2011*. Ministry of Health and Family Welfare, Human Resources Unit, Dhaka.

23 Human Resources for Health Country Profile Bangladesh. Dhaka: Human Resources Management Unit, Ministry of Health and Family Welfare; 2013. (http://www.searo.who.int/bangladesh/publications/hrh_pofile1.pdf?ua=1, accessed 30 August 2016).

to coordinate health services, even though the process has proven difficult.²⁴

Even as the SWAp promotes sector-wide horizontal representation in health planning, there is nevertheless a remaining gap in vertical representation in the MoHFW planning processes. Planning in the MoHFW 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 inevitably leads to implementation that does not achieve the goals laid out in original plans.

Studies on how to improve the use of evidence in policy-making in Bangladesh have found that evidence is not being used by decision-makers but, also, that building the general capacity of individuals and institutions will not achieve a sustainable change.²⁵ Institutional capacity must be built focusing on the norms and rules that govern decision-making, in contrast to organizational capacity, which is about strengthening systems so organizations can operate more effectively and efficiently.

Regulatory process

A comprehensive range of acts have been approved to establish frameworks for professional health education and manufacture/supply of pharmaceuticals in both the public and private sectors. However, without adequate resources and political will, relevant bodies are generally unable to fully meet their responsibilities.

The major problem with medicines regulation, for example, is the possibility for patients to purchase almost any medicine, without prescription, at any of the thousands of private pharmacies across the country. This leads to the inappropriate and misuse of medicines, particularly antibiotics, exacerbating the problem of drug

resistance. Counterfeit medicines are also manufactured and sold on a large scale in Bangladesh.

A *Citizen's Charter* for health care was published in 2007, which includes the unrealised ambition for community clinics to appoint local committees.

Monitoring and information

The Government recently approved the establishment of a health management information system (HMIS) using exclusive national funding. The HMIS initiative will eventually help ensure that decision-making is evidence-based. However, local staff need better training to manage the procedures and ensure quality. In addition to data collection challenges, significant barriers lie in getting planners and policy-makers to incorporate data into decision-making. Line managers are required to present their facility/department data and engage in monthly meetings, representing a major step towards accountability.

Ways forward and policy considerations

In relation to PHC in Bangladesh, major objectives remain to effectively engage the Government, nongovernmental and private sectors to improve coordination and regulation, with the Government playing the leading role. Current, focused initiatives – such as the HMIS programme – help to gradually guide the MoHFW towards reform and the adoption of new practices. However, with no dedicated public sector PHC infrastructure in urban areas, the Government still needs to be engaged and its role more fully defined.

The PHC referral system needs urgent strengthening. This requires a concerted effort by the MoHFW to address health worker shortages, make investments in staff training, and upgrade PHC facilities so that the quality of services is trusted by the public. These improvements may then lead to people choosing to use primary care facilities rather than drug stores or presenting at tertiary-level facilities. It also requires engagement with private sector providers and better communication between staff at various levels of the Upazila system.

24 See Sunderwall et al 2006 and Ahsan et al 2015 for insights on the health SWAp in Bangladesh. Sunderwall, J. et al. (2006). *Theory and practice – a case study of coordination and ownership in the Bangladesh health SWAp. Health Research Policy and Systems*, 4: 5. Ahsan, K.Z. et al (2015). Fifteen years of sector-wide approach (SWAp) in Bangladesh health sector: an assessment of progress. *Health Policy and Planning*. 1–12.

25 Hawkes, S. et al. (2016). Strengthening capacity to apply health research evidence in policy making: experience from four countries. *Health Policy and Planning*, 31.

Greater promotion of medical training for nursing and other non-physician health professionals require more emphasis and investment. A far wider range of health personnel need to be engaged in health planning. This should include people with experience of PHC needs and services at community, union and Upazila levels, and those representing different skill and professional areas.

Increasing public awareness about health insurance schemes is also required; if good quality health services are available, then people might be more encouraged to use such schemes.

The non-state sector has been a key factor in the health successes Bangladesh has been able to achieve. Engaging the nongovernmental sector as a resource by assigning it specific, measurable tasks is a constructive option, which will require guidelines to help the Government, donor and nongovernmental sectors work in more coordinated ways.

This case study was developed by the Alliance for Health Policy and Systems Research (AHPSR) in collaboration with the Bill & Melinda Gates Foundation, as part of the Primary Care Systems Profiles and Performance (PRIMASYS) initiative. PRIMASYS supports the development of case studies of primary health care (PHC) systems in low- and middle-income countries (LMICs) in order to bridge the knowledge gap on PHC systems at national and sub-national levels. Using findings from a combination of key informant interviews and focus group discussions with key stakeholders, as well as quantitative data available nationally, PRIMASYS provides insights to support PHC system strengthening and improve implementation, effectiveness and efficiency of health programmes in LMICs.

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