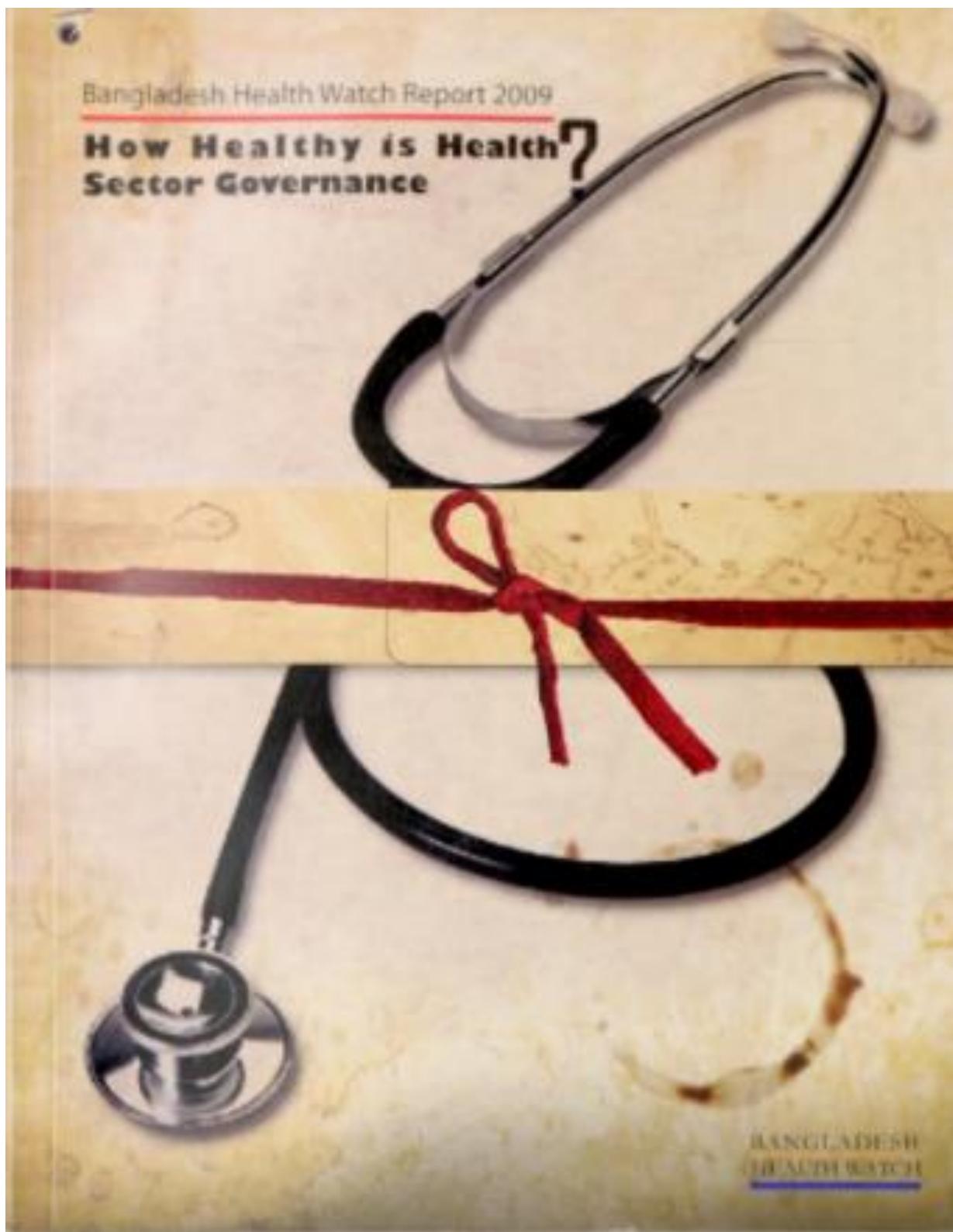


Bangladesh Health Watch Report 2009

How Healthy is Health Sector Governance?



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The University Press Limited

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HEALTH WATCH

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Foreword

This report on the governance of the health sector in Bangladesh is the third such report presented by the Bangladesh Health Watch (BHW) on the state of health in Bangladesh. BHW, a multi organisation civil society network, was formed in 2006 to establish a tradition of holding the state as well as non-state sectors accountable for their performance in delivering quality health care to the citizens. BHW decided to produce an annual report on the state of health in Bangladesh focusing on a theme that deserves priority attention. The report was designed as an instrument of accountability for health care providers by and to the citizens of Bangladesh. As a citizen's initiative, BHW needed to establish its credibility before both the public and the government through the quality of its work and the independence as well as non-partisan nature of its contributions. These qualities have now, hopefully, been established over the course of two successive reports, the first one focusing on the theme of health equity and the second one on the status of the health workforce in Bangladesh. These two reports have been widely used as objective measures of the state of health in Bangladesh by various stakeholders including the government, professional and civil society organisations, service providers and users, media and the international development agencies.

Our third report addresses the even more challenging theme of governance of the health sector in Bangladesh. The issue of governance has in recent years been discussed extensively by political and civil society as well as the international development community. The state of governance has emerged as a critical variable in determining our developmental outcomes. The quality of public service delivery, which impacts on the lives of most citizens, but particularly the financially deprived, is one of the most vital aspects of governance. Access to and quality of health care is a critical element of service delivery; yet none of the existing reports on the state of governance published by some of our institutions have put their spotlight on the delivery of health care. This third report by BHW on governance of health is, thus, of special value because it addresses specific problems facing a vital service sector and offers constructive suggestions as to how to improve its governance.

The issues addressed by the report cover some important overarching concerns such as the stewardship role of the government as well as several micro level issues to illustrate the practical manifestations of the state of governance on our daily lives. The stewardship of the government is analysed through a critical review of the processes and politics involved in health policy formulation and implementation; the functioning of the various statutory and regulatory bodies; and the ethical standards and practices maintained in the health sector. The specific issues highlighted by the report, which impact on all those seeking health care, include blood supply, availability and use of essential drugs, pharmaceutical promotion, quality of care, and hospital diet.

The report highlights many problems such as ineffectiveness of statutory and regulatory bodies; deficits in ethics and standards; politicisation of health policy and its lack of continuity; partisanisation of the medical profession and absence of accountability. However, the report also showcases several positive examples which can be replicated and used as role models for good governance in the health sector.

I hope this report will not only raise awareness about the many governance related problems of the health sector, but more importantly it will catalyse concrete actions by government as well as non-government agencies to address these challenges which will result in better delivery of health services to our citizens.

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Acronyms

BCDS	Bangladesh Chemist and Druggist Samity	HPSS	Health and Population Sector Strategy
BDNF	Bangladesh National Formulary	IFA	Iron-Folic Acid (Tablet)
BHW	Bangladesh Health Watch	IFPMA	International Federation of Pharmaceutical Manufacturers and Associations
BMA	Bangladesh Medical Association	HSC	Higher Secondary Certificate
BMDC	Bangladesh Medical and Dental Council	IMS	Intercontinental Marketing Services
BNC	Bangladesh Nursing Council	IPH	Institute of Public Health
BNF	British National Formulary	IPS	Instant Power Supply
BNP	Bangladesh Nationalist Party	LMF	Licentiate of Medical Faculty
BRAC	Bangladesh Rural Advancement Committee	MaLAM	Medical Lobby for Appropriate Marketing
BSMMU	Bangabandhu Sheikh Mujib Medical University	MBBS	Bachelor of Medicine and Bachelor of Surgery
BTS	Blood Transfusion Safety	MCWC	Mother and Child Welfare Centre
CDC	Centers for Disease Control and Prevention	MLSS	Member of Lower Service Subordinate
CI	Consumer International	MoH	Ministry of Health
CME	Centre for Medical Education	MoHFW	Ministry of Health and Family Welfare
CMMU	Construction and Maintenance Management Unit	MP	Member of the Parliament
CS	Caesarean Section	MR	Medical Representative
DAB	Doctors Association of Bangladesh	MUAC	Mid-Upper Arm Circumference
DCC	Dhaka City Corporation	NDP	National Drug Policy
DDA	Directorate of Drug Administration	NGO	Non-Governmental Organisation
DGFP	Directorate General of Family Planning	NHP	National Health Policy
DGHS	Directorate General of Health Service	OOP	Out-of-Pocket
DMCH	Dhaka Medical College Hospital	PC	Private Commercial
EDL	Essential Drug List	PEM	Protein Energy Malnutrition
ESP	Essential Service Package	PHC	Primary Health Care
FP	Family Planning	Pnon-C	Private non-Commercial
FWV	Family Welfare Visitor	PSC	Public Service Commission
HAPP	HIV/AIDS Prevention Project	PWD	Public Works Department
HNPS	Health, Nutrition and Population Sector Programme	RDA	Recommended Dietary Allowance
HPSP	Health and Population Sector Plan	RMO	Resident Medical Officer
		RMP/PC	Rural Medical Practitioner/ <i>Palli Chikitshok</i>

R/PIP	Revised/Programme Implementation Plan	TIB	Transparency International Bangladesh
SACMO	Sub-Assistant Community Medical Officer	TTI	Transfusion Transmissible Infection
SBTP	Safe Blood Transfusion Programme	UFPO	Upazila Family Planning Officer
SCP	Shwadhinata Chikitshak Parishad	UHC	Upazila Health Complex
SEAR	South East Asia Region	UH&FPO	Upazila Health and Family Planning Officer
SIP	Sector Investment Plan	UNDP	United Nations Development Programme
SMF	State Medical Faculty	UNO	United Nations Organization
SSC	Secondary School Certificate	UP	Upazila Parishad
SWAp	Sector Wide Approach	WHO	World Health Organization

EXECUTIVE SUMMARY

Improved and sustained health of citizens depends on a well functioning health system. The main functions of a health system include service provision; generation of funds for building physical infrastructure and creating competent human resources for service delivery; and stewardship, i.e. setting and enforcing rules of operation and providing strategic direction for all the different stakeholders to work effectively. These functions are related to one another and stewardship is the most critical one as it involves ensuring the implementation of all the other functions and has direct effects on health outcomes. The World Health Organization (WHO) in its World Health Report (2000) stressed that the "ultimate responsibility for the performance of a country's health system lies with government." The report defines stewardship and its significance by stating that "the careful and responsible management of the well-being of the population is the very essence of good government ... How well or poorly a government executes its stewardship role can influence all aspects of the health system performance" (WHO 2000).

Stewardship includes the tasks of defining the vision and direction of health policy, exerting influence through regulation and advocacy, collection of intelligence, ensuring compatibility between policy objectives and organisational structures, building partnerships, ensuring tools of implementation and accountability. Above all, the task of stewardship is attributed primarily to the Ministry of Health (MoH). Given the

The studies attempted to assess the situation in critical elements of health service delivery, interpret them in the light of the key elements of governance, and identify actionable points for the policy makers.

importance of governance of the health sector, Bangladesh Health Watch (BHW) examined the status of health sector governance in the country as its theme for the present report. BHW commissioned six studies to generate evidence to assess the status of governance. The studies were on health sector governance in general and on critical health care issues in particular. The focus of the investigation on governance in general included the national health policy, regulatory frameworks and ethics. The manifestations of ineffective governance are usually experienced in specific areas of the health care system. The specific areas covered were: marketing of

pharmaceuticals, use of essential drugs, blood safety, quality of hospital diets and services. The studies attempted to assess the situation in critical elements of health service delivery, interpret them in the light of the key elements of governance, and identify actionable points for the policy makers. This overview presents key findings, messages emerging from the studies and puts forth a few recommendations.

An overview

Governance, policy and regulations

Bangladesh had formulated and adopted a National Health Policy in 2000. Several attempts have been made to update it since then. With subsequent changes in political regimes, the 2000 health policy had never been fully implemented. As this report was being published, the Ministry of Health and Family Welfare had placed a revised draft of the National Health Policy on its website for further comments and consultation. The draft was first formulated in June 2009 and shared in

the public domain. This draft was subsequently revised based on comments and recommendations received from various quarters.

Several regulatory and statutory bodies were established in order to develop qualified health professionals, ensure standard health services to the people, protect peoples' rights to health and ensure access to quality health services. The statutory bodies include Bangladesh

Medical and Dental Council (BMDC), Bangladesh Nursing Council (BNC), State Medical Faculty, Bangladesh Pharmacy Council, (BPC), and Bangladesh Board of Unani and Ayurvedic Systems of Medicine (BBUASM). The Parliamentary Standing Committee oversees all activities on behalf of the government and citizens to ensure transparency and accountability of the health sector in serving the citizens. The study findings reveal that most of these statutory and regulatory bodies have not been functioning to their fullest capacity due to problems of politicisation, lack of democratic practice, and lack of accountability.

Ethics

In Bangladesh, ethics in medical practice as a subject has been taught to medical students in their third and fourth years of MBBS classes since it was introduced in 1988. The nursing diploma curriculum includes content on nursing ethics emphasising the concept of nursing self-management and accountability within health care. The midwifery curriculum also has a small section on ethics. Ethical issues in medical practice comprise a small share in the course content compared to other topics in the curriculum. It is therefore taken casually by most students and it never received due attention in the teaching of health care practice. The course recommended by WHO on ethical standards has been adapted for Bangladesh and approved by BMDC. However, it is yet to be fully implemented by the Centre for Medical Education (CME) for providing short courses through medical colleges. So far, no step has been taken to incorporate the course into the medical, dental and nursing curriculum.

It is important to note that a set of code of medical ethics prescribed by BMDC is in existence in order to ensure standard ethical practice in medical interventions. In case of failure to adhere to the code, the BMDC has the authority to suspend and/or cancel the registration of a practitioner.

Code of ethics in professional conduct also exist for Family Welfare Visitors. Despite their existence and the authority granted to BMDC, there is no example of any action taken so far for violations. This clearly indicates the ineffective implementation of the code. There are no organisational mechanisms in place to monitor unethical practices by health professionals. Findings on the symptoms of a weak stewardship in areas of drug use, pharmaceutical marketing practices, blood safety, quality of care and hospital diet as revealed in the study are discussed in the following sections.

Essential drugs

Use of more than one drug per prescription was very high and on the rise (33% from 5% in 1994) with wide variation among groups of health care providers. The proportion of prescriptions with three or more drugs was highest (62%) among the prescriptions from drugstores followed by urban clinics (46%) and Upazila Health Complexes (UHC) (33%). On an average, the

number of drugs per prescription from UHCs had increased to 2.2 in 2009 from 1.4 in 1994. Use of three or more drugs increases the risk of drug interactions, errors in dispensing and intake with adverse health consequences and unnecessary household expenditure.

Use of antibiotics was highest in the prescriptions from drugstores (60%), followed by urban clinics (45%) and UHCs (43%). Prescribing of antibiotics by the UHC providers has increased to 50% in 2009 from 25% in 1994.

Although the list of essential drugs was available in 47% of the UHCs (from 28% in 1994) and 55% of the urban clinics, none of the facilities had all the 20 essential drugs listed. Only 6% of the UHCs and 15% of the urban clinics had at least 15 of the 20 essential drugs. The use of essential drugs by UHC has reduced to 63% from 85% in 1994. None of the drugs dispensed from any of the health facilities was labelled properly with the name of the patient, generic name of the drug and dosage.

A very wide variation in drug prices was observed. For example, the ratio of lowest to highest price for IFA tablets was 1650%, for a bottle of B-Complex tablets was 650%, for Mebendazole tablets was 900%, for Benzylbenzoate lotion was 817%, for Chloramphenicol ointment was 543%, for Miconazole ointment was 592%, and for Metronidazole tablets was 500%.

Promotion of pharmaceuticals

The pharmaceutical companies in the country have an estimated number of 20,000 medical representatives (MR) to promote and market their products. The MRs were found to be highly target oriented with attached incentives to target fulfilment. This made the MRs highly aggressive in marketing drugs. The MRs maintain a high level of contact with physicians for sharing product information and they manage to get easy access to physicians. The physicians are somewhat dependent on the MRs for product information. The pharmaceutical companies maintain databases of physicians and monitor the prescribing practices of doctors in terms of use of drugs. The practice of a wide variety of "rewards" for physicians from the pharmaceutical companies for prescribing their drugs is prevalent. The MRs have also started to include the village doctors (*palli chikitshoks*) in their sphere of influence for marketing drugs.

Blood safety

Blood transfusion is carried out in some facilities that are not enlisted with the Directorate General of Health Services (DGHS). Most of these unregistered facilities are private commercial undertakings and some are private non-commercial facilities. Only seven of the enlisted 25 centres under the Safe Blood Transfusion Programme (SBTP) of the DGHS included in the study had facilities for preparation of blood components. None of the non-SBTP centres had such facility. The main reasons for not providing blood transfusion services by the SBTP listed facilities were lack of logistics support, reagents and trained manpower.

Thirty-three out of the 37 centres (89%) reported that they screened blood for Transfusion Transmittable Infections (TTIs). However, only 18 centres reported screening blood for all five TTIs as required under the SBTP. Reasons for not screening blood included -- not perceiving all diseases as important; lack of awareness about the importance of blood screening among the relatives/attendants of the patients; shortage of trained manpower in the facilities; lack of funds; and insufficient lab facilities and screening products.

Staff members of the majority of the centres included in the study (76%) reported that they received special training on SBT. Staff members at 88% of SBTP enlisted centres reported that they had received training, while staff members from 59% of the non-SBTP centres reported that they received training. Training on SBT had been provided to the staff of most of the government facilities (90%) while the number of trained staff in the private sector, whether commercial or non-commercial, was relatively fewer (62%).

Guidelines on screening and selecting donors, collecting, testing, matching, transfusing and storing blood, training staff, health and safety procedures, use and maintenance of equipment, behaviour and dress code were mostly absent in private (14 out of 19 functioning centres) facilities and in five out of 18 functioning government centres. None of the 18 centres could show the printed copies of the guidelines which they claimed to have. Majority of the managers who supervised blood transfusion system did not have knowledge about SBT (31 out of 42). Knowledge of various policies regarding blood transfusion was also found to be deficient among the

key staff members of the centres. Staff members of only six centres had knowledge of at least three components of blood collection policy, 15 centres had knowledge of at least one component of blood supply policy, six centres had knowledge of at least one component of blood transfusion policy, and only 18 centres were aware of blood testing/screening policy, i.e., blood must be screened for five TTIs.

Majority of the centres (81%) did not have any license/accreditation for Blood Transfusion Safety (BTS). Some private centres reported having a BTS license (63%) while none of the government facilities had a license. The staff at the government and private non-commercial centres (65%) did not perceive the need to have a license and considered themselves above such requirements. Though many of the centres were supervised by DGHS personnel it was not clear why most of them do not have a license yet.

The medical technologists/technicians in the centres had to perform multiple tasks which hampered their primary task of maintaining SBT standards including adoption of universal precautions. Lack of practice of standard universal precautions was observed among the majority of staff members of the blood transfusion centres. Staff at only two centres wore aprons while staff at only one centre were found to wear gloves. Decontamination practice for reusable materials was found to be practised in 14 centres out of 15 (93%).

Hospital diet

Ensuring appropriate dietary therapy is an important component in the overall management of patients as it influences the treatment and recovery process of many illnesses. There is limited knowledge available as to how the facilities are doing in terms of ensuring appropriate diets for patients. According to some earlier studies conducted, food served in hospitals in Bangladesh was not nutritionally sound. Hospital diets are not generally perceived as appropriate and are seldom adjusted for the management of different diseases.

The supply of a therapeutic diet was found to be inadequate compared to Recommended Daily Allowance (RDA) in all of the hospitals in the study. For diabetes patients, diet contained 63% fat, 25%

carbohydrate and 38% Kcal (Energy) less than the RDA but 34% excess protein was supplied compared to the RDA. For coronary heart disease patients, hospital diet contained 6% protein, 27% fat and 30% carbohydrate in excess of the RDA and contained 2% less Kca than the RDA. For kidney disease patients, hospital diet contained 71% fat, 34% carbohydrate and 39% Kcal less than the RDA but protein content was 163% in excess of the RDA. For liver disease patients, hospital diets supplied about 60% protein, fat, carbohydrate and Kcal less than the RDA. The appropriateness of diet given to diabetic, kidney, liver, and malnourished patients in the specialised hospitals were not any better than those in the general hospitals.

There may be several reasons behind this poor application of therapeutic diet in the hospitals in Bangladesh. Health systems administration of Bangladesh may be one of them. Other reasons include lack of dietary advisors and nutritionists, and inadequate trained nutritionist etc. Although all of the hospitals have reported that they have a budget for dietary management, it may not have been properly implemented due to poor design and inadequacies in the system. Although there are dieticians in the hospitals, they may not have been properly skilled and were not adequate in number.

Qualitative study presents that most of the patients were satisfied about the hospital diet but some of them had a few suggestions regarding the adequacy, quality, palatability and cleanliness. Patients suggested bringing about variations in the menu to avoid monotony. They also suggested proper monitoring and planning of diets in accordance with the requirements of the treatment been given to the patients.

Quality of care

The study investigated quality of care in public and non-government facilities in terms of factors like physical condition and amenities at the facility; adequacy of providers and other staff; their attitudes toward the patients/clients; condition of supplies, drugs and other equipment; waiting time; client satisfaction, role of management; compliance to and awareness of the Citizens' Charter; condition of emergency services and technical quality. In these

areas, it was noted that the situation in public facilities was more compromised when compared to the non-government facilities. Of the public facilities, those in rural and remote areas suffered more in terms of the staffing condition, access to resources, and efficiency.

Number of patients admitted in the hospitals were always outnumbering the beds available which resulted in patients being on the floor. This was observed in all the public facilities except a few in Dhaka. Privacy was always compromised in overcrowded facilities. Shortage of sanctioned posts of critical service providers like doctors (including specialist), nurses, paramedics, medical technologists, support staff (ward boy, aya, sweeper) was a common problem in public facilities. Exceptions were a post graduate hospital and a child and maternal care hospital in Dhaka.

In public facilities, providers were often not friendly and responsive to patients. Providers did not feel that they were accountable to the patient and were unaware of the patients' rights, indifferent about patients' expectations, need for confidentiality, respect and dignity. The situation was better in non-government facilities except in one children's hospital in Dhaka city.

Patients usually had to wait a long time before being attended by the right providers in all the public facilities. The situation was worse in case of emergencies, which defeated the purpose of having emergency service in the first place. The situation was also worse in rural facilities and in lower level facilities. Posters displaying patients' rights and Citizen's Charter in prominent locations were not found in all the facilities visited. However, this is an action that all public facilities are mandated to follow.

In terms of emergency services, non-government facilities often were reluctant to treat emergency cases, for example, victims of road traffic accident, cases of trauma, etc., especially when there were subsequent legal implications associated, such as cases of poisoning. These patients are mostly treated in public facilities.

Technical quality of care for indications of caesarean sections was found to be satisfactory. Quality of care for management of pneumonia was found to be compromised through conducting either excessive or inadequate

investigations, by prescribing drugs with no indication, not prescribing drugs with clear indication, and inappropriately using third generation of antibiotics.

Main messages and recommendations

Based on the findings emerging from the above studies and current debates on health sector governance, BHW would like to provide some key messages for policy makers. The perennial issue of poor quality health care described in this report was mostly an outcome of either the lack of a regulatory framework or its ineffective implementation.

Our first message is about strengthening the regulatory/statutory bodies for the interest of the people; and upholding patients' rights along with the rights of the service providers. In the

absence of strong regulatory frameworks, institutions, regulations and strict implementation of regulatory measures, the quality of healthcare will continue to be unsatisfactory. To treat patients effectively and efficiently, hospitals will require adequate numbers of quality health professionals and support workforce. Thus the regulatory institutions responsible for health workforce production require strengthening in terms of course content, examination process, faculties, registration of graduates, and periodic assessment of performance of health care providers for renewal of registration. Most importantly, they need to pave a user-friendly way to address genuine grievances of the patients and uphold patients' rights, if necessary without waiting for further direction.

In order to ensure the above, BHW recommends the following actions:

z Carry out detailed review immediately on the existing status of these regulatory bodies and clarify their roles in order to

- revitalise their existence, especially that of the BMDC;
- update all the acts related to their formation and proper functioning with extensive consultation with the stakeholders and based on evidence;
- strengthen their legal and logistical powers;
- enhance democratic practices through ensuring participation of the relevant

stakeholders including representatives from the civil society in these councils;

- ensure a democratic process for council governance and merit based recruitment;
- enhance the mandates of these bodies; and
- implement the right to information act to ensure free flow of information for the common people.

- z Develop accountability policies and processes within regulatory bodies to ensure transparency of information on the regulation of medical professions and health care.
- z Strengthen management and administrative skills and capacity to perform regular administrative and supervisory functions.
- z Establish divisional monitoring units within BMDC and BNC to oversee the activities of medical and dental practitioners and publish and update the names of the registered medical, dental and nursing professionals with respective specialties and sub-specialties, if any, on their respective websites.
- z Produce accessible, people-friendly annual publications which will clearly feature how the regulatory bodies have performed in their supervisory and disciplinary roles and with what outcomes, and what initiatives have been taken to improve their accountability to the public.
- z Encourage and strengthen the role of civil society organisations, especially those focusing on the rights of the citizens and consumers, to play an active and vigilant watchdog role in monitoring the functionality of the regulatory bodies for the interest of the people.

Our second message would be that inappropriate use of drugs and lack of adherence to the list of essential drugs is the result of weak supervisory capacity of the regulatory mechanism and aggressive push from the pharmaceutical companies while marketing their products.

In order to address the above issue, BHW recommends the following actions:

z Completely reorganise and strengthen the Directorate of Drug Administration (DDA) in terms

- of human resource and technical capacity (e.g. establishment of drug testing labs). Ensure a rigorous approval process for product literature. Reconstitute the Committee for Implementing the Code of Pharmaceutical Marketing Practices.
- ⌘ Ensure that the Essential Drug List is on public display in all the PHC level facilities in the country irrespective of urban or rural locations or public, NGO or private attachment of the facilities. MoHFW should send an urgent directive to this effect.
 - ⌘ Make available Essential Drugs for common illnesses as listed in the national EDL at PHC level facilities, especially the public sector facilities throughout the country. DGHS should ensure the supply and monitor this regularly through their official chain.
 - ⌘ Make a clear commitment in the national health policy to education and training combined with managerial and regulatory interventions for rational drug dispensing at the 80,000 plus drug shops in the country as well as public and private sector health facilities. Combine this with an explicit commitment to an institutional mechanism of implementation.
 - ⌘ Undertake further research to determine how to promote rational prescription, avoidance of poly-pharmacy and overuse and misuse of antibiotics, generic prescribing, and prescribing from the national EDL; and on how the consulting time can be increased for quality provider-patient interaction.
 - ⌘ Bring gifts-giving practice by pharmaceutical companies under strict regulation and ensure that parity is maintained for all civil servants. Bring visits by medical representatives under regulation, especially in public hospitals.
 - ⌘ Find ways to make the promotional budgets of the pharmaceutical companies transparent so that it is clear what percentage of the drug price is channelled towards promotional efforts. Direct audit firms responsible for auditing these companies to look into the promotional practices and identify any deviations from ethical practices in their audits.
 - ⌘ Take appropriate regulatory action to ensure that pharmaceutical companies comply with the
- IFPMA¹ Code of Pharmaceutical Marketing Practices
 - WHO Ethical Criteria for Medicinal Drug Promotion²
- * Undertake a comprehensive evaluation of National Drug Policy using structural, process and outcome indicators to have a state-of-the-art knowledge on the Bangladesh situation. This will provide policy makers the necessary guidance in improving the present condition with respect to production and rational use of drugs.
- Our third message is on safe blood transfusion and weak implementation of the safe blood transfusion regulations.*
- In order to address the above issue, BHW recommends the following actions:
- ⌘ Widely disseminate blood transfusion policy to providers as well as to the general public.
 - ⌘ Bring the functioning non-SBTP private commercial centres immediately under strict regulations and monitoring of the government and restart services in the non-functioning SBTP-enlisted public facilities without delay.
 - ⌘ Make licences mandatory for blood bank operation, with renewal of licenses conditional on the performance of the centres. Licensing criteria should be equally applicable to the government, non-government and private entities.
- Our fourth message is about adequacy and appropriateness of hospital diets which are neither on the hospital agenda nor on the list of priorities in terms of patient management protocol.* This lack of prioritisation is evident from the absence of dieticians and nutritionists in the facilities and absence of guidelines to be followed by the hospitals.
- In order to address this issue, BHW recommends the following actions:
- ⌘ Make the employment of qualified nutritionists and dieticians mandatory in hospitals.
 - ⌘ Introduce standard protocols for dietary management in hospitals.

¹ Codes promulgated by the International Federation of Pharmaceutical Manufacturers and Associations (revised in 2006).

² A document prepared and revised in 1985 and endorsed by the Third World Assembly in 1986.

- * Assess the status of diets in hospitals and clinics at all levels and implement systematic monitoring and evaluation of patients' diets in every hospital.

The fifth message would be about adherence to ethical practices by the health professionals and addressing the prevailing weaknesses in the course content in order to prepare future health professionals to combat ethical dilemmas successfully in real life at every level of health service delivery.

In order to ensure the above, BHW recommends the following actions:

- * Emphasise and strengthen ethics training in medical education at undergraduate and post-graduate levels, particularly by familiarising students with the practical and operational side of medical ethics and incorporating the WHO module into the curriculum.
- * Mandate the professional bodies to introduce ethics into continuing professional education and make this compulsory for all registered medical practitioners.
- * Ensure that the Patients' Charter/Bill of Rights is widely publicised by rights-based organisations and by the regulatory bodies.
- * Encourage stronger participation by human rights and consumers rights related civil society organisations to play a more active watchdog role in monitoring ethical practices in the health sector.

Our final and overarching message is about the national health policy which would govern the entire health sector of Bangladesh. The revision or formulation process should ensure participation of all the important stakeholders for its consistent implementation. To ensure continuity as a public

policy, health policy should not be narrowly conceived as a "policy of the ruling party" rather it should be viewed as the policy of the state.

In order to ensure the above, BHW recommends the following actions:

- * Develop a transparent mechanism for informing people in general about the progress of the national health policy revision or formulation process and ensure participation of all the important stakeholders so that it is implemented consistently.
- * In order to develop a sense of ownership and to avoid unjustified policy revisions, ensure adequate engagement of the opposition political parties in the policy process, particularly through the vital role that the Parliamentary Standing Committee can play as a cross-party parliamentary body.
- * Ensure that policy formulation or revisions are research-based, need-based and participatory, rather than mere expressions of the preferences of the political regimes. In particular use the mechanism of the Parliamentary Standing Committee to organise public and specialist hearings on the national health policy to optimise stakeholders' participation.
- * Recognising that a stronger civil society can play an effective role in offsetting the arbitrary acts of the ruling parties regarding policy revisions, encourage NGOs, as a part of civil society, to act as a watchdog over government stewardship as opposed to remaining in a mere complementary role.
- * Undertake a critical review of the approved national policies, e.g. health policy, population policy, nutrition policy, drug policy to bring synergy in the sector; and if possible-prepare a synthesised policy document.



METHOD '09

Introduction

Governance

In recent times, "governance" has occupied a centre stage in the discourse on development, both as a concept and as an instrument of development strategy. According to the United Nations, "Good governance is perhaps the single most important factor in eradicating poverty and promoting development" (UNO 1998). Accordingly, various states and international organisations devised their development strategies with due emphasis on governance. It is now well recognised that overall development of a country cannot take place as long as governance remains weak and underperforming. Despite the growing interest in governance there is no consensus on what constitutes governance. Since its introduction, the term "governance" has been interpreted in various ways. The World Bank (1992) defines governance as a combination of three factors: i) the form of a political regime; ii) the process by which authority is exercised in managing the country's economic and social resources; and iii) the capacity of government to design, formulate and implement policies and in general to discharge governmental functions.

Governance is therefore more than just the government and efficient management of resources. It refers to the role of government in creating a framework of activities to be undertaken for economic development and making decisions about the distribution of benefits, as well as the nature of relationship between the government and those governed. According to the UNDP (1997), governance is defined as "the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises of mechanisms, processes, and institutions, through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences". This definition of governance encompasses the private sector and the society at large and not just the government. Interactions among these three

actors are critical for sustainable human development as government provides stable legal and political environment to facilitate participation of civil society and all other groups in socio-economic development of a country. General attributes of governance include: accountability, transparency, efficiency, effectiveness, rule of law, participation, responsible and equitable administration at all levels of a government.

Governance in health sector

The health sector is concerned with the provision, distribution and consumption of the health services and related products. It is made up of hospitals, private nursing homes, medical and dental clinics, public health interventions (including health promotion activities, counselling, etc.), ambulance service, transportation, complementary medicine and other human health related activities, such as medical laboratories services and health information across a range of organisations within the public, private and voluntary sectors.

In Bangladesh, health services are delivered by multiple providers including public, private, non-governmental organisations (NGOs), informal health care providers and traditional healers (BHW 2007). Public sector has a countrywide health infrastructure. Although, in terms of service coverage, the private sector, formal and informal combined, overrides the public sector service provisions. Effective governance is therefore challenged by the pluralistic and diverse nature of the health system. Good governance influences the functioning of a health system towards better health outcomes. The World Health Organization (WHO) in its World Health Report 2000 defines a health system to include all the activities whose primary purpose is to promote, restore or maintain health. It further states that health systems have a responsibility not just to improve people's health but to protect them against the financial cost of illness and to treat them with dignity. WHO identifies four major functions of the health systems: service provision;

generation of physical and human resources for service delivery; raising and pooling of resources in order to pay for health care; and stewardship, i.e. setting and enforcing rules of the game and providing strategic direction to the different actors. All these functions are interrelated and stewardship is the most critical amongst all as it involves overseeing of the rest and directly or indirectly affects all the outcomes. Stewardship includes: the tasks of defining the vision and direction of health policy; exerting influence through regulation and advocacy; gathering intelligence; ensuring compatibility between policy objectives and organisational structures, building partnerships, ensuring implementation tools and accountability. Above all, it attributes the task of stewardship primarily to the Ministry of Health (MoH).

Health sector governance in Bangladesh

Over the past few decades, Bangladesh has made great progress in terms of its social indicators (WHO 2007). Net enrolment in primary education has exceeded 80 percent with girls and boys attending schools in equal numbers. Infant mortality and fertility rates have reduced to less than half since independence in 1971. Extreme poverty has fallen from nearly 70 percent in the 1980s to less than 50 percent in early 2000. However, many challenges remain, such as maternal mortality, which is alarmingly high, and there is still widespread malnutrition among children and lactating mothers. Inequity in terms of health status and access to services persists (BHW 2006), while the quality of essential and commonly used medicines marketed particularly in the rural areas remain questionable and has caused death among children in the recent past. Service quality in the public sector has been greatly compromised and the problem is compounded by unfilled vacancies of huge number of staff positions (World Bank 1992). Moreover, mechanism of accountability of service providers is seemingly ineffective.

The perspective of Bangladesh Health Watch

During 2005-2006, a number of professional and civil society organisations came together to discuss the

possibility of creating a civil society network to regularly and systematically measure and monitor the country's progress and performance in health sector. As a result Bangladesh Health Watch was launched in April 2006. It was decided that the 'Watch' would annually publish one report on the state of Health in Bangladesh, focusing on a different theme each year and reporting on the performance of key indicators, on a continuous basis.

The Bangladesh Health Watch is governed by an advisory board consisting of eminent personalities in the field of development, particularly in health. A Working Group consisting of researchers and activists from different organisations carry out the different activities. The James P Grant School of Public Health of BRAC University serves as its secretariat.

The theme of Bangladesh Health Watch report for 2006 was "Challenges of Achieving Equity". The report identified income, gender and place of residence as the major factors of inequity. It highlighted the inequities that are most persistent and hence require greatest policy attention. It also looked into policy commitments made by the government and described achievements and limitations. Finally it drew lessons for wider application from selected successful initiatives in delivering services as well as holding the health system accountable. The report was formally launched in December 2006 in Dhaka by renowned Professor Amartya Sen, Nobel Laureate in Economics.

The theme of Bangladesh Health Watch report for 2007 was "Health Work Force in Bangladesh: Who constitutes the Healthcare System?" The report documented the issue of health workforce in the country, identified their strengths and weaknesses and put forth recommendations for improvement. It involved undertaking the first ever national level study of its kind. The report laid emphasis on the profile and density of health care providers of public, private, NGO, qualified and informal sector; quality of services provided by selected group of providers, training, production and future challenges for healthcare providers. The report was launched by the Health Advisor of the Caretaker Government and was subsequently widely used by various actors for policy and planning purposes.

The BHW decided to take up Health sector governance as the theme for this year's publication and for the purpose of this study defines governance as:

"the manner in which political, economic and administrative power is exercised by the government in the management of the national health affairs at all levels."

Box 1.1: The elements of health sector governance as perceived by BHW

BHW considers elements of health sector governance as formulating strategic policy direction; generating information and intelligence and making information accessible; ensuring equity, inclusiveness, participation, transparency, accountability, responsiveness; consensus orientation; enforcing the rule of law, regulatory framework and ethical standards; effectiveness and efficiency with active involvement of peoples' representatives, civil society and private sector for sustainable health development."

The present report critically analyses how efficiently and effectively Bangladesh manages its overall health system—from policy development to organisation and delivery of services and the dynamics of allocation of resources.

Objectives

The broad objective of the report is to provide a situational analysis of the health sector governance in Bangladesh and make relevant policy recommendations.

Specific objectives include:

- a. Reviewing the current status of governance in the health sector emphasising elements of governance; the national health policy; functions of the statutory bodies; and ethical standards and practices.
- b. Critically analyse the capacity of the health system in Bangladesh for good governance in order to identify the ways and means to further strengthen it especially with regards to stewardship, regulatory functions and setting standards.
- c. Highlight practical manifestation of governance by critically assessing a few micro-level health system issues like drug availability and promotion, blood supply, and some management system issues such as quality of care and provider accountability.
- d. Showcase a number of replicable best practices or "positive deviances" to promote good governance in the health sector.

Approaches to analysing governance in the health sector

To achieve the above mentioned objectives, BHW commissioned six studies under two broad clusters—governance at macro level and manifestations of governance in the day to day health care experience of the people (both provider and recipient). BHW developed a matrix (see Annex 1) to analyse governance and synthesise the study results. However, due to time and resource constraints, only a few aspects of the matrix could be addressed by the studies undertaken for this report. The issues addressed are grouped under two broad clusters as described below:

Study Cluster 1. Assessment of the general situation of governance focusing mainly on the stewardship function of the government:

The government formulates a National Health Policy which basically governs the entire health sector, and sets up different statutory and regulatory bodies to protect interests of the patients. This in turn promotes ethical practices fundamental to quality service provision. This study covers these important stewardship functions of the government.

It includes various aspects of national health policy especially the politics in the policy formulation process, roles of different actors and a content analysis of the policy itself. Practices related to health policy formulation in a few selected countries and their relevance for Bangladesh are also reviewed.

In order to assess the statutory bodies, the study analysed the functions and roles of the various statutory and regulatory bodies; and offered insights into the causes and suggests actions. The study also documents the situation of ethical standard and practices in Bangladesh.

Study Cluster 2. Reflection of governance in a number of specific areas with important implications for health:

The immediate and day-to-day challenges faced by the citizens in order to maintain health exemplify the status of health sector governance. BHW aimed to

explore some of these issues through special studies, case studies and secondary data analysis to understand the magnitude of the problem, identify weaknesses in governance and identify action points for policy makers. The areas explored were as follows:

Essential Drugs: National drug policy, one of the most important ingredients of the health sector governance, should have positive bearing on the availability, affordability and rational use of drugs. This part of the study assessed the *availability* of essential drugs in the public and private health care facilities; the *affordability* of essential drugs by exploring the price differentials of different brands of drugs for the treatment of specific marker illnesses (diarrhoea, dysentery, ARI, hyperacidity, fever, body-ache/arthralgia) and finally assess the *rational use of drugs* by studying the prescribing behaviour of allopathic health care practitioners (MBBS doctors, Medical Assistant/SACMOs, and Village doctors) for specific illnesses, dispensing practices of pharmacists/ drug dispensers and understanding compliance of consumers (patient/attendants).

Pharmaceutical promotion: This study investigated the promotional practices of the pharmaceuticals in terms of influencing non-compliance of the regulatory guidelines, namely, the Drug (Control) Ordinance of 1982 and the Code of Pharmaceutical Marketing Practices, promulgated in 1994. It also explores the challenges in enforcing the regulations and the factors that play into causing these challenges.

Blood Supply: Blood supply is usually required as a critical life saving measure. It is a proxy indicator of organisation of emergency medical services in the country. This study aims at understanding the governance of blood banks in terms of how the existing policy is implemented, where and how the existing regulations have been failing, and what the contributing factors are. The study identifies gaps, weaknesses and positive deviances.

Hospital Diet: Appropriate dietary management is an important component in the overall management

of patients as it influences the treatment and the recovery process. This study was commissioned to assess appropriateness of hospital diets provided to patients and their intake compared to their therapeutic recommendations in case of five specific disease conditions, namely, diabetes mellitus, coronary heart disease, renal failure, liver diseases, and severe protein energy malnutrition in both urban and rural hospitals in Bangladesh.

Quality of Care: Quality of services is the ultimate element to influence health outcomes. The study assessed the situation of quality of services and related the findings to governance issues. Selected public sector, NGO and private facilities at different levels in both rural and urban areas were included in this study.

This report has ten chapters. Findings from Study Cluster 1 are reflected in chapters 2, 3 and 4, while chapters 5 through 9 depict findings from Study Cluster 2. Each chapter provides a brief description of the methodology used and detailed methodologies are given in Annex 2. The concluding chapter summarises key findings and recommends priority actions.

This report's analysis and critique of the health system recognises that a large number of medical professionals and health workers continue to perform with integrity, diligence and efficiency, often under impossibly difficult conditions. Their commitment to public service should not be undermined by the inadequate and occasionally inappropriate conduct of some professionals. It is in the interests of the medical profession as a whole to therefore, enhance the governance of the health system, through more effective regulation. The report has attempted to identify a range of corrective interventions that are needed to improve the governance of the health sector. The government is also committed to make such improvements. It is in the interest of both the people of Bangladesh as well as the medical profession that attention is paid to this report's constructive suggestions.



Health policy

Introduction

Universally, policies provide a broad guideline for realising sectoral visions. As for the health sector "an explicit health policy ... defines a vision for the future ... outlines priorities and expected roles of different groups, builds consensus and informs people, and in doing so fulfils an important role of governance" (WHO 2000). This chapter adopts the domain of stewardship as the framework for analysis of the health sector governance (WHO 2000) in Bangladesh as it provides a comprehensive health-specific framework. Stewardship includes: the tasks of defining the vision and direction of the National Health Policy, exerting influence through regulation and advocacy, generation of intelligence, ensuring compatibility between policy objectives and organisational structures, building partnerships, ensuring tools of implementation and accountability.

There have been several attempts to formulate a National Health Policy in the past, and the first ever formally approved health policy in Bangladesh was formulated in August 2000, towards the end of the Awami League's previous tenure. This chapter examines i) the vision and directions of the health policy of 2000 and its subsequent revisions till 2009; ii) vulnerabilities caused by frequent revisions, discontinuation and reversals; iii) management of policy implementation; and iv) the health policy formulation process as practised in India and Pakistan to learn from a comparative account.

National Health Policy 2000: Vision and directions

The National Health Policy (NHP) 2000 had 15 goals and objectives, 10 policy principles and 32 strategies. The key policy objectives were to: i) make basic health services accessible to all, particularly to the poor;

ii) reduce the rate of maternal and child mortality and, maternal and child malnutrition; iii) ensure availability of doctors, nurses and the medical equipment required to provide services at the upazila and union levels; iv) make health services accountable and cost effective and v) increase effectiveness and accessibility of the family planning programme especially by the poor.

The key principles adopted to achieve these objectives included: i) extending primary health care services to all ii) equity; iii) decentralisation of health service management; iv) stakeholder participation in planning and management; and v) public-private partnership.

The major strategies to achieve the policy objectives were: i) focusing on primary health care as the key strategy to make health services cost effective; ii) a need-based human resource development for health; iii) involvement of the local government in health service provisions; iv) strengthening and reforming of the health regulatory bodies; v) ensuring professional standards of the medical practitioners and their close monitoring; vi) introducing minimum user fees in public hospitals with safety nets for the poor and disabled; vii) managing all the activities of the health and family planning sector through a Sector Wide Approach (SWAp); viii) delivery of Essential Service Package (ESP)¹ from a single service point known as "one-stop service" as a cost effective mechanism of providing primary health service to all; ix) establishment of community clinics for every 6,000 population in order to bring health services to the doorsteps of the population and provision of doctors at the union health centres; x) reallocation of public health expenditure from district to the community level; xi) unification of health and family planning wings of the Ministry of Health in order to avoid overlapping of programmes and reduce wastage of resources; xii) discouraging private practice of public doctors

¹ ESP includes five basic services: reproductive health services, child health, communicable disease control, limited curative care, and behaviour change communication.

through introducing non-practicing allowances or special privileges for those willing to practice privately in the public hospital premises; and xiii) recognition of traditional medicine.

Thus, the NHP 2000 clearly spelt out its objective of providing basic health services to all, proposed strategies to achieve this objective, recognised the role of policy actors (public, private, NGO, traditional medicine), provided guidance for prioritising expenditure (for ESP and rural health), indicated organisational arrangements for service provision through unified structure and regulatory controls for ensuring quality.

Implementation of the Health Policy 2000 and its partial reversal

As per the vision of NHP 2000, Health and Population Sector Strategy (HPSS) and its programme implementation plan known as the Health and Population Sector Plan (HPSP) for the period 1998-2003 were the main vehicles of translating the NHP 2000 into reality. HPSP had an ambitious plan of health sector reform which warranted unification of health and family planning (FP) services. The main demonstration of the unification was planned through constructing, equipping and staffing 13,500 community clinics throughout the country from which comprehensive health and family welfare services were to be provided through the staff of health and family planning services. Unification of the two wings was undertaken in order to improve service efficiency by minimising duplication and overlap of service delivery. However, its implementation was obstructed due to bureaucratic stringency.

NHP 2000 had its setback when the implementation of HPSP was slowed down due to the reduced pace of health sector reform especially integration of the two wings i.e. health and family planning and setting up of community clinics. The integration was to take place in stages. By early 2000, the two wings were unified at the upazila (sub-district) level and below. This was made possible because the Upazila Family Planning Officers (UFPOs) were of a lower official status than the Upazila Health Officers and therefore it was easier to bring them under the supervision of the latter (Osman 2005). Nonetheless, the UFPOs

resented the integration as it curtailed their authority for managing family planning services (Hossain & Osman 2007). However, officials of comparable status at the district and directorate levels did not want to compromise their positions and resisted the process. Eventually the deteriorating morale of FP officers led to disruption of the FP services and together with several other factors resulted in apparent stagnation of the total fertility rate.

In 2001, the new BNP-led government came into power and stalled the integration process and functioning of the community clinics. It ultimately reversed integration of the two wings and made the community clinics dysfunctional and redundant. With the expiry of the HPSP in June 2003, a new programme called the Health Nutrition and Population Sector Programme (HNPS) for the period of 2003-2011 was developed to commence in 2003. The government's policy reversal and specially its firm stand against unification caused discontent among the development partners which led to the World Bank's temporary withdrawal of funds from the health sector. As a result, the HNPS could not be approved until December 2005. There was no policy instrument or programme to guide the health sector during this interim period and sector projects were being implemented on ad hoc basis to fulfil essential sector needs. The interim arrangement was to spend the unspent HPSP balance between 2003 and 2005. Priorities and investments supported by the HNPS were set out in the Sector Investment Plan (SIP) and the revised HNPS emerged from this process in November 2005 though implementation could not be started until 2006. Overall, the SWAp, ESP and the client-centred approach to service delivery system were continued while nutrition as a new component was introduced in the programme. Other modifications to the programme included a return to the previous system of separate health and family planning wings and restoration of domiciliary services, thus formalising the reversal of NHP 2000.

Politics of reversal: Role of the policy actors

During the period of 2001-2006 reversal of NHP 2000 became the centre of a whirlpool of conflicts, delays,

and disagreements among policy players. The key players in this politics included the bureaucrats, politicians, medical professionals and donors. Incidentally, the civil society played a relatively passive role during this critical period.

Bureaucrats

Bureaucracy played a dominant role in reversing the previous policy. Bureaucrats who had been influential during the period of 1996-2001 had little say in the era of the new government. Successive health secretaries were either explicitly against or remained passive over the unification process and community clinic programme, resulting in weak bureaucratic leadership within the ministry (Osman 2005). This in turn led to poor monitoring and supervision of the performance of field workers, hampering the quality of family planning services. In the early years of the BNP regime the bureaucracy held considerable power and influence over the implementation of NHP 2000. According to a number of respondents "the final decision on reversing unification was taken by the Health Secretary and the Prime Minister".

Political parties

Politicians played an active role in the policy arena during 2001-2006 than in the past. The partial rejection of NHP 2000 can be attributed to the culture of confrontational politics and intolerance that permeates every level of the polity and not necessarily to the ideological differences of the political parties. A close liaison of the medical professionals (particularly physicians) with the ruling party members was the main source of power of the politicians. They were initially influenced by the bureaucrats to reverse the reform.

Medical professionals

Medical professionals, particularly physicians, were in favour of the implementation of major reforms under the NHP 2000. Support of the professionals for the two major elements of the NHP 2000 (unification and establishment of community clinics) was reflected in the policy document prepared by the Bangladesh Medical Association (BMA), which later influenced the preparation of NHP 2006. "Despite the fractious nature of health politics, BMA, DAB (Doctors Association of

Bangladesh, aligned with the BNP) and SCP (Shawdhinata Chikitshak Parishad, aligned with the Awami League) held together considering the benefits of enhanced role of doctors, from integration and the community clinic programme", informed a medical professional during an interview. He added "however, the reservations of some key, top level politicians and bureaucrats could not be overturned". This phenomenon indicates the dominance of the politicians and bureaucrats in the policy process over the professionals.

Donors

Donors were in favour of unification as it was one of the conditions of their support to the HPSP. The decision to reverse integration of the two wings had seriously affected cooperation between the government and development partners (Sundewall, Forsberg & Tomson 2006) resulting in temporary suspension of funds. The World Bank and its co-financiers promised to resume the credit as soon as the government presented an alternative reform agenda. Some of the senior ministers were quite convinced that in the end the donor community would have to reconsider its decision because of the need for reporting back on spending levels. Finally, the credit suspension was lifted after almost three months and trust between the two parties was restored somewhat when the Ministry presented a comprehensive plan to carry forward reforms in order to achieve some of the main objectives of the HPSP (Sundewall, Forsberg & Tomson 2006). However, the Ministry remained firm on its decision not to integrate the health and family planning wings.

Formulation of NHP in 2006 and revision initiatives in 2008 and 2009

Formulation of NHP in 2006

It is interesting to observe that Bangladesh has had only one formally approved National Health Policy, i.e. NHP 2000, in its history of 37 years. With so many changes and disruptions taking place in the health sector programmes, goals and priorities, NHP 2000 was no longer considered as an appropriate policy

document. In July 2003, under the initiative of the MoHFW, a 58-member core committee headed by the Health Minister was formed with the purpose of updating the NHP. In August 2006, three years after the revision process started, the draft policy was forwarded by the Ministry to the Cabinet but was never finalised. Formulation of NHP 2006 was largely driven by the politicians and the medical professionals who incidentally developed good nexus by then. The influence of the bureaucrats was somewhat marginalised in the 2006 policy process while donors and the civil society also had little involvement.

Revision of NHP 2000 in 2008

The caretaker government of 2007-2008 decided to update NHP 2000 to reflect the changes since it was adopted. An advisory committee and a steering committee led the revision process. The initiative to revise the NHP 2000 came out more as a benevolent autocratic decision of the caretaker government than the demand of the sector. Despite wide consultation through the Internet and meetings at divisional and national level towards the end of 2008, the policy revision was rejected by the BMA and most of the civil society organisations although some appreciated the contents of the revision. The revised draft avoided all the potentially controversial issues such as integration, community clinics and concentrated on high level goals and objectives which anyone would agree to in principle. Donors did not have much influence over the process. However, it left out the most important stakeholders of any policy process, i.e., the political parties.

Revision of NHP in 2009

The current ruling party in its election manifesto declared that "In order to ensure health services to every citizen of the country, the health policy of the erstwhile Awami League government will be re-evaluated and adjusted according to the demands of the time. It is in the light of this policy that the 18,000 community clinics, established during Awami League rule, will be re-established.

Accordingly, the MoHFW took on the initiative to revise the NHP 2000 and the revised draft has been posted on the website of MoHFW for comments and

suggestions. It is unclear how this revision was done. There had been hardly any initiative from the MoHFW to engage the political parties, BMA, professional bodies, intellectuals in the health sectors, bureaucrats, donors and civil society in the process of revising the document. A general invitation to comment on the draft document placed on the website was made. Civil society organisations have been active in discussing the NHP 2009 and provided comments to the MoHFW. It was expected that a revised draft of the National Health Policy will be further shared for final round of consultation by October 2009. In January 2010, the Minister announced that the comments received from various interest groups would be incorporated and a final policy document would be ready for approval by three months time.

The MoHFW has also taken the initiative to revise the National Population Policy and it is expected that the policy will be processed along with the health policy. The National Drug Policy and Nutrition Policy are already in existence. A critical review of all the policies under the broad umbrella of the National Health Policy is required urgently in order to bring synergy and proper coordination in the health sector.

Commonalities of NHP initiatives of 2006, 2008 and 2009

There had been three distinct initiatives to revise the NHP 2000 in the years 2006, 2008 and 2009 under various governments led by the BNP, the caretaker government and the current Awami League government respectively. While in power, different parties or interest groups have attempted to adjust the NHP according to their ideologies or interests and/or of their party's election manifestos and somewhat indicate the various political standpoints. The authors had the opportunity to review the content of the revised draft NHPs of 2006 and 2008. The revised draft document of NHP 2009 was on the website for public consultation when this report was written. A critical review of all the drafts and NHP 2000 shows the following commonalities:

- i. The policy documents state generic, broad and lofty goals without specific and pragmatic strategies to attain them. Thus, policy directions have most often remained vague.

- ii. Increased budgetary allocations have been promised at different times but how the resources will be managed has never been clarified and therefore lacking realistic guidelines for resource allocation.
- iii. The policy makers have failed to draw attention to some of the significant supply-side barriers, including unofficial and out-of-pocket (OOP) expenses incurred by patients seeking health care, non-availability of drugs, absenteeism of doctors, and unprofessional attitude of health care providers, mostly faced by the poor.
- iv. The need for human resources for health has been raised in each of the policy documents but a clear strategy to do so has never been spelt out.
- v. Performance is another issue that is neglected in all the policy documents. A realistic incentive to providers to reward good performance and sanction against bad performance and more importantly, an acceptable incentive package for professionals for working in rural areas has not yet been suggested.
- vi. Although the policy documents give recognition to all kinds of providers including private sector, NGOs and traditional medicine but no clearly delineated roles with financing mechanisms and service provision, were assigned to them and are barely recognised in legislation and regulation.

NHP 2000 and its subsequent revisions thus still remain a mere "wish list" accompanied by the uncertainties of implementation. More importantly, they lack continuity and pose serious challenge to governance in the health systems.

NHP formulation in neighbouring countries: Involvement of stakeholders

Process of NHP formulation: Experience of India

To date, India has adopted two NHPs. The first NHP was launched in 1983 and then updated in 2002. India's health policy targets are aimed at providing health care to all, especially to the poor, and the guidelines are kept broad on purpose, similar to Bangladesh's

NHP 2000. The policy update involved a rigorous three-year revision of the NHP which began in 1999. The process involved all the stakeholders including research institutions. While small working groups prepared the terms of reference, 14 Indian institutions were engaged to conduct research. The findings were discussed at a series of regional and national seminars and 21 research reports were circulated in print and on the website. A revised draft of the NHP was formulated and distributed for public comment. The revised document was consequently presented and endorsed in the parliament. In the formulation struggle four key players were involved: politicians, bureaucrats, health professionals (predominantly physicians) and the civil society. The bureaucrats were the real policy movers and to a large degree, determined as to whether there would be a status quo or a reform. The civil society and the bureaucrats continuously interacted with each other and were the most influential. Politicians and health professionals (dominated by the physicians' voice) engaged in the policy discourse only when their interests and mandates were affected.

Box 2.1: Experience of India

- ⌘ Policy is research and evidence-based.
- ⌘ Policy enjoys continuity and sustainability.
- ⌘ Policy revision is not politically motivated; rather the intention has been protecting national or professional interest.
- ⌘ Civil society is highly influential in policy making in case of idea generation, holding the government accountable and above all, performing the role of a watch dog in the policy arena, which in effect prevents arbitrary actions of government.
- ⌘ Decentralised health planning allowing deeper involvement of stakeholders.
- ⌘ Medical profession is not politically motivated rather focused on professional interests.

Process of NHP formulation: Experience of Pakistan

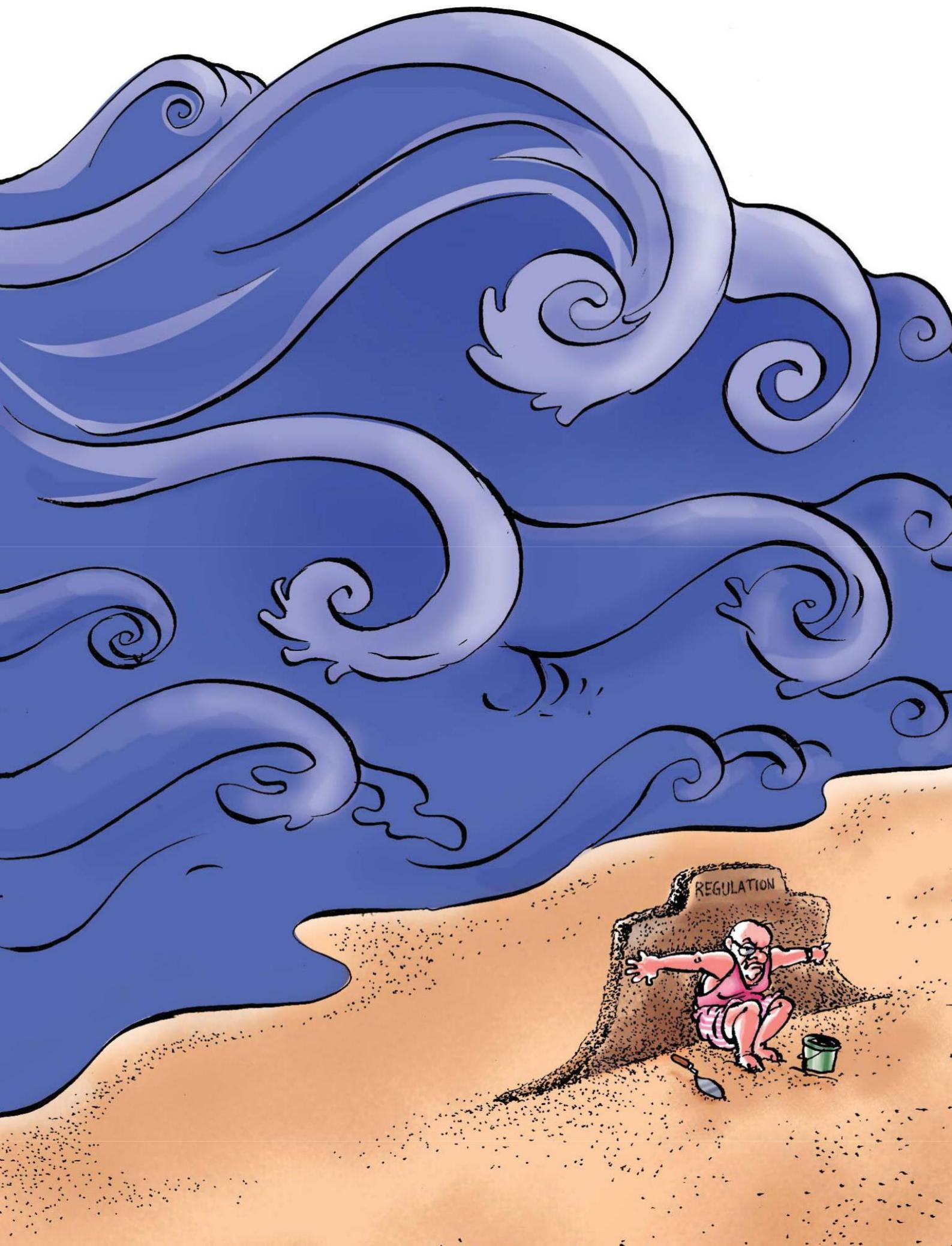
In Pakistan to date, three NHPs have been formulated in 1990, 1997 and 2001 while a fourth, health policy of 2009 has been finalised. Successive governments have made attempts to streamline health policies to their ideologies. Bureaucracy played a dominant role in policy making in Pakistan. The Federal Ministry of Health,

which oversees the provincial government offices, dealt with all stages of the health policy formulation process such as setting agenda, articulating the policy, planning, implementation, monitoring and evaluation (Khan 2006). The uncertain nature of Pakistan's political environment particularly the frequent change of health ministers bringing in changes in the health plans, made it difficult to effectively implement the health policy.

Physicians as well as the civil servants within the Ministry of Health assumed a dominant role in setting the health care agenda as reflected in the strong focus on clinical health care in all the NHPs. Role of the civil society in policy making in Pakistan is quite restricted due to limited access of the public to knowledge and information regarding the development process of the health policy (Khan 2006).

Box 2.2: Experience of Pakistan

- ⌘ Policy lacks continuity or sustainability.
- ⌘ Policy revision is highly politicised as health plans get altered with change in the government.
- ⌘ Policy formulation and implementation process is decentralised but it has failed to produce the desired result due to lack of coordination.
- ⌘ Over dominance of physicians in the policy process has made the policy a "clinical" one while the influential bureaucracy prevented the policy formulation process from being a transparent one.
- ⌘ Weak civil society including media resulted in lack of stakeholder participation and created scope for arbitrary actions by the government and frequent policy revisions.



Functions of regulatory and statutory bodies

Introduction

Stewardship as an essence of good governance refers to the careful and responsible management of the responsibility entrusted to one's care (WHO 2007). Stewardship functions imply the ability to ensure good regulations and the tools for implementing it and provide the necessary base to ensure accountability and transparency. In the context of the health system, one of the functions of stewardship involves influencing policies and regulatory actions that may affect health of the population. Therefore the role of the regulatory/statutory bodies is critical to ensure good governance in the health sector. Under the tutelage of the regulatory bodies, necessary regulations on health education, training and professional practices can be ensured to maintain quality of care in health. These bodies are also expected to set clear policy priorities in order to reflect public interests and maintain ethical standards to defend people's health rights.

Different categories of service providers (physicians, nurses, midwives, pharmacists, medical technologists etc) are supposed to operate under certain legal obligations while the regulatory/statutory bodies are mandated to oversee their compliance to the rule of law (exhibiting good stewardship) thus supporting the health system to work better. When these bodies remain dysfunctional, poor management and weak supervision leads to bad governance in the health system.

The Government of Bangladesh has established different professional regulatory and statutory bodies with the objectives of:

- i. developing competent health workforce (doctors, nurses, midwives etc.)
- ii. ensuring provision of standardized health services
- iii. protecting people's right to health, and
- iv. ensuring access to health services as and when required.

Bangladesh Medical and Dental Council (BMDC),
Bangladesh Nursing Council (BNC), State Medical

Faculty, Bangladesh Pharmacy Council and Bangladesh Board of Unani and Ayurvedic Systems of Medicine were formed to play the stewardship role in the health sector governance. In addition, the Parliamentary Standing Committee is expected to play important overseeing function to ensure transparency and accountability of the sector.

It may be noted that the Director General of Health Services (DGHS) performs registration and overseeing functions for private clinics and hospitals, pathological laboratories and blood banks while the Director General of Family Planning (DGFP) performs registration function for the NGOs determining eligibility to receive family planning commodities at designated working areas.

This chapter focuses on the organisational arrangement and functionality of the statutory bodies, except the DGHS and DGFP, in terms of six broad themes i.e. independence, democratic norm, rule of law, capability, efficiency and accountability. The objectives of this chapter are to: i) examine the functioning of the statutory bodies, and ii) identify the factors/ determinants of their functionalities.

An analysis of the statutory bodies

Bangladesh Medical and Dental Council (BMDC)

Bangladesh Medical and Dental Council emerged as a statutory body under the Medical Council Act in 1973 later repealed in 1980. BMDC regulates registration of physicians and dentists and monitors medical educational institutions for the purpose of establishing uniform standard of basic and higher qualifications in medicine and dentistry.

According to the Act, the Council is composed of a number of representatives from the Ministry of Health, medical education, nursing services, medical colleges (both public & private), professional associations, members of the Parliament, Bar Council and each

administrative division in Bangladesh. The Council is headed by a President and a Vice President elected by the members of the Council from amongst the members. The Council is a supreme body that takes all major decisions and executes its functions through various committees, namely the Executive Committee, Standing Recognition Committee, Disciplinary Committee and office of the Registrar. The Registrar is the Chief Executive of the Council and is responsible for all administrative activities including implementation of the decisions of the Council.

Functionality of BMDC: There is widespread frustration about the functionality of BMDC and apathy of the Government towards it. Although no study has been conducted, it is well known that BMDC is virtually an ineffective body except for its registration function.

BMDC has failed to promote and protect patients' rights. A common allegation against the health professionals (mainly doctors and nurses) is that they are not aware of the patients' rights and do not behave appropriately towards them. Some of the other allegations commonly made include negligence of duties, absenteeism, malpractice, incorrect treatment, demand for extra payments, etc. The Ain-O-Shalish Kendra (ASK), a leading human rights organisation reported that between January and October 2007, over 70 deaths were recorded due to negligence or malpractice (Doctors' impurity must stop 2008), but BMDC failed to address any of them. Every year many complaints are filed with BMDC but most of these are rejected by the Council with the pretext of the complaints containing "incomplete information". According to key informant interviews conducted for the present study, BMDC approved investigations for 25 and 17 complaints in 2007 and 2008 respectively against the medical and dental practitioners. However, not a single investigation report was finalised or made public. In fact no report has been finalised by BMDC since 1994.

According to Clause 30 of the BMDC Act No. XVI of 1980, only registered dental and medical practitioners are allowed to practice in Bangladesh. However, in the recent past foreign doctors were found practising without any registration with the BMDC; taking the quality of training of other countries as granted. The case of the alternative medical health care providers is also similar.

BMDC rules require registered dental and medical practitioner not to use misguiding designation, description or symbol. Yet most physicians, even professors are found to use descriptions and symbols in business cards and signboards that are not permitted by the rules.

In terms of ensuring quality of medical education and accreditation of the medical education institutions in the country, BMDC's role has been taken over by the MoHFW and Director's office of Medical Education of DGHS.

Lack of independence: Prior to formation of the Council, BMDC is required to seek approval from the Ministry of Health and Family Welfare regarding its potential members since some members are nominated by the Government. The Government can thus influence the council formation and have the main authority within BMDC and hold unconditional power in its functioning.

BMDC's independence is somewhat compromised by the presence of the Government nominated members as in case of initiating independent investigations against doctors working in government/public hospitals. In such cases, BMDC can only issue "show cause" notices to the directors of the hospitals; in response the hospitals form their own committees to conduct investigation of the complaints. BMDC has no option but to follow the decision of these committees thus making its role as a regulatory body ineffective and redundant.

BMDC is administered by professional and practising doctors who play a key role in the formulation of regulations and conducting investigations. This sometimes hampers independent investigations and objectivity of judgments due to professional bias towards their fellow colleagues.

There is no coordination between BMDC and the MoHFW regarding jurisdiction and authority for registration of foreign doctors or doctors trained abroad. Currently these doctors are required to get permission from the Ministry and subsequently register with BMDC. In most cases, these doctors avoid registration at BMDC and only seek permission from the Ministry.

Democratic deficit: The composition of the "Council" of the BMDC does not incorporate relevant

stakeholders from the health sector. For example, Medical Council Act of 1973 provided that "two members from each administrative divisions of Bangladesh of whom one shall be a government medical official to be nominated by the Government and other shall be a private medical practitioner to be elected by the registered medical practitioners other than teaching staff of the medical college in each division". Later this provision was changed in the BMDC Act (Act No XVI of 1980) so that both members from each administrative division of Bangladesh are to be nominated by the Government only thus removing the provision for electing private medical practitioners by the registered practitioners.

It is important to note that the council election has not taken place in the last 18 years suspending any chances of running of BMDC in a democratic way. Several governments have witnessed this situation but paid little attention in addressing the issue.

Bypassing rule of law: The existing Act (Section 88, Act No, XLV of 1860) in the Penal Code of 1980 depicts "Nothing, which is not intended to cause death, is an offence by reason of any harm which it may cause, or be intended by the doer to cause, or be known by the doer to be likely to cause, to any person for whose benefit it is done in good faith, and who has given a consent, whether expressed or implied, to suffer that harm, or to take the risk of that harm". This provides ground for the doctors to avoid responsibility claiming they believed they acted in the best interest of the patient when the error was committed. Many human rights groups and activists are concerned about this act, as it allows doctors to escape responsibilities for causing harm or death to the patients.

Capability deficit: It is pertinent to note that BMDC is mandated to initiate investigations about malpractices in order to take disciplinary actions which may require criminal conviction of serious professional misconduct of medical and dental practitioners. Any individual or citizen of the country can send complaints to BMDC to inform them about professional misconducts by medical and dental practitioners. Many such complaints are filed at BMDC every year. However, BMDC does not have enough human resources to respond to all complaints and investigate properly. As mentioned

earlier, not a single investigation report has been finalised since 1994.

Lack of efficiency: The lack of efficiency of the regulatory authorities is phenomenal. The complaint process of BMDC is cumbersome, lengthy and difficult to avail for the common people; even the most aggrieved person or family member often resigns pursuing their case with BMDC. Hence, lack of an efficient process discourages the citizens from claiming their right to lodge complaint-the primary purpose for which this body was formulated.

Another mandate of BMDC is to maintain standard of medical education and training. According to a health professional, 13 out of the 17 government medical colleges have shortage of senior level medical academics. BMDC has failed to address the issue which is essential in maintaining the standard of education.

While BMDC maintains the authority to provide permanent registration to doctors, it does not have any process for revalidating the registration. Lack of such provision prevents them from ensuring updated knowledge and standard performance of the doctors.

Lack of accountability: All the officials of BMDC are accountable to the Registrar who in turn is accountable to the Council. However, the Council is currently non-functional since no election has taken place in years. It has failed to meet and review its administrative activities and recommendations made by the Council members.

BMDC is also unable to seek death audit from both public and private hospitals and in case of public hospitals needs to refer the case to the Director of the hospital. The general public is not at all informed of the activities of BMDC as it does not have any regular public relations activities.

Bangladesh Nursing Council (BNC)

Nursing is an important pillar of the health system of a country. In order to ensure the standard of nursing education and practice, Bangladesh Nursing Council (BNC) was constituted in 1983. BNC acts as a national education board to ensure good quality education for the nurses. It regulates nursing practices to ensure clinical standard and also protects people from inappropriate nursing services in Bangladesh. The

current Council consists of top level government officers (rank of Secretary and Director General) from the MoHFW, health and family planning departments and professionals such as doctors, nurses, educationists and social workers. The Council has a Registrar and two Deputy Registrars to perform administrative functions. The Council comprises three committees i.e. Executive Committee, Examination Control Committee and Accreditation Committee.

Functionality of BNC: Bangladesh Nursing Council has been unable to meet the need of protecting the rights of the common people as well as that of the nurses. Similar to BMDC, the Council is also an authority that exists on paper and performs no other function except registration of nurses.

The quality of nursing education and training does not meet the demand of the health sector in Bangladesh and is far from availing the opportunity of the demand for nurses in the international market. As a result, many private hospitals with specialised services rely on nurses from abroad.

According to BNC, 21,815 midwives are currently working in different hospitals in Bangladesh playing an important role in the health sector, especially for maternal health services. However, in Bangladesh, midwifery is still not recognised as an independent vocation though BNC has been trying for the recognition and integration of midwives into the mainstream nursing profession.

BNC does not have any mechanism to identify or take any action against unregistered nurses who graduate from formal nursing institutes of the country. Also the number of expatriate nurses working in Bangladesh without any registration with the BNC is unknown.

There is no clear provision or guidelines for lodging any complaints against poor nursing by the general public at BNC and little or no evidence of the Council taking corrective measures against such complaints.

Lack of independence: Similar to BMDC, BNC has to seek approval from the Ministry of Health and Family Welfare for council formation. Most of its members are required to be nominated by the MoHFW. BNC ordinance in 1983 empowered the Council to elect the President from amongst the council members provided that the Secretary of the Health Ministry is

the first President of the Council. As such there is no opportunity for potential or qualified professionals to contribute in a leadership role in the council.

There is no effective coordination between Bangladesh Nursing Council and the Government. The Government is not obligated to share any information with BNC pertaining to nursing in the public sector. BNC cannot take measures against the unregistered (and often un- or semi-qualified) nurses who are currently working in many hospitals and clinics.

Democratic deficit: According to the Act of BNC, the Government nominates three members from the nursing profession. This limits the ability of the nursing professionals to elect their own representatives to appropriately serve the interests of the nurses in the country.

Capability deficit: Since its formation, the Bangladesh Nursing Council has been encountering shortage of human resources to carry out its activities especially in the field of monitoring, inspection and investigation of misconducts by nurses. Moreover, there is no legal protection in BNC to provide legal aid to nurses accused of professional misconduct. The disciplinary committee of the Nursing Council has very little power and insufficient budget allocation preventing it from fulfilling the very purpose of its existence.

Lack of efficiency: According to the findings of Bangladesh Health Watch report 2007, the nurse-to-patient ratio is very poor with a shortage of 280,000 nurses compared to the standard requirement. The recent changes in the qualifying requirements for admission into the nursing course (HSC qualified as opposed SSC qualified) has restricted the entry of women from rural areas in nursing profession. There is also a sustained cultural notion that this profession is not for men. On the other hand, some private institutions have expressed interest in setting up nursing institutes with high standards, catering to the needs of the international market. However, the bureaucratic mechanisms have slowed down such initiatives.

Parliamentary Standing Committee

The Parliamentary supervision is designed to prevent unlimited exercise of power of the executive branch, ensure proper use of public resources and accountability of the state agencies. Members of the Parliament act

through different Parliamentary Committees to exercise these overseeing functions. Formation of Parliamentary Committees, their powers and responsibilities as well as functioning procedures are regulated by relevant provisions in the constitution, the rules of procedure, Parliamentary conventions and rulings of the Speaker. The basic functions of the committees are to examine draft bills and other legislative proposals; review the enforcement of laws and propose measures for such enforcement; investigate and inquire about the activities or administration of the concerned Ministry and perform any other function assigned by the Parliament. Every Standing Committee as referred to in Rule 246 "shall consist of not more than ten members including the Chairperson. Members including the Chairperson shall be appointed by the House so that a Minister shall not be the Chairperson of the Committee and each committee shall meet at least once a month".

Functionality: Parliamentary Standing Committee on MoHFW has mandate to investigate and inquire into the activities of the Ministry. But the Committee remains largely ineffective in playing stewardship role for a number of reasons. First, the ruling party usually occupies committee chairmanship and dominates committee proceedings and ignores the opinions of the opposition party. Second, the formation of Standing Committees is frequently delayed. For example, the Standing Committee on Health for the 8th Parliament was formed two years after the first session of the Parliament. Thirdly, Committee meetings are neither held regularly nor are they attended by all the members. However, the 9th Parliament is an exception where the Standing Committee was formed during the first session and started functioning immediately.

Lack of independence: The Parliamentary Standing Committee on MoHFW in the 8th Parliament was supposed to play important overseeing functions to ensure transparent and effective health care delivery system for the common people. However, its independence was curtailed by the Government. The rule [clause 188(2)] mentions that "no member shall be appointed to a committee who has a personal, pecuniary or direct interest in any matter [that] may be considered by the committee". In the 8th Parliamentary Standing Committee on health, the Chairperson was from the treasury bench and the minister in charge of the Ministry was a member of the committee. The

minister's membership in the committee provided the avenue to exert executive influence over the committee ultimately curtailing the objectivity, impartiality and independence of the committee. The Standing Committee of the 9th Parliament shows similar traits.

Democratic deficit: Parliamentary Standing Committee also faces the problem of democratic deficit. Until the 7th Parliament, the concerned Minister or State Minister was the chairperson of the Standing Committee which ultimately affected the democracy of the committee. Later on, the 7th Parliament made the provision of making any member of the Parliament, other than the Minister, the Chairman of the Committee. According to the rules of procedure, each committee will consist of ten members of Parliament but there is no clear indication of the distribution of the committee membership to the various parties. As a result, the ruling party takes up majority of the memberships.

Bypassing rule of law: All the committees on relevant ministries should be formed in the very first session of the Parliament. In the 8th Parliament, all the Standing Committees were formed 18 months into its first session while the Standing Committee on MoHFW was finally formed in the 13th session of the 8th Parliament on 16 September, 2004, almost three years after the first session of the Parliament. Thus, there was hardly any effective Parliamentary supervision of the activities of the Health Ministry for a long period of time. Attendance of committee members per meeting was only 4.68% (TIB 2006). As mentioned earlier, the 9th Parliament is an exception in terms of quick formation of the Standing Committee.

The Standing Committee has so far failed to ensure compliance of the Health Ministry. There is no time limit for the concerned ministries, persons and executive branches to respond to committee recommendations and decisions. In the 7th Parliament, the Estimate Committee identified gross irregularities in accepting a tender worth Taka one billion by the Ministry (Rahman 2008). A three member sub-committee headed by the Health Minister investigated the matter and recommended cancelling the tender order. However, the Ministry authorised the original bidder defying the committee's recommendations. The tendency to bypass committee recommendations thus creates lack of institutional accountability, transparency and perpetuates irregular practices and corruption in the health sector.

Capability deficit: Although the Parliamentary Standing Committee is the apex body of performing Parliamentary overseeing functions on relevant Ministries, the committee is seriously handicapped by lack of resources. The committee wing of the Bangladesh Parliament secretariat is divided into 15 sections. It is stated that "each section is composed of one Assistant Secretary/committee officer and four other personnel who work under the supervision of a joint secretary/ additional secretary through four deputy secretaries of the wing" (Rahman 2008). The committees have no research staff or policy aides. Although several steps had been taken in the 8th Parliament, through the project "Strengthening Parliamentary Democracy" to improve the logistics of the committee offices, these were mostly cosmetic changes to the office of the committee's chairperson. The sections of the committees which did the actual work to make the committee functional were subsequently ignored. Once again, the 9th Parliamentary Committee has so far been an exception in this respect.

Lack of efficiency: The Parliamentary Standing Committee on the MoHFW has not been very effective in ensuring people's right to access health care services. In the 7th Parliament only 6.46% (Rahman 2008) of the required committee meetings were held each year. In several cases the committee recommendations were either overlooked or bypassed by the concerned ministries and government agencies. In the 8th Parliament, 217 decisions were made by the Parliamentary Standing Committee on the Ministry but only 55 decisions, i.e., less than 30% were implemented (TIB 2006).

Lack of accountability: Article 70 of the Constitution actually prevents MPs from voting against their own party and defying party directives. They are expected to listen to what is discussed in the committee meetings and follow the party directives. It is reported that in the 7th Parliament fifty four assurances were given by the Health Minister but only nineteen were fulfilled (JS body unhappy at health ministry work 2003) yet the committee members were unable to take any stern action against the Ministry. All the meetings of the committee were held in private with no scope for outside participants (depicted as strangers in Rule 201) to attend the meetings. Such tradition has led the

committee activities to operate in secretive and non-transparent manner.

State Medical Faculty

The State Medical Faculty was established during the British period in 1914 for the purpose of holding examinations and awarding diplomas to LMF doctors. After the partition of India in 1947, the State Medical Faculty (SMF) of East Pakistan was created with the same objective. Due to the growing demand for health services the mandate of the SMF was broadened to include coordination of diploma courses on LMF, compounder, LDS, nurse, midwives and dressers; conduct paramedics course since 1952, conduct medical assistant course since 1976 and coordinate *palli chikishok* (village doctor) course for the period of 1979-1983 and award diplomas and certificates to the successful candidates.

Bangladesh Pharmacy Council

Soon after the independence of Bangladesh in 1971, the Government stepped up to establish Pharmacy Council to regulate the practices of the pharmaceuticals. The Pharmacy Council Ordinance was enacted on 4th March, 1976 to establish the Council. According to the Act, the Council consists of government officials including Secretary of the MoHFW, Director of Health Services, head of Drug Administration, one nominated person each from Bangladesh Oushad Shilpa Samity, Bangladesh Medical Association and Bangladesh Chemists and Druggists Samity and three persons nominated by the pharmaceutical society. The main functions of the Council include regulation of registration and monitoring of educational institutions for establishing a uniform standard of basic and higher qualifications in pharmacy.

Bangladesh Board of Unani and Ayurvedic Systems of Medicine

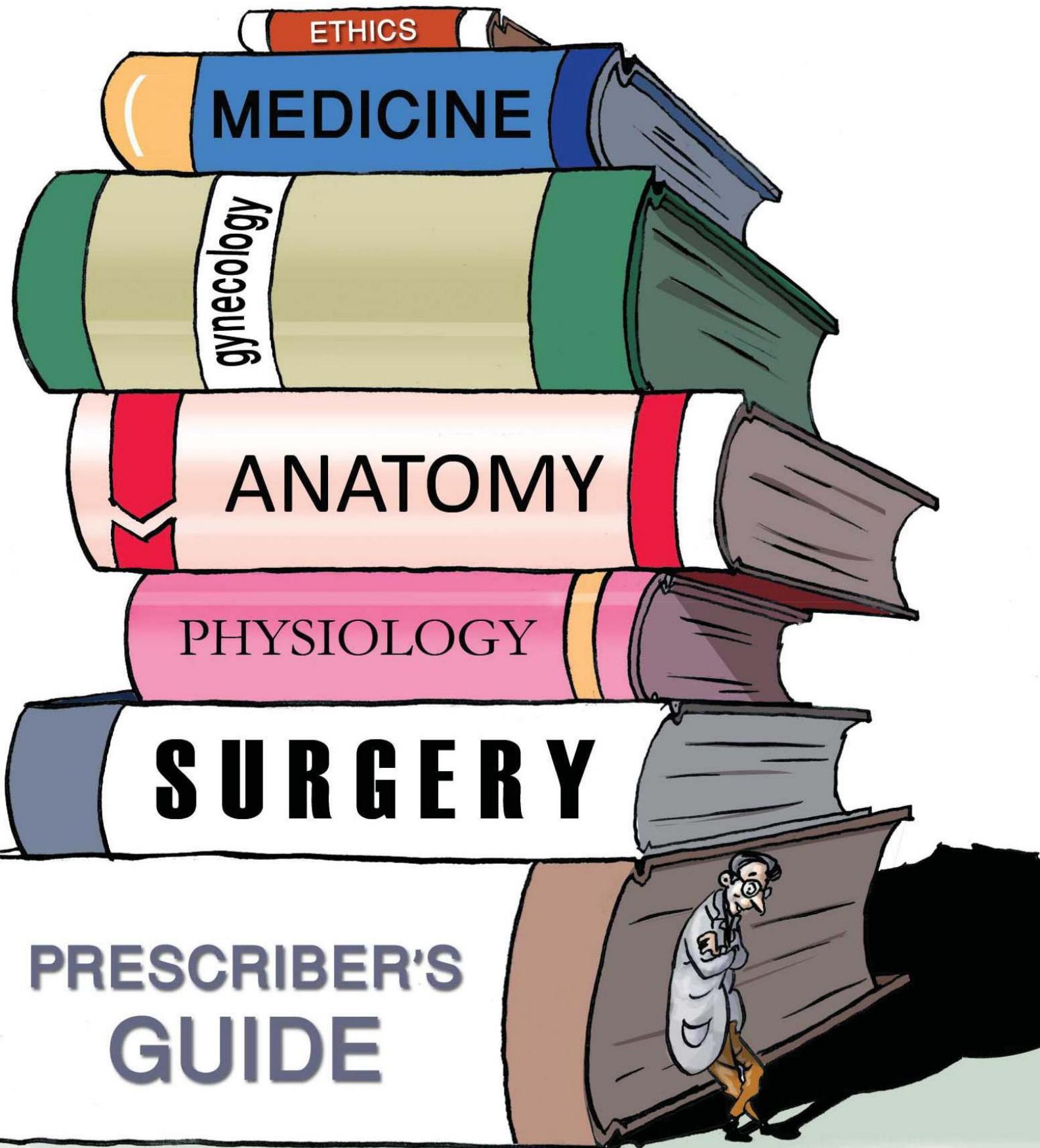
After the country's independence, the country inherited the Pakistani Board of Unani and Ayurvedic Systems of Medicine. Later, a new law titled "Bangladesh Unani and Ayurvedic Practitioners Ordinance of 1972" was enacted to restructure this body as the Board of Unani and Ayurvedic Systems of Medicine, Bangladesh

(WHO 2001). The Board is responsible for maintaining educational standards at teaching institutions; arranging registration of qualified persons (including appointing a registrar) and arranging the standardisation of unani and ayurvedic systems of medicine.

In 1983, another law entitled "The Bangladesh Unani and Ayurvedic Practitioners Ordinance, 1983" was passed to regulate the qualifications and registration of practitioners of Unani and Ayurvedic system of medicine. According to the ordinance, the Board of Unani and Ayurvedic Systems of Medicine is headed by a Chairperson who is appointed by the Government.

The ordinance also has the provision for the board to be consisted of two members from *hakims* and *vaid*s, one member from each administrative division, to be elected by the registered practitioners of Unani system of medicine, two members from teachers of recognised teaching institutions of unani and ayurvedic system of medicine.

All the three institutions i.e. State Medical Faculty, Bangladesh Pharmacy Council and Bangladesh Board of Unani and Ayurvedic Systems of Medicine have similar characteristics as BMDC and BNC. Their analyses have not been presented in order to avoid repetition.



**PREScriber's
GUIDE**

Ethics in the health sector

Introduction

Traditionally, medical profession is the only profession which directly deals with the life and death of a person. Medical ethics refer to the moral principles which should guide the members of the medical profession in the course of their practice of medicine and their relationship with their patients and other members of the profession (Nandy 1996). It is defined as a set of principles and moral values to guide proper medical conduct (Answers.com n.d.). Ethics has been considered as an indispensable part of medical profession from ancient time with universally accepted codes of ethics. However, the implementation of such codes varies from country to country.

Although ethics as a concept has been developed in different parts of the world over a long period in history, the Babylonians were the first to codify the rules. The Code of Hammurabi is the first code of ethics which was articulated around 2200 BC. Ethical principles were also followed in ancient Egypt, India, Greece, Persia and China (Huq 1999). The Hippocratic Oath incorporated the comprehensive concept of medical ethics during the Greek-Roman era. The Geneva Declaration of medical ethics, which is a revised version of the Hippocratic Oath, was formulated by the General Assembly of the World Medical Association at Geneva in September 1948 (see Box 4.1). The code is commonly known as the International Code of Medical Ethics, which has been amended several times between 1948 and 2006. The Geneva Declaration is adopted by the Bangladesh Medical and Dental Council with a few modifications. While the oath states a promise to show utmost respect for human life, in Bangladesh it is modified so as to protect the human life in all circumstances and to rescue it from death, malady, pain and anxiety. In Bangladesh, instead of taking an oath for not using medical knowledge to violate the human rights and civil liberties, it states, that as an instrument of Allah's mercy, medical care will be extended to everybody and everywhere.

Box 4.1 Geneva Declaration

1. I solemnly pledge myself to consecrate my life to the service of humanity;
2. I will give to my teacher the respect and gratitude which is their due;
3. I will practice my profession with conscience and dignity;
4. The health of my patient will be my first consideration;
5. I will respect the secrets which are confided in me, even after the patient has died;
6. I will maintain by all means in my power, the honour and the noble traditions of the medical profession;
7. My colleagues will be my sisters and brother and I will pay due respect and honour to them;
8. I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, or social standing to intervene between my duty and my patient;
9. I will maintain the utmost respect for human life;
10. I will not use my medical knowledge to violate human rights and civil liberties, even under threat;
11. I make these promises solemnly, freely and upon my honour.

Source: Geneva Declaration 1948.

This section of the report deals with the ethical issues related to the medical professions in Bangladesh, looking specifically at doctors, dentists and nurses.

The objectives are to: i) examine how ethics is taught in medical education in Bangladesh; ii) discuss how ethics is practised in reality and iii) formulate recommendations thereof.

Ethics in medical education

Ethics was introduced as a part of the formal medical curriculum for the first time in 1988. No formal ethical education is included in the post graduate medical

education. It is taught during the third and fourth year of medical education (Huq 1999). A core course on Medical Jurisprudence is taught only under forensic medicine for which as few as 12 lecture hours are allocated. Para-clinical teaching session also contains limited discussions on medical ethics. Compared to the medical curriculum, the dental curriculum includes a more detailed discussion on Dental Jurisprudence and allocates more lecture and tutorial hours on this topic. The nursing diploma curriculum includes a section on nursing ethics which defines nursing ethics, discusses the concept of nursing self management and accountability within health care system. A small section on ethics is also included in the midwifery syllabus.

A review of the medical, dental and nursing curricula shows that these largely include discussions on ethics as a concept and its definition, state rules and laws for regulating the profession, professional code of conduct and a brief historical context of the medical ethics. A critical assessment of the curricula reveals several problems in relation to inclusion of ethics. These are issues that are presented in the following section.

Ethics taught superficially

Ethics is taught from a theoretical perspective. Medical education experts assert that the major objective of teaching ethics should be the development of medical professionalism. They also argue that ethics should be taught in an integrated manner rather than a separate course (key informant interviews). The curriculum is largely theoretical and is only concerned with defining and elaborating terms without referring to the clinical topics or problems. As a result the physicians and dentists find it difficult to exercise ethical rules in practice as they do not receive any applied knowledge.

No prior attention given to habit formation

It is argued that habit formation should be a major concern of overall medical education and which must be maintained while teaching medical ethics. The ethical problems that the students might face in their day to day practice should be taught emphatically and under varying circumstances in order to develop expertise in handling such emergencies with efficiency.

It is suggested that a course on ethics should be designed in such a way that it is spread through the years of medical education.

Lessons on ethics are ignored by medical students

Medical ethics as a topic is not paid much attention by medical students. Students tend to memorise the chapters which are more likely to be asked in examinations. As ethics comprises a very small section of the whole syllabus, there is little or no chance of it being included in examinations. As such it is neither properly taught by the teachers nor studied by students. The lack of education on ethics is also reflected in the quality of the teachers who often do not have proper training in medical ethics, etiquette and code of conduct (Huq 1999) and hence fail to ensure proper deliverance on ethical issues.

WHO course on ethical standard is not mandatory

The World Health Organisation (WHO) concerned over the lack of adequate teaching expertise on ethical issues began working on developing guidelines for teaching health ethics in the countries of South East Asian Region (SEAR) since 1996 (WHO 1999). Bangladesh was the first among SEAR countries to complete the country specific version of the module. It has been approved by BMDC as an additional resource module. The Centre for Medical Education (CME) is currently arranging orientation workshops to introduce the material to teachers; the module will be disseminated in every medical college and each and every department will be advised to organise three or four teaching sessions on this module. The module is generic in nature and CME recommended it for dentists and nurses as well. However, no steps have yet been taken to make it mandatory and to incorporate it within the medical, dental or nursing curricula. This leaves the use of the module entirely at the discretion of the teachers with the risk of being under or never utilised.

State of ethical enforcement

As a signatory to the international code of medical ethics, Bangladesh has adopted the standard code of

medical ethics. BMDC is responsible for maintaining the standards in the medical profession and is supposed to publish and disseminate Code of Ethics among the registered doctors and dentists to familiarise them with the professional regulations. The Code of Ethics provides a set of regulations prescribed by BMDC to maintain a standard in ethical practice in the medical profession. If any medical or dental practitioner violates the guidelines, BMDC can either suspend or permanently cancel his/her registration as a practitioner.

Similarly Bangladesh Nursing Council is responsible to maintain ethical standards in nursing and is supposed

Box 4.2 BMDC approved codes

1. The nurses/midwives/FWVs should treat patients as clients and show them respect.
2. They should be sympathetic and sensitive in their attitude towards the patients.
3. They have to maintain professional secrecy at all times.
4. Patients should be served irrespective to their religion, gender, age, race, nationality and class.
5. They are to advice patients in all matters related to the care.
6. Nurses/midwives/FWVs are to inform patients about all the related issues of treatment because it is the legal right of the patient.
7. Maintain a safe environment to promote recovery, prevent complication and ensure wellbeing of patients.
8. Maintain and ensure a basic professional standard.
9. They are not allowed to undertake any nursing practice without authority.
10. They are prohibited to do any practice about which they do not have the required skill.
11. They are not allowed to participate or assist in any unethical medical and nursing practice.
12. They are not allowed to restrain a patient unless they become harmful to others or themselves.
13. To maintain the professional standard, they are not to accept money from the patient, patient's family or relatives.
14. They are also responsible to extend their professional knowledge through training.
15. They are not allowed to misuse the property of hospital or property under anybody's control.
16. They should not have any engagement in activities which might disgrace the profession itself.

Source: BMDC 1983

to collect, publish and disseminate the Code of Ethics among the nurse. In reality, no doctor or nurse ever received any communication from BMDC or BNC on ethical standards.

Code of ethics and professional conduct for the nursing, midwifery and FWVs

The code of conduct also provides a detailed list of do's and don'ts for the nurses, midwives and Family Welfare Visitors (FWVs). The codes are depicted under three major sections. The first section gives a guideline about how they should behave with patients; the second section provides guidelines on their practice and the third section states a set of rules in order to maintain a standard in their practice.

The code approved and prescribed by BMDC and BNC are of international standard, but are still merely on paper. One may also question the applicability of the code given the realities in the health sector and the level of preparedness among the concerned health professionals. It will be revealed from the upcoming sections and chapters that physicians frequently engage in unethical practices that are completely contrary to the provisions made in the Code of Ethics. In terms of the BNC approved codes, it may be argued that they are not contextualised according to the general qualifications of the nurses and the real life conditions in which they work.

Ethical standard in practice

Bangladesh is plagued by deteriorating of quality health service accompanied by increased corruption and medical malpractices. People are extremely concerned about the conditions and performance of public hospitals where the bulk of the responsibility lies with the physicians. The 2007 corruption survey report of Transparency International Bangladesh (TIB) reveals that two out of five patients faced harassment in receiving service from public hospitals (Table 4.1).

Almost half of the patients among them reported that they had to pay a bribe at the hospitals to get service.

Table 4.1: Types of bribe takers

	% of households members paying bribe		
	Rural	Urban	Overall
Doctors	47.6	33.9	42.2
Nurses	20.0	32.2	24.8
Employees	5.2	14.8	9.0
Ward boy	2.8	4.4	3.4
Brokers	17.0	12.4	15.2
Others	7.4	2.3	5.4
Total	100.0	100.0	100.0

Source: TIB Corruption Survey 2007

Table 4.2: Status of service recipients reported to be harassed

Faced harassment	% of households members		
	Rural	Urban	Overall
Yes	39.8	37.5	39.0
No	60.2	62.5	61.0
Total	100.0	100.0	100.0

Source: TIB Corruption Survey 2007

Doctors are reported to be the highest bribe takers followed by nurses (Table 4.2).

Public physicians are not very attentive to maintaining regular attendance in their work place either in the public health complex or in the public hospital. Private practice is the major reason behind this as confirmed by a TIB survey (Zaman & Abdul 2006). A World Bank study (Chaudhury & Hammer

2003) reports that the absentee rate of physicians in public health centres is more than 40 percent on average. In larger hospitals it is 40 percent compared to 74 percent in small health centres (such as the Union centre) that are often run by one doctor only.

The existence of illegal contracts among doctors and dentists with pharmaceutical companies and diagnostic centres is another widely reported complaint against physicians, irrespective of whether they are private or public practitioners. The TIB Corruption Survey 2007 found that 22.7 percent of the patients of public health services reported that they were advised to visit the private chamber/clinic of the doctor. The

Box 4.3 BNC approved codes

1. No registered medical and dental practitioners are allowed to issue false certificate.
2. Doctors and dentists are not allowed to accept any illegal gratification from the patient.
3. Professionals are not allowed to engage in illegal abortion or prescribing drugs which violate the Dangerous Drug Act. BMDC can also suspend or cancel their registration if doctors or dentists are convicted of driving under the influence of alcohol or found to be addicted to drugs.
4. a) Medical/Dental practitioner is not to have any kind of improper relationship with his patient or any person with whom he has professional relationship. If a doctor is found guilty in divorce proceedings s/he will be subjected to suspension or cancellation of registration. b) Medical professionals are required to maintain professional secrecy.
5. Any gross negligence will be counted as professional misconduct. If a doctor/dentist assist any unregistered person, it will be considered as a professional misconduct.
6. The Council may take disciplinary action against the professionals who are convicted of offences such as false pretences, forgery, fraud, theft, indecent behaviour or assault.
7. Professionals are not allowed to share any fees with other professionals or other persons as commission.
8. Doctors and dentists are prohibited to use any false titles which make people infer that the professional holds any additional qualification unless it is conferred by a legal authority. They are also not permitted to use any sort of advertising and canvassing to attract patients.
9. The medical/dental practitioners who are actively involved in private practice are not allowed to disclose their identity when they appear in radio or television. Such appearance should be limited to health education only.
10. All registered doctors/dentists must inform the medical association if they change their address or make any changes in the hours of private practice. They should also publish the announcement of address change in local newspapers, either simultaneously in three papers, or consecutively over three days in the same newspaper.
11. BMDC also expects that a medical or dental practitioner will not charge fees from one another for their service.

Source: BNC 2003

study also reported that 39.5 percent of sample households were asked to do pathological tests when their family members consulted with the public physicians. The 2007 report by Consumer International (CI) shows that doctors are the main targets for the promotional activities of the drug companies in the developing world. This report was complemented by a month long investigation by the Daily New Age which revealed that as incentive for prescribing medicines of selected pharmaceutical companies, physicians get a wide range of returns including monthly payments, air ticket, and payment of mobile phone bills etc. Popular and well-known doctors often get laptops, air conditioners, televisions and even cars in return to prescribing selected medicines (Hayat 2008). Doctors even welcome medical representatives of the pharmaceutical companies to be present during the office hours making the patients suffer. More elaborate discussion on pharmaceutical promotional practices can be found in Chapter 7 of this report.

Another report found that doctors of Dhaka Medical College Hospital (DMCH) referred half of their patients

to the private diagnostic centres in spite of having laboratory facilities at the hospital where 90 percent of the pathological tests and other investigations are available (Ashraf & Mollah 2008).

Patients' satisfaction highly depends on the service orientation of the physicians and nurses; but this issue does not get proper attention in Bangladesh. The 2002 TIB report card survey depicts that half of the patients felt they did not receive proper attention of the doctors in the public hospitals.

Problems with enforcing mechanisms

Doctors and nurses who are liable for poor ethical standard in medical profession are not the only actors to blame. The professional regulatory bodies responsible for enforcing ethical standards in the profession are equally responsible for not preventing these malpractices from taking place. The problems of the enforcement mechanisms of the regulatory bodies have been discussed in the previous chapter.

Box 4.4: Code of ethics: Theory vs. practice

Ethics in theory (Code of Ethics, BMDC 2002)	Ethics in Practice
Registered doctors/dentists are not allowed to take any gratification from patients.	Not Practiced in reality.
No registered doctors/dentist will issue fake certificate.	Not maintained.
Doctors will not be engaged with any improper abuse of his skills, such as abortion, prescribing dangerous drugs etc.	Not practiced in reality.
Doctors will not have any improper relationship (for e.g. adultery) with the patient or his relatives. The secrecy should also be maintained.	No report on improper relationship or secrecy violation has been ever found.
Disregard of professional responsibility to the patient, i.e. he will not show any gross negligence to patient or will not assist an unregistered person.	Least practiced in reality.
No medical/dental practitioner shall commercialise any secret remedy or share any professional fees with any other medical/dental practitioner or other person in the form of a commission.	Not practiced.
Doctors are not to use false title, do any sort of advertisement or canvassing.	Not practiced by professionals. Title is widely used without taking permission from the authority.
When announcing their appearance on the radio or the television on professional subjects, medical/dental practitioner shall not disclose their identity or allow it to be disclosed.	Not practiced.
Any change of address or of the hours of practice have to be announced in advance through proper notice.	Not practiced.



Availability and use of essential drugs in the primary health care facilities

Introduction

An essential drug is a medicine considered as indispensable for treatment of a disease. The availability and accessibility to essential drugs are crucial for successful functioning of any health systems (Chaudhury et al. 2005). The National Drug Policy (NDP) of 1982 was instrumental to improve the supply of quality essential drugs in Bangladesh at an affordable price (Islam 1999). An Essential Drug List (EDL) initially identified 150 (45 for rural PHC facilities) drugs with controlled price which was later reduced to 117 in 1993. The EDL has been revised and updated recently after 25 years to reflect advancement in medical science and now contains 209 drugs (Khan 2008).

The pharmaceutical industry in Bangladesh has developed rapidly following the implementation of the National Drug Policy of 1982 (Reich 1994). In 2005, the pharmaceutical market was worth US\$ 504 million and has been increasing at a steady average rate of 17.2% annually (Begum 2007). In 1980, eight multinational companies manufactured 75% of all products (by value) while indigenous or local pharmaceuticals now claim a market share of more than 75% (Ahmed & Hossain 2007). Out of the top ten pharmaceutical companies now, eight are local.

The local pharmaceutical industry is capable of producing all the 209 items under the EDL and can meet the demands of the country. As per the existing drug policy, 60% of the production capacity of a company should be invested in producing medicines under EDL. 117 items out of 209 of the EDL are amenable to price control.

One of the main objectives of the Drug Policy of 1982 was to make available quality essential drugs at an affordable price. Thanks to the policy of buying raw materials from international competitive markets under the NDP of 1982, the prices of the essential drugs fell sharply in the following years (Ahmed 2004). From 1981 to 1991, retail price of drugs increased by

only 20% in local currency. Before the Drug Policy, the retail price of drugs was fixed by the Ministry of Trade upon discussion with Directorate of Drug Administration. Following recommendations of the NDP, a pricing committee with experts from stakeholder groups decides on the price of the locally produced drugs, and also endorse prices of imported drugs/ non-essential drugs produced locally after review.

In other words, Government of Bangladesh has set out the policy in such a way that essential medicines should be made available to the population of Bangladesh at an affordable price. Only good governance can ensure proper implementation of such policy. This is of particular importance since Bangladesh is one of the few countries where there is high out-of-pocket (OOP) expenditure on drugs by households which amounts to around 70% of the total OOP expenditure on health (GoB 2003).

In this year's report, Bangladesh Health Watch attempts to study governance issues related to the functioning of health systems in Bangladesh. This particular section documents the achievements of the three outcome objectives (out of four; quality of drug excluded) of the National Drug Policy of Bangladesh with respect to availability, affordability, and rational use. So far, no comprehensive study on the effectiveness of drug policy have been done in Bangladesh except a study on drug use at public sector PHC facilities about 15 years ago (Guyon et al. 1994). This study is intended to fill in the knowledge gap by exploring the current state of Essential Drug use in the country.

BHW commissioned a research team to examine how far the outcome objectives of the National Drug Policy in terms of availability, affordability, and rational use have been achieved with respect to essential drugs in the public and private sectors PHC facilities in both rural and urban areas of Bangladesh. *Availability* refers to geographical access, i.e., whether the full range of essential drugs are available throughout the

country, and whether private pharmacies or other licensed drug outlets are accessible to the majority of the population. *Affordability* refers to financial access, i.e. whether drugs that are needed can be obtained at a price affordable to the majority of the population and how the poor gains access. *Rational use* refers to whether drugs are prescribed, dispensed and consumed in a therapeutically rational manner; whether private health providers, pharmacists, pharmacy aides and other dispensers are providing good advice on consumer purchases; and whether patients and consumers are buying therapeutic quantities of prescribed or recommended drugs (Bennett, Quick & Velásquez 1997). The study covered a representative sample of UHCs (30) and drug shops (30) in the rural areas and a sample of urban clinics (20) in the Dhaka City Corporation (DCC) area for observation, exit interview and a mini-market survey. The details of the study objectives and methodology are provided in Annex 2.

Findings

Polypharmacy on the rise

Polypharmacy or prescribing three or more drugs increases the risk of drug interactions, dispensing errors and proper comprehension of correct dosage schedules (INRUD & WHO 1993). The study found polypharmacy to have been practised in a greater extent, at a staggering 33%, than in the past (5% reported by Guyon et al. 1994) in the UHCs. On an average, the number of drugs prescribed per visit of patients in the UHCs (2.2) was higher than that in the past (1.4) (Guyon et al. 1994).

Table 5.1: Polypharmacy by study areas

Prescription containing no. of drugs	Urban		
	Rural UHCs (%)	Drug Shops (%)	DCC/NGO Clinics (%)
One	18.1	5.4	14.8
Two	49.0	33.1	38.9
Three	27.0	42.8	30.0
Four or more	5.9	18.7	16.2
Total number	900	900	596

Only 5% of the prescriptions from the drug shops contained a single drug compared to 15% from the

urban clinics and 18% from the UHCs (Table 5.1). Prescriptions having two drugs were mostly from UHCs (49%) compared to drug shops (33%) or urban clinics (39%). Polypharmacy such as three drugs (43%), and four or more drugs (19%) was most prominent in prescriptions from the drug shops.

Insufficient use of essential drugs

Average number of drugs prescribed per encounter (prescription) was highest for the drug shops (3) and lowest for the UHCs (2) (Table 5.2). The drug shops also prescribed injection in 4% of the encounters compared to none for the UHCs and urban clinics. In 44% of encounters in UHCs and urban clinics, an antibiotic was prescribed while the proportion rose to 60% in case of drug shops. In more than 60% of the encounters in the UHCs and the urban clinics, drugs were prescribed from the essential drug list (EDL) while the proportion was only 44% in case of drug shops.

Antibiotic use on the rise

The proportion of antibiotics prescribed in the UHCs irrespective of any specific disease (45%, see Table 5.2) was higher than 25% reported by Guyon et al. (1994) and also other earlier studies (Karande, Sankhe & Kulkarni 2005; Hamadeh et al. 2001; Shankar et al. 2002; Massele et al. 2001). Antibiotics prescribed were even higher in the drug shops (60%) where unqualified and semi-qualified providers like *palli chikitshoks* and medical assistants attended patients. This is not surprising as in rural Bangladesh, the provider/prescriber and the dispenser, are often the same person thus giving rise to conflict of interest (Axon 1994). To maximise profit, they might prescribe drugs in stock whether it is needed or not, especially the more expensive ones like the antibiotics. The situation is made worse by the aggressive marketing strategies of the pharmaceutical companies especially for the unqualified/semit-qualified providers. They are easily influenced by these efforts since they don't have any other channel of information from the formal sectors approaching them. Thus, irrational use of antibiotics is noticed across a broad spectrum of providers (Trap & Hansen 2001; Ahmed & Hossain 2007; Kristiansson et al. 2008; and Rahman et al. 2009) and is responsible for development of antibiotic resistance (Larsson 2003).

Table 5.2: Core drug use indicators by study areas

	Rural UHCs	Drug Shops	Urban* DCC/NGO Clinics	<i>Consulting and dispensing time</i>
Average number of drugs per encounter	2.2	2.8	2.5	
% of encounters with an antibiotic prescribed	45.0	59.8	42.7	
% of encounters with an injection prescribed	0.0	4.2	0.0	
% of drugs prescribed from essential drugs list	63.0	44.4	66.1	
Average consultation time (min)	1.8	5.1	5.8	
Average dispensing time (min)	0.9	NA	2.1	
% of drugs actually dispensed				The quality of care provided was measured by the time spent in consulting with the patient and dispensing the prescribed drugs which includes providing instruction on how to take the drugs. Average consulting and dispensing time in the UHCs appeared to have increased from what was found by Guyon et al. (1994), from less than one minute to two minutes and from 23 seconds to about 60 seconds respectively (Table 5.2).
% of drugs adequately labelled	76.3	NA	44.0	
% patient's knowledge of correct dosage (self-reported)	65.4	100.0	43.0	
% facilities having a copy of essential drugs list	73.0	90.0	76.0	
% facilities where at least 15 essential key drugs (from the reference list) are available	47.0	NA	55.0	
	6.0	NA	15.0	

* Dhaka City Corporation areas; NA=not applicable

Performance of Bangladesh in terms of rational use of drug

The Essential Drug List comprises of a core list of minimum medicine that satisfies the health care needs of the majority of the population in a particular country, and should be available at all times in adequate quantity and in appropriate dosage (Brudon et al. 1999). The latest updated and revised EDL in Bangladesh was released on 8th April, 2008 (GoB 2008). Only 47% of the UHCs and 55% of the urban clinics had a copy of the Essential Drugs List (Table 5.2). None of the facilities had all the 20 listed drugs (reference list prepared from the EDL for this study) for common illnesses. However, 6% of the UHCs and 15% of the urban clinics had at least 15 of the 20 listed drugs. An alarming decrease in the proportion of drugs prescribed from the EDL in the UHCs was observed (from 85% in 1994 to 63% in 2009) compared to the earlier study by Guyon et al. (1994). Similar level of prescription from EDL (around 60%) was reported in Serbia (Jankovic' et al. 1999) but higher level was reported in India (Karande, Sankhe & Kulkarni 2005), Laos (Keohavong et al. 2006), Tanzania (Nsimba 2006) and Cambodia (Chareonkul et al. 2002). It is clear that Bangladesh is behind other low-income countries in the aspect of rational drug use.

However, it still lacks behind other countries such as Serbia (Jankovic' et al. 1999). Such a short time is neither adequate for history-taking and examination of the patients nor for providing sufficient information on drug dosage schedule, and the necessity of completing the dosage as per instruction. The drug shops and the urban clinics performed better than the UHCs in this respect. It was revealed in the study that 73% patients in rural UHCs and 76% patients in urban clinics knew the correct dosage prescribed.

Drug dispensation quality shows mixed scenario

The proportion of drugs dispensed out of the ones prescribed, was much higher in the UHCs (76%) compared to the urban clinics (44%) (Table 5.2). None of the drugs dispensed from any of the facilities was labelled properly (name, generic name of drugs and dosages). In the present study, drugs were considered labelled if the drug could be identified by either the inscription on its body or the name printed when available in the original package. Even with this proxy indicator, it was found that the UHCs and the urban clinics were performing poorly in this aspect. Only 65% of the drugs dispensed in UHCs and 43% in the urban clinics were labelled. Poor labelling of drugs dispensed was also seen in India (Karande, Sankhe & Kulkarni 2005), Tanzania (Nsimba 2006) and Cambodia (Chareonkul et al. 2002).

Patients' knowledge of correct dosages was estimated in this study by self-reporting since proper labelling was mostly absent and instructions on how to take the drugs were given verbally. An improvement in the knowledge of correct dosages since 1994 (Guyon et al.) was observed in case of UHCs (from 57% to 73% in this study), comparable to other studies (Karande, Sankhe & Kulkarni 2005; Keohavong et al. 2006), while a lower level of such knowledge was observed in studies by Nsimba (2006) and Chareonkul et al. (2002).

Availability of essential drugs reduced

The facility indicators presented a mixed picture. While comparing with the previous study on UHCs (Guyon et al. 1994), an improvement was observed regarding the presence of the copy of the EDL (from 28% to

47%) but availability of essential drugs for treatment of common illnesses had deteriorated (from 63% to 6%, Table 5.2). Thus availability of essential drugs appeared to be a major constraint in rational management of common illnesses. This is also consistent with the common complaint of lack of medicines (other complaints being bad staff attitude, bad service, difficulty to reach, extra payment, non-availability of doctors, etc.) leading to further reduction in the use of government health services during 1999-2003 (Cockcroft et al. 2007).

Anarchy prevails in drug price

Table 5.3 presents the results of the mini-market survey for the lowest and highest price of selected

essential drugs for common illnesses. The anarchy prevailing in the drugs market is well amplified by the wide variation found in the price of drugs based on brands, sometimes the difference ranging from an overwhelming 500 to over 1000 percent. For example, the price of tablet IFA was amplified by a 1650%, one bottle of tablet B-Complex by 650%, tablet Mebendazole by 900%, Benzylbenzoate lotion by 817%, Chloramphenicol ointment by 543%, Miconazole ointment by 592%, and tablet Metronidazole by 500%.

The anarchy prevalent in the prices of essential drugs is a result of poor regulatory and supervisory activities by the Drug Administration authority. The prescribed drugs at the facilities are not always available and out-of-pocket expenditure for drugs is high in Bangladesh.

Table 5.3: Lowest and highest price of selected essential drugs for common illnesses (Taka)

Sl	Essential drug list	Current market price (Taka) % difference		
		Lowest price (Tk.)	Highest price (Tk.)	
1	ORS (Oral Rehydration Solution	2.00	5.00	150
2	Cotrimazole single table	0.80	2.50	213
3	Cotrimazol syrup	11.0	26.65	142
4	Amoxycline syrup	20.0	60.0	200
5	Ciprocine tablet	4.0	16.0	300
6	Ciprocine syrup	37.0	95.00	157
7	Aluminium hydroxide+ Magnesium hydroxide tablet	0.50	1.50	200
8	Aluminum hydroxide +magnesium hydroxide	11.0	65.00	491
9	Tab Ranitidine (150 mg)	1.00	4.00	300
10	Tablet Paracetamol (500 mg)	0.50	2.00	300
11	Tablet Acetylsalicylic cyclic (Aspirin 300mg)	0.50	2.00	300
12	Tablet IFA (Iron + Folic Acid)	0.20	3.50	1650
13	Tablet B complex per bottle	12.00	90.0	650
14	Tablet Ascorbic acid	0.50	2.00	300
15	Tablet Mebendazole	0.50	5.00	900
16	Tablet Albendazole	1.00	6.00	500
17	Tablet Atenolol 50mg	0.70	4.00	330
18	Tablet Prednisolon	0.50	1.50	200
19	Benzylbenzoate lotion 25%	6.0	55.0	817
20	Chloramphenicol eye drop	10.0	35.0	250
21	Chloramphenicol ointment	7.0	45.0	543
22	Nasal drop	6.0	35.00	483
23	Miconazol ointment	13.0	90.0	592
24	Tablet Metronidazole 400 mg	0.50	3.00	500

These factors contribute to the catastrophic health expenditure for the poor households (Xu et al. 2003; Doorslaer et al. 2007).

Weak state of drug governance and inadequately equipped infrastructure

The Directorate of Drug Administration (DDA) is the supreme regulatory authority in the country for drug related affairs such as licensing, production, import, export, quality control, and pricing. (ddabd.org n.d.). DDA is headed by a Director who is assisted by three Deputy Directors (one each for registration and quality control, inspection and licensing, and drug testing). There are 37 District offices staffed by 41 Superintendent of Drugs and 12 Drug Inspectors who are responsible for field level regulatory activities. A number of committees, such as the Drug Advisory Committee, Drug Control Committee, Pricing Committee, and Standing Committee for procurement of raw materials and import of finished drugs etc., comprising of experts from appropriate disciplines, advise on relevant matters to the licensing authority. Besides, there are two drug testing laboratories: one in Chittagong under the DDA and another in Dhaka under the Institute of Public Health (IPH) of the DGHS. These laboratories test the quality of the pre-registration as well as post-marketed drugs. The regulatory mechanism for the production, marketing and use of drugs is limited by the Drugs Act 1940 (rules made in 1946) and the Drugs (Control) Ordinance 1982 (ddabd.org n.d.).

New products enter the market everyday. With the meagre resources (such as two drug testing labs and around fifty drug inspectors/superintendents) at hand, it is very difficult for the DDA to supervise and monitor such a large sector. As a result, many drugs are entering the market without proper quality assessment procedures. This has resulted in flooding of the market with counterfeit drugs, sub-standard drugs

and expired drugs (Fake drugs flood Bangladesh 2004). These fake and low-quality drugs are frequently responsible for poisoning, sometimes death of people (UNHCR 2006), and development of resistance to life-saving antibiotics (Okeke et al. 1999).

Drugs in the public sector hospitals and facilities are distributed by the central medical stores (WHO 1985). Outside this sector, the retail distribution seems to be in a chaotic condition whereby no regulatory enforcement is in place. According to law, the persons dispensing drugs at drugstores should have at least a short training of eight weeks duration (certificate course) conducted by the Bangladesh Pharmaceutical Society (BPS) in cooperation with the Bangladesh Chemist and Druggist Samity (BCDS) through 45 tutorial centres before applying for a drug shop (pharmacy) license. But in practice, this is hardly followed. According to BCDS, there are about 64,000 licensed (14,000 member of the samity) and around 70,000 unlicensed drugstores in the country involved in selling drugs 'over-the-counter' (Zahedee 2008). Most of the sales people at these drug stores do not have training in either dispensing of drugs or in diagnosis and treatment. Since they have no other channel of information from the formal sectors, they fall easy prey to the aggressive marketing strategies of the pharmaceutical companies (Appalbaum 2006). Irrational use of drugs such as over prescribing, multi-drug prescribing, use of unnecessary expensive drugs and overuse of antibiotics and injections are the most common problems found with these retailers (Ahmed & Hossain 2007).

Drug retail shops are often the first and only source of health care outside home for majority of the patients in developing countries (Kamat & Nicther 1998) and Bangladesh is no exception. Anybody can buy any drug in any amount including addictive drugs without prescription from these drug stores. In reality, there are no 'prescription-only' drugs in Bangladesh. There is no monitoring and supervision system in place to regulate these drug stores.



Pharmaceutical promotion: Regulatory provisions, status of enforcement, awareness and compliance

Introduction

Pharmaceutical products play a critical role in health care everywhere in the world. Prescriptions are only effective if quality drugs are taken by the patients in proper dosage and schedule. Dependence of health care on pharmaceuticals has created a substantial market for drugs worldwide and the industry has been very aggressive in marketing and promoting their products. Like any other profit making industry, push for introducing new drug and/or increasing sale of drugs in order to maximise revenue is an obvious course of activity for all pharmaceuticals. Physicians are positioned between the industry and the patients through whom the drugs are brought to the end-users, especially when promotion through mass media is restricted for all pharmaceutical therapeutic products. Thus, they shoulder a major responsibility in all societies including Bangladesh where the regulatory framework for drug dispensing is weak. It is important to understand how drugs are marketed and promoted in such countries and the role of regulations in this transaction.

In the backdrop of these realities, a study on the topic was conducted under the auspices of the Bangladesh Health Watch. The study investigated i) the extent to which pharmaceutical promotional practices influence non-compliance of the regulatory guidelines, namely, the Drug (Control) Ordinance of 1982 and the Code of Pharmaceutical Marketing Practices, promulgated in 1994; and ii) explored the challenges in enforcing the regulations and the factors that play into causing these challenges. The study primarily used qualitative tools, such as in-depth interviews with medical representatives, physicians, RMPs and *palli chikitshoks*, observation of health care facilities, and focus group discussion (in the form of a roundtable) with CEOs and other top management staff of prominent pharmaceutical companies. Interviews and observations took place at various sites in Dhaka, Bogra and Chittagong. A brief prescription survey was also conducted for triangulation of the information gathered from the qualitative investigations. This chapter presents the findings of the study.

Promotional practices

Medical representatives meeting targets

In 2005, the pharmaceutical market of Bangladesh was worth US\$ 504 million and has been increasing at a steady average rate of 17.18% annually (Begum 2007). In 1980, eight multinational companies manufactured 75% of all products (by value) while indigenous pharmaceuticals now claim a market share of more than 75% (Ahmed & Hossain 2007). Out of the top ten pharmaceutical companies now, eight are indigenous. There are over 20,000 medical representatives currently employed by the entire range of pharmaceutical companies who basically promote pharmaceutical products. The companies seek fresh graduates in science with good academic records and select some of the smartest candidates through a rigorous screening process, following which the selected candidates have to undergo a two-month training course. Each medical representative (rep) is assigned a particular area and given a target calculated based on the annual sales target of the company and the number of doctors in that territory by the pharmaceutical company. Medical reps receive an increment or incentive based on the target achieved on top of their monthly salary. Doctors often give in to their persistent requests of "filling up targets". According to one physician:

"Reps are always anxious about meeting their targets ... there are several reps who I know closely. One of them requested me the other day, 'Sir, I need your help in fulfilling my target. If I can make it this time, I'll be able to go to China.' I thought I should support him."

Blurring lines of professional boundaries

At present, it is a common practice for the MRs to interact with the doctors at a personal level and physicians are generally comfortable with this approach. It was mentioned in several interviews that the professional

distance that used to be maintained between the physicians and MRs is gradually diminishing.

Aside from visits, medical reps also make it a point to do a close study of the personalities and preferences of each doctor. They call it "taking history" of the doctor to know what their "demands" are like. In the process of gathering background information on the doctors, they try to know their financial conditions, their past interactions with pharmaceutical companies, whether they have contracted with a specific company or not, and often about their families and their health conditions. This information helps them become intimate with the doctors and interact with them in capacities beyond professional boundaries. Common examples include medical reps running personal errands for doctors, doing household chores, arranging for transportation for the physicians' personal and family use, sending birthday and anniversary greetings and presents, bringing sweets and medicines as "gifts" for members of the doctors' family and loved ones.

"Gifts and inducements"

The code of pharmaceutical marketing defines the gifts for medical professionals. In clause 19-1 under the section on 'gifts and inducements', it is mentioned that subject to Clause 19-2, '*no gift or financial inducement shall be offered or given to members of the medical profession for proposes of sales promotion.*'

"Shudhu kothay chira bhije na" ("Just words are not good enough to convince")

The title of this section is a statement made by a medical representative. This represents the sentiment of a medical rep based on their experience in dealing with physicians. The most commonly used promotional materials are literatures, journals, notepads, pens and drug samples. However, there is an increasing tendency of the pharmaceutical companies to give almost anything as gifts. Gift items are not necessarily for professional use; personal and household items are also quite common. A wide array of items from showpieces, torches, books, stethoscopes, money bags, belts, dinner sets, tiffin boxes, calendars, mobile cards, body sprays, ties, coat pins, key rings, bed sheets, suit pieces, tissue boxes, and tea bags to expensive gifts like ceiling fans, TVs, fridges, air

conditioners, generators, IPSs, mobile sets, cars, and apartments are all examples of what is included in the list of gifts and inducements offered by the companies.

"Pharmaceutical companies have been providing everything except for grocery (kaacha bazaar). During the last Eid they provided perfumed rice (polao er chal), sugar, vermicelli (semai) etc. So it's not easy to say what they don't offer us." - A doctor

Induction at an early stage

Doctors shared in their interviews how they started receiving small gifts from pharmaceutical companies since the time of their internships. Gifts offered at that time ranged from mobile cards, crockery, shirts, wrist watches, to medical books and journals.

Contracts with companies

Companies get into contracts with the doctors that vary according to the popularity of the doctor and the capacity of the company. The duration of these contracts can be from one month to one year and the amount may vary according to the popularity ("potentially", as referred to by the MRs) of the doctor. The study findings revealed that the amount of money varies from one thousand taka to ten lacs taka per month. These deals can also be made in exchange of expensive items such as TV, fridge, laptop, air conditioner, interior decoration service for the chamber, or even cars or apartments. Doctors can get into such contracts with several companies at the same time according to their "potentially". One MR shared:

"I know a very potential doctor of my territory whose chamber rent is provided by one company while his driver's salary and attendant's salary are paid by two other companies."

While companies push their products and offer rewards to contracted doctors based on prescriptions written for their products, they also proactively offer commissions even when the doctor prescribes drugs without any particular obligation or allegiance to the company.

Targeting the informal sector

There are small-scale local pharmaceuticals in the market who are unable to compete with the market leaders in terms of quality of drug or the promotional offers for medical professionals. Therefore, they target a

variety of other actors in the health care system like the LMFs, Rural Medical Practitioners-*Palli Chikitshaks* (RMP-PC), chemists, or even the attendants of the doctors and security guards of private and public facilities. According to an official at the DDA:

"Many small companies with no promotional workforce or field force get into contract with fixed pharmacies and drug shops or clients for selling their drugs in lieu of payments."

The study findings revealed that the market leaders don't have much promotional activities with chemists. Drug sellers can earn a better profit by selling drugs of a small local company since the purchase prices are much lower than that for the same generics produced by multinational companies. Chemists are more likely to sell these products when a client comes without a prescription. MRs mentioned that sometimes the chemist altered the prescriptions on purpose in order to dispense the brand of a company with whom he has an "agreement". In our in-depth interviews with the MRs of large or medium range companies, it was revealed that their primary target is to promote drugs to the doctors while the MRs of smaller and more inconspicuous companies said that their prime targets are the chemists.

The RMPs usually have good relationship with small companies. Names of some companies mentioned by them were never mentioned by the doctors or MRs interviewed in the urban sites. The RMPs claimed that they prescribe the drugs of these small companies because they came to them on a regular basis to promote their drugs and they entertained the RMPs with "*cha-nashta*" (tea and snacks). The market leaders in the pharmaceutical industry don't visit them as much. All the RMPs interviewed in the study were owners of drug stores. The other reason they mentioned for selling drugs of these small local companies was the low price of their products, however, the quality of which may be questionable.

Aiding the knowledge base of practitioners

The most conventional method used by pharmaceuticals to promote their brand is product detailing. This is a process by which a MR describes his product in terms of its pharmacological properties, indications, dosages,

side effects, price, and benefits over other generics or other brands. They use "literature" or "journal" that are produced by their own companies upon consulting books, journals, internet sources, etc. According to them, this is a process of sharing scientific information on a drug with the doctors and orienting them to their brands. The doctors also valued this service in general:

"Medical reps provide important information which helps us in staying up-to-date as we ourselves remain busy and sometimes fail to collect the information. They are also a good source of information about new drugs because we don't get them from the textbooks".

- A doctor

However, since there are a number of pharmaceutical companies manufacturing the same drug, the doctors often have to listen to the same information from different MRs. They generally pay more attention when there is information on a new drug. The study revealed that doctors are generally not that interested in receiving literature from medical representatives. It was noted during several observations that doctors were mainly interested in the sample drugs that the MRs brought, and often kept the literature aside.

The doctors acknowledged the role of pharmaceutical companies in disseminating new information, but they also added that the quality of information provided by some companies was questionable. The doctors often rely on the information provided by reputed companies since they don't have the time to verify the information. In case of doubt, they ask the companies to provide supporting documents. The doctors also complained about the information synthesis and non-disclosure of full information.

A study conducted in 2005 by the Department of Pharmacology at the Ibrahim Medical Hospital revealed that prescribing information of drugs presented in the manufacturers' product literatures contained 70% more indications than recommended in BNF (British National Formulary) 47, 77.5% fewer cautions, 71.25% less side effects and 55% fewer contraindications. This data was based on an analysis conducted for 80 different drugs (Haque 2005). The study also revealed that while side effects are understated, possible indications of drugs tend to be highly overstated for most drugs.

While manufacturers tend to exaggerate the claims in the literature, there is little capacity of the DDA to monitor the volume of literature produced every month by the industry. Moreover, the BDNF (Bangladesh National Formulary) also struggles to stay up-to-date with the most current information that can be matched with the literatures produced by the drug companies.

"We have updated the BDNF from Volume I to Volume III. But we do not have the manpower for continuous updating and we get no support from the Ministry either. We have only one doctor to review the literature. There are around 800 companies and most of the big companies produce more than 30 literatures every month. It is not possible for one doctor to check all the literatures thoroughly. We try to check the doses, indication and side effects in most cases." - Official at the DDA

Which factors determine prescription?

All the doctors agreed that getting into contract with one or more pharmaceutical companies influences the prescription pattern of the doctors and unnecessary drugs can be prescribed due to obligations created through contracts or by receiving other benefits. A doctor commented:

"When a company makes a contract with a doctor they give him a specific target. To achieve the target sometimes the doctor prescribes drugs, that are not necessary. I saw some of my colleagues prescribe antibiotic where only Paracetamol could do."

The study also revealed that the irrationality was not only in prescribing unnecessary drugs; it also exists in the dosage prescribed. Doctors usually don't prescribe drugs of small or unknown companies because of the questionable quality. However, there are some doctors who prescribe the drugs of unknown local companies, knowing fully well that the efficacy of these drugs may not be up to the standard. It was also revealed in the study that doctors still prescribe these drugs by increasing the number of dosages or increasing the frequency of intake. A medical representative shared in his interview:

"I have seen a doctor prescribe Cap. ciprofloxacin 500 mg, two tabs twice daily for seven days. But the recommended dose is one tablet twice daily for seven days. He actually prescribed the drug of a small

company. When I asked him about the dose he said, do you think companies like this really provide 500 mg in their tablet? I gave two tablets so that they actually get 500mg."

There is no way for doctors to verify the accurate amount of active ingredient in these drugs and therefore their prescribing pattern is also based on assumptions. Adverse drug reaction or other harmful health outcomes are possible due to such practice. A recent example of the effects of substandard drugs was the case of Rid Pharma illustrated in Box 6.2.

Irrational use of drugs can also occur as a result of the constant persuasion of the MRs. Doctors who usually don't receive any benefit from the companies may also become susceptible to favouring a medical representative and succumb to prescribing additional drugs even when they are not necessary. One doctor admitted this while talking about his own prescription habit:

"There are some MRs who are very courteous and visit me regularly. But I usually don't prescribe their drug because they work in a small company and I am not confident about the quality [of drug]. But as they come regularly I sometimes prescribe their vitamins."

Box 6.1: 25% savings of the patients compromised in lieu of gift

The researchers collected a list of some "loyal" cardiologists of one leading pharmaceutical company (Company X). During data collection a commonly prescribed cardiac drug (anti-hypertensive) was being specially promoted to the doctors by giving a desktop worth Tk. 220 to each. The study team visited 20 of the doctors targeted for this special promotional scheme and collected 102 prescriptions for analysis.

The analysis revealed that among the 102 patients, 98 were prescribed an antihypertensive. Among these 98 patients 79 (80.6%) were prescribed the antihypertensive brand of Company X that was being promoted while the rest 19 (19.4%) got other anti-hypertensive brands.

Anti-hypertensive drugs are usually prescribed for lifetime. This ensures life-long sales of that particular anti-hypertensive brand of Company X for at least the 79 patients whose prescriptions were collected. An analysis of the market price of some other brands of the same anti-hypertensive revealed that the patients could buy the drug of another reputed company for 25% of the cost if the doctor had prescribed it, or if a generic was prescribed and the patient had the option to buy a cheaper drug.

Investing in intelligence and competition

It was interesting to observe that while the MRs are active in the field to promote the products of their respective companies, the company headquarters are also putting in a lot of efforts in gathering intelligence about the doctors, especially their prescriptions.

Maintaining doctors' database

Companies maintain extensive databases of doctors and other health care providers in order to keep track of who prescribes what and also their mobility. The databases are constantly updated with information gathered from medical reps and regional sales offices. Companies also offered training on personality types of doctors in order for the MRs to tailor their strategy accordingly.

Engaging in fierce competition

There has been a sharp increase in the number of pharmaceutical companies in the last two decades, from 110 companies in the 1990s to about 800 manufacturers that are currently operating, of which 237 are allopathic (KII 2009). Local companies over these years have built capacity to manufacture some expensive drugs at cheaper rates. A significant change in the promotional strategies of the pharmaceutical companies is also noticed. In certain locations that are of significance to the industry, e.g. near medical college hospitals and popular clinics, top companies may assign up to five MRs, whereas medium size companies may assign one or two.

Prescription monitoring

Companies have to ensure that their drugs are not just prescribed once or twice, rather that doctors make it a habit of prescribing their products. To keep track of the physician's prescription patterns, the top companies purchase prescription survey reports from a research firm called 4P Market Research and Consultancy.¹ From this data, they generate a region-wise list of which doctor is prescribing which particular brands. It costs about taka two hundred thousand per

year to purchase the report (KII 2009). On top of the 4P report, some large companies also have their own prescription survey team monitoring the performance of their brands.

Besides the prescription share report, pharmaceutical companies also purchase data from an international organisation called Intercontinental Marketing Services (IMS)². The study revealed that currently nine companies are purchasing IMS report at Tk. 1,100,000 per report.

Issues in drug governance

Inadequate staff

It is evident from the above findings that pharmaceuticals are not abiding by any code or norm and there is serious lack of regulatory intervention. As per the existing National Drug Policy, Directorate of Drug Administration (DDA) is the authority to oversee these issues. There are plenty of governance issues which need to be addressed by the DDA. Interview with the official at the DDA revealed the following:

"Shortage of manpower is one of the main constraints that we are struggling with. In 1982 we had only 110 manufacturers in the country while at present there are around 800; out of these 237 are Allopathic, 266 Unani around 170 Ayurvedic and rest are others. Annually the manufacturers produce medicines worth 5,000 crore taka. The pharmaceutical market has expanded but not our manpower and resources to cope with this market. Currently we have only 52% of the allotted workforce. Since 1982 only two new appointments were made. On the other hand many of our staff have retired making the workforce crisis more acute. We sent a proposal to the Ministry of Health in 2014 to appoint new staffs and proposed for a total of 389 staff in the department to increase our capacity. Ministry of Health accepted our proposal and sent it to The Ministry of Establishment; till now it is in the Ministry for approval. The governments

¹ 4P Market Research and Consultancy is a research firm based in Dhaka that specialises in pharmaceutical consultancy. They audit brand performance by means of prescription survey and publish a report every month. Although it was revealed from the KIIs of this study that each of these reports cost the pharmaceuticals about two lacs taka per month, 4P representative refused to disclose the price of the research reports.

² IMS Health, Inc., founded in 1954, is the leading provider of global market information to the pharmaceuticals and health care industries. Compiling information into more than 10,000 reports, available on a regularly updated basis, IMS Health provides a wide variety of market knowledge to support strategic decision-making in all aspects of pharmaceutical company operations. The company uses the latest information technology to provide real-time information and rapid results. The company operates in more than 100 countries around the world, collecting information from more than 29,000 data sources, including drug manufacturers, wholesalers, retailers, pharmacies, hospitals, managed care providers, and long-term care facilities. Customers include the major pharmaceutical companies, as well as government and regulatory agencies, financial analysts, researchers, and educators (IMS Health n.d.).

have changed over the past years but the proposal is lying unapproved." - An official at the DDA

The situation in the district offices is even worse. There is only one staff per office with very little logistics support. Requests for increasing the workforce has been falling into deaf ears for the past six years.

Regulation of the informal sector

While government regulatory authorities have the power to intervene only in case of registered physicians, there is a vast number (nearly 80%) of the health workforce who remain outside their jurisdiction. However, pharmaceutical companies have identified the huge potential in the informal sector and moved ahead to "build capacity" of the rural medical practitioners (RMPs) and *polli chikitshoks* (PCs) regarding their products and prescriptions. The companies consider their initiative of educating the RMPs and PCs as a part of their 'corporate social responsibility'.

Varying meanings of "ethics"

Despite the existing code and ordinances governing their practices, the medical representatives were completely unaware that any such provision existed. Most doctors also mentioned that they were unaware of any code for promotional practices. The way "ethical behaviour" was described by various stakeholders and players in the industry significantly varied from one another. According to the medical representatives, an "ethical" doctor was the one who is "loyal" to one particular company and prescribes only their drugs, whereas an "unethical" doctor was the one who maintained contracts with several companies and even bargained with the medical reps for benefits by quoting offers of other companies. While only a few medical reps considered both behaviours as unethical, they agreed that the latter behaviour was worse.

Resignation to status quo

Across most of the interviews with doctors and officials in regulatory bodies, there has been an undertone of powerlessness and resignation regarding the current practices and an acceptance of the status quo. While there is despair, there is also hope regarding the "new generation" and speculations of the ethical and moral values to be changing towards the right direction.

"Nothing will change by making laws or talking about ethics... Do you think doctors don't know what's right or wrong? To whom are you going to teach this? In the end, if someone doesn't want to go by certain principles, no one has anything to do about it! It's a matter of conscience." - An official at BMDC

Who bears the cost?

Financial cost: There are over 20,000 medical representatives currently employed by the entire range of pharmaceutical companies. From the discussions so far, it is clear that the promotional budget of the industry allocated to gifts and inducements is quite high. Interviews with all stakeholders indicated that the high price of drugs and the push for achieving targets for selling drugs is an effort towards recovering the investment made by the companies in producing and marketing the drugs. The cost is eventually recovered by raising the drug prices and by having end-users purchase more drugs than necessary.

Health cost: Besides bearing the financial cost of over-prescription by doctors, patients are also exposed to contraindications and side-effects of the drugs that are unnecessarily prescribed. Physicians mentioned that they test the effectiveness of new drugs by giving samples to poor patients. For many drugs, the effects may not be immediate but may manifest in the long run. These health costs are also borne by patients who don't have a choice but to trust the doctors' prescriptions. Another common phenomenon is prescribing antibiotics and vitamins regardless of the patients' condition. There are risks of developing resistance to antibiotics to say the least while doctors have mentioned in their interviews that they often prescribe antibiotics and vitamins of companies with whom they have "good relationship". The interest of the patients' health in such cases is secondary.

Cost of time: According to Bangladesh Health Watch report 2007, there are only 7.7 formal healthcare providers (physicians, dentists and nurses combined) per 10,000 people. This already indicates the immense pressure doctors undergo in managing patient load on any given day, especially in public facilities. In addition, patients have to travel for several hours in rural areas to get to health care facilities by

foregoing other daily household/work responsibilities. If on an average 15-20 medical representatives visit a doctor on any given day and do not maintain their assigned visiting hours, this automatically means taking time away from what should rightfully be dedicated to the patients.

Lessons from local and international initiatives

No Free Lunch: A potential model for monitoring and advocacy

With the leadership of an Internist doctor Bob Goodman, "No Free Lunch"-a US based not-for-profit organisation (sometimes in collaboration with the American Medical Students' Association) organises outreach sessions on convincing physicians to refuse gifts, money, or hospitality from pharmaceutical companies. The group believes marketing tactics of drug companies influence prescribing behaviour of doctors. The members of the group are also health care providers (No free lunch n.d.).

Healthy Skepticism

Healthy Skepticism, established in 1983 as Medical Lobby for Appropriate Marketing (MaLAM) in Austria, is an international non-profit organisation for health professionals and includes everyone with an interest in improving health. Its objective is to work on misleading promotion in developing countries where the consequences may be worse because of weak regulatory mechanisms and lack of independent information.

Gifts ban in Massachusetts

Massachusetts has issued a regulation implementing a sweeping new regime affecting the way biotechnology pharmaceutical and medical device companies can market their products within the Commonwealth. Among other things, the regulation significantly limits

the promotional gifts, including meals that companies can provide to doctors and other health care practitioners as part of their promotional programmes.

Initiative of the Consumers' Association of Bangladesh

The Consumers' Association of Bangladesh is currently undertaking a research as part of an international study being conducted by the International Consumers' Association (based in Kuala Lumpur) to gather information from doctors about the various types of promotional items offered to them by the pharmaceutical companies. The study is using a tool called the "Doctor's Diary" whereby doctors have to note down the name of the companies and gifts/samples and different kinds of promotional offers (such as seminar, conference, and workshops) they get from the pharmaceutical companies over a certain period of time. In their experience, it was extremely challenging to enrol doctors to participate in the survey; according to the Association:

"Some doctors initially agreed to participate in the research but later withdrew saying 'we are not the right people to speak out.' We are having difficulty in getting their written consent. We all know about the unethical practices but hardly any doctor is willing to talk about it. No doctor will admit to the fact that they receive even household gifts and foreign trips from the pharmaceutical companies."

Local initiative on promoting rational use of medicine

The pharmacology department of Bangabandhu Sheikh Mujib Medical University organised a 3-day conference in mid-2009 with mid-level faculty members of pharmacology from various medical colleges to share knowledge on Rational Use of Medicine and to dissect the factors that affect rational prescribing. Regular initiatives like this can equip medical college faculty with the knowledge to impart to their students on ethical practice related to drug use.

Box 6.2: Paracetamol syrup killing children: Who is to be accountable?

Between June and August of 2009, death incidences of over 27 children from kidney failure were reported and intake of toxic paracetamol syrup produced by Rid Pharmaceutical Company was attributed to cause these deaths. Similar incidents had taken place in the early 1990s and in 1996. The Health Minister announced that "maximum punishment as per law" would be given to persons responsible for this fatality. Several committees were formed to investigate the issue, including a four-member committee by the health ministry and a seven-member investigation body. Interestingly, none of the committees included a pharmacist.

While fingers are being pointed at pharmaceuticals engaged in low quality production of drugs in order to minimise cost and maximise profit, the Directorate of Drug Administration's role is also brought under scrutiny once again. With two ill-equipped laboratories in Dhaka and Chittagong for testing drugs and inadequate human resources to follow up on pending cases, the DDA continues to prove its inefficiency in carrying out its responsibilities. There are drug superintendents in only 27 of the country's 64 districts. The DDA has even been ineffective in preventing banned and low quality medicines from the neighbouring countries being sold in Bangladesh medicine shops. DDA administrative officials reported to the media that about 200 pharmaceutical companies are manufacturing sub-standard medicines. Although hard evidence is not available, a state-appointed public prosecutor shared with the media that most inspectors are engaged in corruption and receive monthly allowances from blacklisted companies.

Besides the pitiful state of the DDA, there are also challenges to people's right to seek justice for their children falling victim to pharmaceutical malpractice. The current law does not allow members of the public to file cases directly if affected by adulterated drugs. The police can file a case in exceptional circumstances, but they too have to obtain permission from the Drug Administration for investigation. The Drug Administration responded to the problem by suspending manufacturing and marketing of the products of Rid Pharmaceutical Company in Brahmanbaria and published an announcement in three daily newspapers. But existing drugs in the market were not withdrawn or recalled resulting in additional deaths even after the public announcement.

The repeated instances of fatal outcomes and a careless and reactive approach of the administration once again points at the chronic inefficiency and disrespect towards governance and civil rights. No clear directives are available yet to indicate the way forward to prevent any further instances of this nature and to bring the offenders to justice.

Sources: Zannat 2009; Rid's paracetamol claims another kid 2009; and Ahmed 2009



MEHEDI 09

Blood supply and transfusion services

Introduction

Blood transfusion is a critical life-saving procedure. However, if not carried out properly, it can lead to immediate or delayed life threatening complications. According to the World Health Organization (WHO) "inappropriate use of blood and blood products, coupled with transfusion of unscreened or improperly screened units, particularly in countries with poor blood safety programmes, increases the risk of transfusion-transmissible infections (TTIs) to recipients" (WHO 2009). Transfusion-transmissible infections (TTI) are common in many countries including Bangladesh because of weaker blood transfusion policies and/or their enforcements resulting in unsafe practices.

The World Health Organization recommends (WHO 2009) ensuring:

- ⌘ availability of adequate supplies of blood and blood products and their accessibility to all patients requiring transfusion,
- ⌘ safety of blood and blood products, and
- ⌘ safe and appropriate clinical use of blood and blood products.

The Blood Transfusion Safety (BTS) guideline of WHO further recommends, establishing sustainable national blood safety programmes that ensure provision of safe, high quality blood and blood products accessible to all patients requiring transfusion and their safe and appropriate use.

The Centers for Disease Control and Prevention (CDC 2008), USA, also recommends reducing the risk of transfusion-transmissible infections, especially HIV, by restricting blood donations to volunteers, non-remunerated donors, and imposing mandatory blood screening. CDC, however, indicated that a slim chance of human error during screening, viz., false negatives in case of HIV and transmission of infections from donors during the window period remains.

This chapter presents findings from a study carried out during the first half of 2009 to ascertain the current policy and practices governing blood transfusion in Bangladesh. Forty two facilities with provision of blood transfusion were selected for this study. The facilities belonged to one of the following six categories: 1) government and private medical college hospitals; 2) district hospitals, specialised hospitals, and MCWCs; 3) upazila health complexes; 4) non-commercial blood banks; 5) commercial blood banks; and 6) private clinics and pathology centres. Sampling was done in such a manner so that two third of selected facilities were part of government's safe blood transfusion programme (SBTP) while the rest were not. Details of the study methodology are given in Annex 2.

Blood transfusion in Bangladesh

The annual demand for 'whole blood' in Bangladesh is estimated to be about 250,000 to 350,000 units (350 to 450 ml). Voluntary donations, exchange transfusions and commercial blood bank are the major sources of blood supply in the country. Only a decade ago, professional blood donors were the source for about 90 percent of the total blood supply in Bangladesh. However, the situation eventually changed with approximately 20 per cent of the required blood being procured through exchange donations, another 20 per cent from voluntary donations and the remaining 60 percent from professional donors (Hossain, Bhuiya & Streatfield 1996). According to a recent study (Hossain 2008), approximately 70 percent of transfused blood came from professional blood donors. It is perceived that only 40 to 50 percent of the transfused blood is screened for transmissible infections like HBsAg (hepatitis B), hepatitis C, VDRL (syphilis), and malarial parasites while the rest 50 to 60 percent remains unscreened in the supply. This poses great risks of TTIs to the already ailing patients who receive the blood.

Blood transfusion policy

Bangladesh did not have any policy on mandatory blood screening for TTIs for either public or private health facilities, prior to 2000. Professional blood donors were the major source and accounted for approximately 70 percent of transfused blood (Hossain 2008). A study estimated that 29 percent of these professional donors suffer from hepatitis-B, six percent from hepatitis-C, and 22 percent from syphilis (Khan et al. 1993; Daily Ittefaq, 10 January 1993, p.1; and Hossain 1994). The situation of blood screening, collection and handling had also been very dismal in the nineties despite rules in place regarding blood donation (Bhuiya, Hossain & Streatfield 1995). It is ironic that despite having the capacity, government blood banks rarely perform the required screening tests (Hossain, Bhuiya & Streatfield 1996). It is estimated that 100,000 people get infected with hepatitis B and syphilis every year through blood transfusion in Bangladesh (Hossain 1994).

Government of Bangladesh, in line with the WHO and CDC recommended guidelines, enacted the *Safe Blood Transfusion Law* in 2002 and the Act was passed in June 2008.

Box 7.1 June 2008 Act listed the following rules and regulations

1. Prohibition of collection and distribution of blood from professional donors and convicted prisoners
2. Mandatory blood cross-matching, screening and testing for HIV/AIDS, hepatitis B (HBsAg) and C, syphilis (VDRL), and malarial parasites
3. Maintaining specific health requirements for donors, such as:
 - ⌘ Donor's age to be within 18-60;
 - ⌘ Minimum weight to be 100 pounds;
 - ⌘ Normal body temperature, pulse rate, blood pressure, and 75 percent hemoglobin;
 - ⌘ No respiratory illness or skin disease; and
 - ⌘ No scar or marks showing sign of addiction or professional blood donation.

Source: Bangladesh Gazette 2008

In addition, the Bangladesh Gazette (2008) listed rules that ensure good laboratory practices in all aspects of blood grouping, compatibility testing,

component preparation, storage and transportation of blood and blood products for both government and non-government transfusion centres. However, it is commonly believed that in most cases this policy is not followed due to cost considerations and shortage of reagents, apparatus, and lack of skilled workers (Hossain 1994).

Implementation of blood transfusion policy

The alarming situation of blood transfusion practices led the government to undertake the Safe Blood Transfusion Programme (SBTP) in 98 blood transfusion centres in the year 2000, with the assistance from UNDP. The aim of the programme was to screen all donated blood for TTIs, enhance voluntary blood donation, and ensure rational use of blood. Since 2004, the SBTP was implemented under HIV/AIDS Prevention Project (HAPP) with the financial assistance of World Bank and DFID and continued up to December 2007 (Hossain 2008). From January 2008 the programme has been shifted under the Health, Nutrition and Population Sector Programme (HNPSP) of MoHFW.

The existing blood collection and blood transfusion centres in the country can be grouped into three categories. These are: 1) government blood banks comprising of medical colleges, super specialist colleges/centres, district hospitals, upazila health complex, MCWC etc., 2) private non-commercial blood banks, such as the Red Crescent, Sandhani, Lion, and Quantum, and 3) private commercial blood banks, including private hospitals/clinics/medical colleges and private laboratories/pathology centres.

All medical college hospitals fulfil their needs from their own blood banks and Sandhani. The private hospitals depend on their own collection, commercial blood banks and Sandhani. Commercial blood banks collect blood mainly from professional blood donors. There is option for exchange transfusion in all facilities however, not many people are motivated to do so. Moreover, the private and commercial blood banks screen blood "on demand" considering recipients' ability to pay.

The indiscriminate use of blood makes the situation critical as it increases the risk of patients acquiring TTIs like hepatitis B, hepatitis C, syphilis, malaria, and HIV due to the reasons mentioned in the earlier section.

Among the numerous hospitals and clinics in the country, only four percent implement "Safe Blood Transfusion Programme" of the government (Hossain 2008). However, it is not clear how these blood banks are governed and operated, and what the quality of their services is. The situation is equally unclear in case of transfusion services of hospitals with no "safe blood transfusion" programme.

Current practices in blood transfusion

Among the total 42 centres sampled in this study, half were government operated centres. Of the rest, 15 were private commercial and six private non-commercial centres. As per sampling design of the study, 25 centres were under SBTP and rest 17 were non-STBP. Of the 21 public centres all except one, were enlisted under the SBTP. Four out of the six private non-commercial centres were enlisted under SBTP and only one out of the 15 private commercial centres was under SBTP (Table A3-7.1 in Annex 3).

Services and facilities

Despite being non-enlisted, it appeared that one public, 12 private commercial as well as two private non-commercial centres were providing one or more of the transfusion services such as collection, testing, supply, transfusion, and separation of blood components. On the other hand, three public centres, despite being enlisted under SBTP, were not providing any of the transfusion services. Only seven SBTP enlisted centres had facilities for preparation of blood components. None of the non-SBTP centres reported having such facility (Table A3-7.1 in Annex 3).

The main reasons mentioned for not providing blood transfusion services were unavailability of logistic support including reagents and lack of human resources. However, findings suggest that there were more doctors, lab technicians, and MLSS in SBTP enlisted centres than in the non-SBTP centres.

Screening for TTIs

More SBTP enlisted centres (20 out of 22) reported screening blood for various TTIs than the non-SBTP ones (13 out of 15). All private commercial centres reported screening for various TTIs, while 17 out of 19 public and four out of six private non-commercial centres did so. Majority of the centres reported screening blood for Hepatitis B (89%) followed by HIV/AIDS (86%), Hepatitis C (76%), Syphilis VDRL (76%), Malarial parasites (57%) etc. Although 89% centres reported screening blood for various TTIs, it was found that less than half (18 centres) screened blood for all five TTIs while 29 screened blood for at least four TTIs (Table A3-7.2 in Annex 3).

Many factors contribute to unsafe blood transfusion practices. Some of the most important reasons cited were: ignorance, lack of awareness, manpower shortage, lack of funding, insufficient lab facilities and screening products, dishonest proprietor, etc. One of the reasons cited by a respondent of private commercial centre for not screening all five TTIs was- "*Hepatitis C was not seen as an epidemic, so at present it is not screened by our centre.*" On the other hand, lack of awareness about SBT among the public also allows for unsafe blood transfusion. An RMO in charge of UHC said:

"We are always under tremendous pressure by the relatives of the patients to transfuse blood without screening. They even come to beat us if we don't listen to them. Thus, even knowing that we can lose our jobs for not screening, we are forced to do so."

"The mindset of staff members of blood banks/ centres is that there is no need to test blood donated by patients' relatives." -mentioned staff members of transfusion centres.

Staff training status

Staff of the majority of the centres (76%) reported that they received special training on SBT. Staff members at more SBTP enlisted centres (88%) reported having received training compared to the non-SBTP centres (59%). Training on SBT had been provided mostly to government staff (91%) compared to the number of trained staff in the private sector whether commercial or non commercial (62%) (Table A3-7.3 in Annex 3).

Presence of guidelines

Guidelines on relevant issues like screening and selecting donors, collecting, testing, matching, transfusing, and storing blood, training staff, health and safety procedures, use and maintenance of equipment, behaviour and dress code were mostly absent in private (74% of the functioning centres) facilities and in some (28%) functioning government centres. None of the 18 centres could show the guidelines they claimed to have.

Knowledge of key staff

Majority of the managers (74%) who supervise blood transfusion system did not have knowledge about SBT. The knowledge of various policies regarding blood transfusion was also inadequate among the key staff members of the centres. Out of the 42 centres, staff members of only six centres (14%) had knowledge of at least three components of blood collection policy, and staff member of only 18 centres (43%) were aware of blood testing/screening policy, i.e. blood must be screened for five TTIs (Table A3-7.4 in Annex 3).

Sources of blood collection

Five most common sources of blood collection were identified during the study. Family and relatives were the most frequent donors. Based on multiple choice questions, respondents from 34 centres out of 37 mentioned that they collected blood from family and relatives (92%), 27 centres from voluntary donors (73%), 11 centres from voluntary collection (30%), two centres from professional donors (5%), one centre from exchange donation (3%), and 17 centres from private blood banks (46%). Public facilities reported collecting blood mostly from family/relatives followed by voluntary donation and collection, private blood banks and exchange donation. Private non-commercial centres collected blood from family/relatives, and voluntary donation and collection while private commercial centres collected blood from professional blood donors and family/relatives. Eight centres out of 17 (47%) reported that they only transfuse blood after appropriate testing and cross-matching of their own blood bank (Table A3-7.5 in Annex 3). However, the same proportion of centres (47%) reported transfusing without any screening.

Communication programmes

Fifteen out of 37 centres (41%) reported having communication programmes for motivating people for voluntary blood donation. Twelve centres out of 37 (32%) had advocacy activities for safe blood transfusion, and only six out of 37 centres (16%) mentioned providing training to other centres on safe blood transfusion. The SBTP enlisted centres had more of such activities compared to the non-SBTP ones. The centres that had activities to motivate people for voluntary blood donations reported having higher percentage of volunteers (87%) donating blood compared to those that did not have such activities.

License/Accreditation

Majority of the centres (81%) did not have any license/accreditation for BTS. Some private centres (63%) reported having license for blood transfusion, while none of the public facilities had license. The staff in government and private non-commercial centres (65%) did not perceive the need for having a license and considered themselves above such requirements. Though many of the centres are supervised by DGHS personnel it is not clear why most of the centres (81%) do not have a license yet. More investigation is needed before conclusions can be drawn in this regard (Table A3-7.6 in Annex 3).

Staffing

The blood transfusion centres were commonly staffed by nurses, receptionists, trained volunteers, peons, laboratory technicians, messengers, office assistants, accountants, managers, supervisors, counsellors, medical students and so on. These centres had shortage of office assistants and nurses. However, the medical technologists/laboratory technicians were found to perform multiple tasks which hampered their primary task of maintaining the SBT standards including adoption of universal precaution. A medical technician said:

"I have to do all the tasks starting from donor selection to blood collection, testing and even maintaining the patient registration. There are so many patients! How can I wear gloves? If I wear gloves I have to take them off every time I register a patient."

Lack of compliance with the standard universal precaution was observed among majority of staff members of the blood transfusion centres. Staff at only two centres wore apron while staffs at only one centre were found to wear gloves. Decontamination of reusable materials was found to be practised in 14 out of 15 centres.

Policy-practice gap

The above scenario shows:

- ⌘ The government has formulated necessary policy with regards to safe blood transfusion, but proper implementation, enforcement and necessary supervision are yet to be in place.
- ⌘ Blood transfusion centres screen blood based on their inadequate knowledge/awareness and sometimes deviate from the mandatory screening requirements. They are often driven by commercial motive and tend to skip screening. They decide whether to screen or not based on their assessment of the patients' ability to pay.
- ⌘ Blood collection and transfusion centres are not ready to make the minimum investment required to follow the policy guidelines properly. There is no compulsion from the government for doing so and current supervisory mechanism cannot even ensure licensing or accreditation to run blood transfusion centres. There is no clarity as to whether government run facilities require license or at least meet the minimum standards set by the relevant Act.
- ⌘ Common citizens and even the key staff members of blood transfusion centres are not aware of the consequences of unsafe blood transfusion on health. While the staff members are not capable of delivering quality services, people are also unable to demand the level of service they can rightfully claim from these facilities.



Quality of hospital diets for patients with selected chronic diseases

Introduction

Hospital diets are expected to comply with patients' needs and the recommended dietary allowances. Ensuring appropriate dietary therapy is an important component in the overall management of patients as it influences the treatment and recovery process of many illnesses. Diet therapy is the process by which food is used to help manage disease and promote health. When patients with diseases such as diabetes mellitus or chronic renal failure seek advice, it is necessary to ensure the help of the professional nutritionist or dietician to determine the composition, proportions and quantities of the diet.

Limited knowledge was available as to how the facilities were doing in terms of ensuring appropriate diet to patients. According to some earlier studies conducted, diet services in hospitals in Bangladesh are not nutritionally sound (Begum et al. 1994). Hospital diets are generally perceived to be in appropriate and not adjusted for management of different diseases. Quality of diet was expected to improve since budget allowance for hospital diets has been increased to Tk. 75.00 per patient per day from Tk. 43.00 (DGHS 2008). Appropriate dietary management for patients is as important as medical treatment and is different for different diseases. Efficient dietary management can help early recovery and better health with well-prepared and appropriate diets.

This study is an attempt to assess the appropriateness of diet supplied to the patients and their actual intakes in a selected number of facilities in the country. Quantity of diet provided and the actual consumption of patients suffering from five specific diseases i.e. diabetes mellitus, coronary heart disease, renal failure, liver diseases, and severe protein energy malnutrition, were compared to their respective therapeutic recommendations in urban and rural hospitals in Bangladesh. The study was a prospective cross-sectional study conducted in several hospitals of

Bangladesh. A total of 250 patients of both sexes were selected from the districts and specialised hospitals of all the six divisions of Bangladesh from various socio-economic groups through a stratified random sampling procedure. The diet was measured in terms of the amount of carbohydrate, fat and protein taken by the patients. Anthropometric measurement (weight, height, MUAC) of the patients were taken. Data was collected by direct weighing method of meals (breakfast, lunch, dinner and other time) given to patients from the hospital.

One large medical college hospital and one large district hospital was identified from each division of Bangladesh. Subjects were selected randomly for each group in all hospitals. The hospitals included were BIRDEM, NIKDU (National Institute of Kidney Disease and Urology) and NICVD (National Institute of Cardiovascular Disease) for patients with the relevant conditions. Protein energy malnourished patients were selected from Dhaka Shishu Hospital and liver disease patients from Bangabandhu Sheikh Mujib Medical University (BSMMU) Hospital. Detailed methodology is given in Annex 2.

The findings are discussed in light of the challenges in governance of the dietary provisions in the facilities.

Findings

Diabetic patients

The present study revealed that diabetic patients in the hospitals were supplied 25% less carbohydrate than the Recommended Dietary Allowance (RDA) and the intake was even lower (55% shortfall) than the RDA (Table 8.1). Amount of protein in diets supplied to diabetic patients was 34% higher than the RDA and the amount of intake was 18% less than the RDA. This implied a significant loss between supply and intake of the protein. In absolute terms, the average amount of protein in the supplied diet was 67 grams and the intake was only 42 grams resulting

in a loss of 25 grams of protein per patient per day (see Annex 4 for detailed table). The status of fat content in diet was even worse with an average supply of 22 grams compared to the RDA of 60 grams per day. With a loss of nine grams from the amount supplied, the actual intake of fat (13 grams) was 80% less than the RDA. In some instances, the patients had to take the food supplied from their respective homes in order to compensate for the deficiencies.

Table 8.1 Shortfall/surplus of nutrient supplied for and consumed by diabetic mellitus patients (n=50)

Nutrients	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	+34	-18
Fat(g)	-63	-80
Carbohydrate(g)	-25	-55
Energy (Kcal)	-38	-65

* + indicates surplus, - indicates shortfall

In total, 1,114 Kcal was supplied to the diabetic patients for energy while the average energy intake was only 633 Kcal, amounting to a wastage of 481g. The percentage shortfalls of energy (Kcal) in supply and in intake were respectively 38% and 65% lower than RDA (Table 8.1).

Coronary heart patients

Table 8.2 shows the excess supply of protein, fat and carbohydrate compared to the RDA for coronary heart patients in the study hospitals. However, the intake of nutrients was substantially lower than the RDA. On an average, the intake of protein, fat, and carbohydrate were 24g, 6g and 79g respectively. The shortfall of intake was nearly 50% of the RDA.

Table 8.2 Shortfall/surplus of nutrient supplied for and consumed by coronary heart patients (n=50)

Nutrients and Energy	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	+ 6	-52
Fat(g)	+ 27	-45
Carbohydrate(g)	+ 30	-43
Energy(Kcal)	-2	-55

* + indicates surplus, - indicates shortfall

The average intake of energy was 446 Kcal, which was 55% lower than the RDA. Nearly 50% of the nutrients were wasted before intake (see Annex 4 for detailed table). Therefore, there is a tendency of over supplying nutrients to the coronary heart patients.

Kidney patients

The kidney patients in the hospitals were over supplied with protein, nearly six times than that of the RDA, and under supplied with other nutrients (Table 8.3). However, the real intake was short of the RDA by 27% for protein, 91% for fat, 79% for carbohydrate and 82% for Energy (Kcal). A significant part of the nutrients supplied to the kidney patients was wasted (see Annex 4 for detailed table).

Table 8.3 Shortfall/surplus of nutrient supplied for and consumed by kidney patients (n=50)

Nutrients and Energy	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	+163	-27
Fat(g)	-71	-91
Carbohydrate(g)	-34	-79
Energy(Kcal)	-39	-82

* + indicates surplus, - indicates shortfall

Liver patients

Liver patients were supplied with diet containing lower amount of nutrients than the RDA. The shortfall was 56% for protein, 76% for fat, 63% for carbohydrate and 61% for Energy (Kcal) (see Annex 4 for detailed table).

Table 8.4 Shortfall/surplus of nutrient supplied for liver patients (n=50)

Nutrients and Energy	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	-56	-82
Fat(g)	-76	-91
Carbohydrate(g)	-63	-85
Energy(Kcal)	-61	-86

* + indicates surplus, - indicates shortfall

Dietary management of malnourished patients

The mean weight of the malnourished children included in the study was 7.2 kg with a mean age of 17.6 months. Malnourished patients were supplied with diet containing nutrients that were lower than the RDA. The shortfall was 33% for protein and 48% for energy (Kcal).

Table 8.5 Shortfall/surplus of nutrient supplied for PEM patients (n=50)

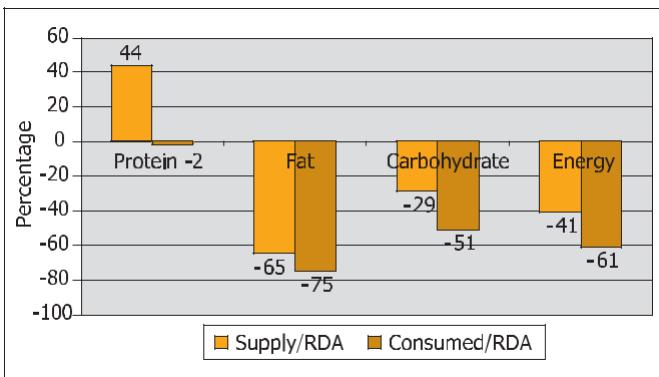
Nutrients and Energy	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	-33	-39
Energy(Kcal)	-48	-60

* + indicates surplus, - indicates shortfall

Quality of diet in specialised hospitals

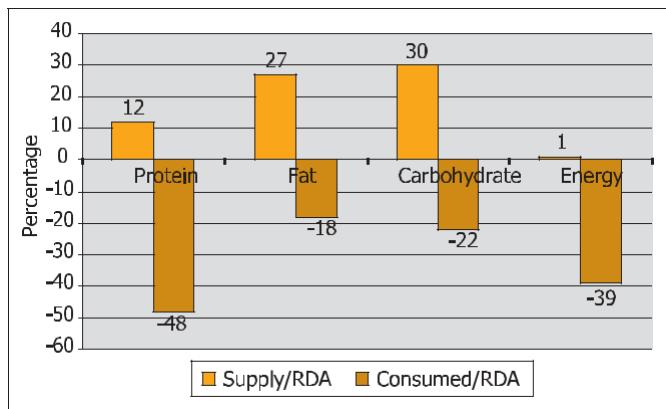
The quality of diet in hospitals specialised in managing diabetic, coronary heart disease, liver, kidney and PEM patients included in the study also deviated significantly from the RDAs. The following discussion depicts the findings from these hospitals.

Figure 8.1: Deviation of supply and intake of nutrients by diabetic patients from disease specific RDA in a specialised hospital for diabetes



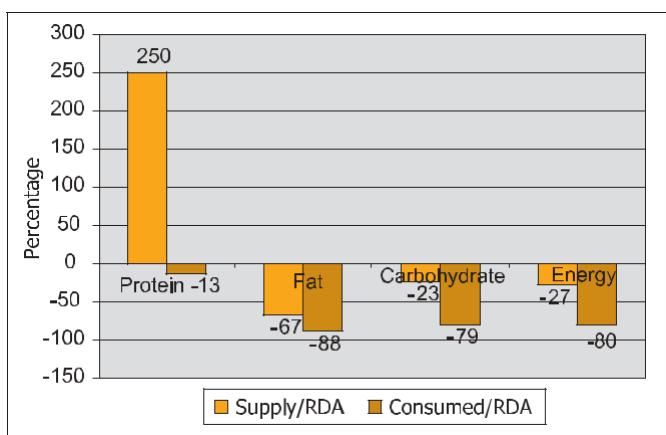
The above figure shows that supply of protein was 44% higher and the intake was 2% lower than the RDA in a specialised hospital for diabetes in Bangladesh. The supply and intake of fat, carbohydrate and energy were lower than the RDA. The shortfall of intake of nutrients and energy was more than the shortfall of the supply.

Figure 8.2: Deviation of supply and intake of nutrients by coronary heart patients from disease specific RDA in a specialised hospital for coronary heart disease



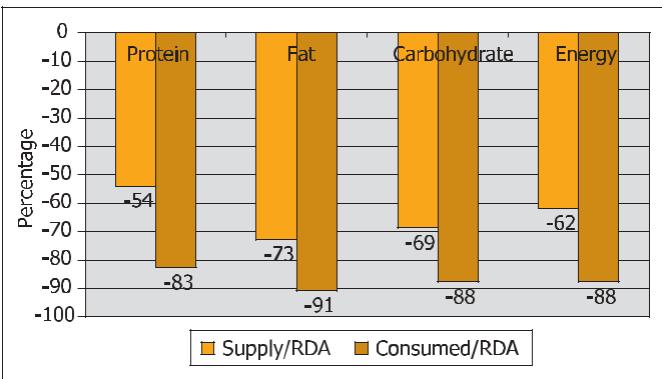
The above data shows that supply of nutrients and energy was more whereas the intake was lower than the RDA in a specialised hospital for heart disease (Figure 8.2). The surplus of supply was 12% for protein, 27% for fat and 30% for carbohydrate while the shortfall of intake was 48% for protein, 18% for fat, 22% for carbohydrate and 39% for energy.

Figure 8.3: Deviation of supply and intake of nutrients by kidney patients (renal failure) from disease specific RDA in a specialised hospital for kidney



In a specialised hospital for kidney disease, protein supply was more than the RDA, while intake of protein among kidney patients was 13% lower than the RDA (Figure 8.3). Supply and intake of fat, carbohydrate and energy were lower than the RDA among kidney patients.

Figure 8.4: Deviation of supply and intake of nutrients by liver patients (liver cirrhosis) from disease specific RDA in a specialised hospital for liver diseases



Supply and intake of all the nutrients and energy were lower among liver disease patients in a specialised hospital for liver diseases. Overall, the shortfall of intake was lower compared to the shortfall of supply. The shortfall of supply was 54% for protein, 73% for fat, 69% for carbohydrate and 62% for energy, whereas the shortfall for intake was 83% for protein, 91% for fat, 88% for both carbohydrate and energy.

Figure 8.5: Deviation of supply to and intake of nutrients by PEM patients from disease specific RDA in a specialised hospital for PEM

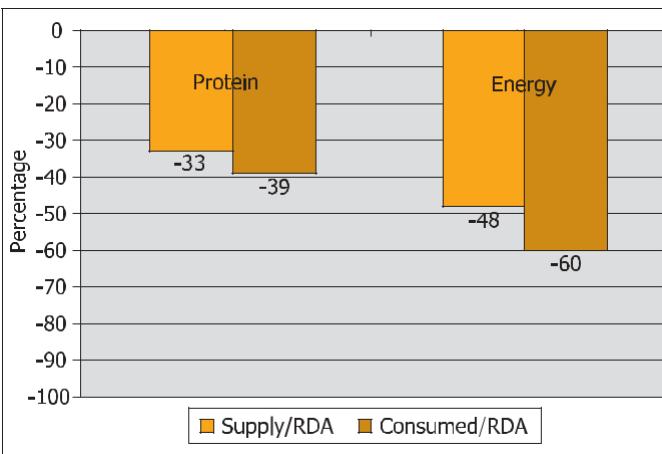


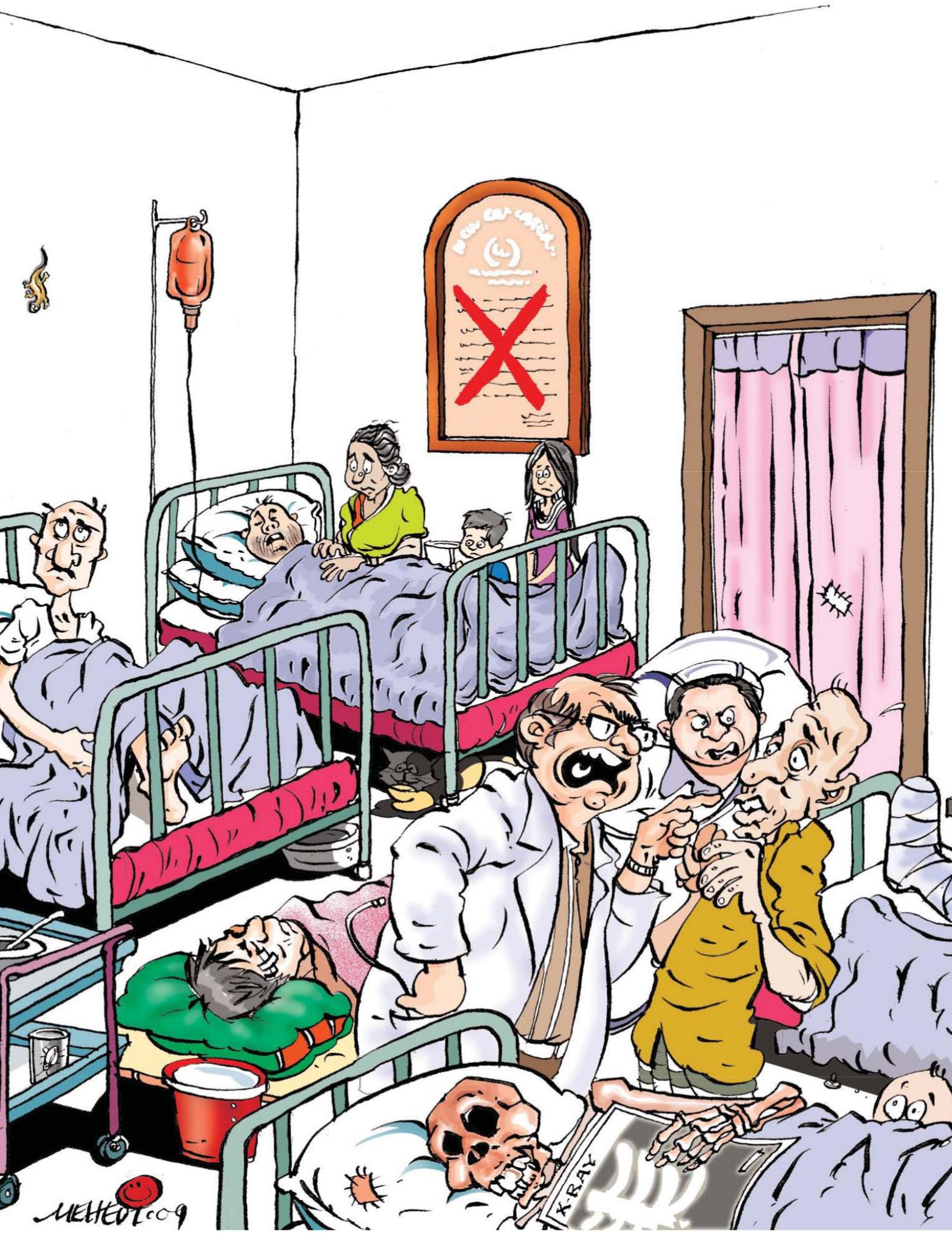
Figure 8.5 presents the shortfall of supply and intake of protein and energy in the diet of a specialised hospital for PEM. Shortfall of energy was higher compared to the shortfall of protein. The supply of protein was 33% lower while its intake was 39% lower than the RDA. The supplied energy was 48% less and intake was 60% less than the RDA.

Patients' perspective and suggestions on diet management

While some patients in the study expressed that they were satisfied with the quality and quantity of the food served at the hospital, most patients expressed dissatisfaction on various grounds. Most common complaints about the diet served were: '*food is not very palatable; does not taste good due to excessive use of water or lack of salt and oil; menu is often monotonous*'. Some patients complained that they could not eat properly because of loss of appetite. The wastage of food that took place between supply and intake of diet was primarily due to the reasons mentioned above. However, patients suggested bringing in variations in the menu and proper monitoring and planning of diet as per disease requirement.

Nutritionist and dietician in the health facilities

To assess the situation of governance and supervision of hospital diet, regulation about diet, workforce for dietary management and funding, further information on management and supervision of diet therapy at hospitals were collected and analysed. The study revealed that about 12% of the public general hospitals appointed 5-10 persons on an average for dietary management; about 17.6% of the public specialised hospital and only 5.9% of the public general hospitals had nutritionist for dietary management. Among these hospitals, about 23.5% of the public specialised hospital had trained nutritionist with educational background in nutrition. However, about half (47.1%) of the public hospitals depended on doctors for diet therapy. In most (52.9%) of the public general hospitals, diet was supplied by commercial suppliers and only 17.6% had diet supplied by the hospital management. This indicates their inability to ensure quality and appropriateness of the food supplied. Overall, the supply of therapeutic diet was not adequate compared to the RDA in any of the hospitals.



Governance issues affecting quality of care

Introduction

Quality of care has been identified as one of the macro-level management system issues to highlight practical manifestation of the state of governance in health sector. Quality of care is an overwhelming issue in the context of health services of developing countries including Bangladesh. Performance of health care professionals and institutions determines the quality of care provided by the health facilities which in turn depends on governance. As Goldfield (1996) notes, many factors outside the health service influence health status and it is therefore reasonable that social policy makers consider the impact of the policies on health and health status. Policies manifest governance of health system and eventually impact on services. The efficiency of the governance system has been blamed for the poor quality of care in facilities in Bangladesh as well as in other developing countries.

Accountability, transparency of the system and dignity, respect and sense of responsibility towards the patients are preconditions to an ideal state of quality of care in health services. Patient satisfaction with medical care involves excellent interpersonal communication of care providers, technical quality of services, accessibility, finances, outcomes, continuity of care, physical environment and availability of medical care resources (Ware et al. 1983).

This chapter reports the findings from a study carried out in selected public, private and NGO facilities in Dhaka and other districts providing different levels of services. A number of cases of caesarean section (CS) as an example of maternal health services, pneumonia as an example of child health services, and a number of emergency care cases were reviewed by senior professionals to ascertain the technical quality of care provided in the facilities included in this study. Six distinguished medical professors in teams visited nine facilities in Dhaka, Sylhet, and Khulna to see the physical condition of the facilities, review and observe

the procedures adopted, diagnoses made and use of drugs, and other aspects of patient care. Assessment of the quality of the services was made by reviewing/observing 20 elective CS, 20 emergency CS, and 30 pneumonia cases among children. Key informant interviews were also conducted to understand the policy implications, effect of organisational structure, service delivery system and resource allocation in delivering quality of services. Further detail on the methodology can be found in Annex 2.

Findings

Physical facilities

Overall physical condition in terms of cleanliness, availability of essential infrastructure such as water, electricity, wash basin etc. in all the facilities studied was found to be reasonably satisfactory with some variations; particularly the private facilities were better maintained than the public-sector ones. All the facilities had electric connections but not all had back-up power support due to limited or non-availability of fuel for the generators. Again, non-government facilities were better than public facilities while secondary and tertiary level public facilities were better than primary level ones. This indicates that facilities in the urban areas were better maintained than the rural ones. Except for the MCWCs included in the study, all facilities had running water supply.

Adequacy of space compared to patient load was severely constrained in public facilities, and was a common feature across all the levels of primary, secondary and tertiary facilities. The situation was better in private facilities followed by non-government and public facilities. General tidiness was again compromised in public facilities at all levels and better maintained in non-government facilities and was significantly better in the private ones. In all the facilities, toilets, particularly for females, had varying degree of cleanliness and user-friendliness, whereas

non-government facilities were better than the public facilities with the exception of a paediatric hospital. Reception/registration service was better organised and client-friendly in non-government facilities compared to public facilities and the Maternal and Child Welfare Centres (MCWCs) visited.

Number of patients greatly outnumbered the availability of beds and resulted in patients being on the floor in all the public facilities with a few exceptions. Privacy obviously was compromised in overcrowded facilities. Public facilities suffer from lack of adequate number of mattresses and cleanliness of the available mattresses, sheets, pillows, pillow covers, mosquito nets, blankets etc. The situation was better in non-public facilities.

Providers

In most of the public facilities, unfilled vacancies in positions of important service providers, like doctors (including specialists), nurses, paramedics, medical technologists, support staff (ward boy, aya, sweeper) aggravated the situation. Shortage of staff was more common in lower level rural facilities than upper level urban facilities. This resulted in paramedics running emergencies in the upazila health complexes and MCWCs. However, the scenario was much better in non-government facilities.

Equipment, drugs and reagents

Shortage and non-availability of drugs, reagents and other supplies coupled with absence or non-functioning of equipment plagued almost all the public facilities. Situation was worse in lower level rural facilities compared to upper level urban facilities. Most of the non-government facilities did not have such problems except in a children's hospital in Dhaka.

Providers' attitude

In public facilities, providers were often found to be unfriendly and non-responsive to patients. Providers did not consider themselves accountable to the patients and were unaware of patients' rights, expectations, need for confidentiality, respect and dignity. The situation was found to be better in non-government facilities except in one children's hospital in Dhaka. However, providers' attitude towards clients/patients also varied in non-government facilities and

was relatively more positive in the private facilities than in the NGOs.

Waiting time

Patients usually had to wait for long durations before being attended by the appropriate providers in all the public facilities studied. Waiting time was even longer in case of emergencies, which is quite contrary to what is expected. Situation was worse in rural and lower level facilities compared to urban and upper level facilities. Non-government facilities were much better in this regard-providers attended to the patients on time. However, the situation in a children's hospital in Dhaka was similar to the public hospitals.

Clients' satisfaction

In majority of the cases, clients were satisfied with the services of the facilities and satisfaction was somewhat more in non-government facilities than in public facilities. Interestingly, satisfaction was observed to be higher in lower level public facilities than in the upper levels. However, clients at most of the facilities expressed their concerns about costs, except in one facility in Dhaka.

Role of management

Management initiatives to promote and ensure quality of care was absent in all the facilities visited. Adoption, promotion and compliance of the standard treatment protocols were generally not maintained, with the exception of some isolated initiatives taken by few providers but not by the management. Auditing of deaths, reviewing of cases etc. are examples of standard practices that were not promoted by the management. However, some attempts to control promotional activities of pharmaceutical companies were noticed in some facilities.

Citizens' Charter

Boards or posters displaying patients' rights and Citizens' Charter in prominent locations were not found in all the facilities visited. Presence of such boards/posters on patient's rights was sporadic and no sign of awareness or compliance to the provisions of the Charter was observed among the patients and providers of any of the facilities in the urban or rural areas.

Health promotion

Health promotion activities being carried out by the facility attendants was not observed in the public facilities except in one upazila health complex. However, health promotion was done in varying degrees by almost all the non-government facility providers.

Citizens' participation

Participation of citizens/community in running the health facilities, irrespective of public or non-government sector was primarily absent with the exception of one upazila health complex and a 250-bed district hospital. In the upazila health complex, local people contributed volunteers, additional support staff and fuel for the generators, while a civil society initiative supported patients who required drugs in the district hospital.

Emergency services

Although non-government facilities welcome patients at any time, most of the emergency cases, such as victims of road traffic accident, trauma victims and other cases particularly with subsequent legal implications were mostly taken to the public facilities. Private clinics and hospitals hardly treated accident and trauma victims.

Technical quality

In general, technical quality of care was found to be satisfactory in all the facilities visited, based on the observations of caesarean sections and management of pneumonia cases. Of the 40 CSs observed the quality of services was satisfactory for all the cases. In case of management of pneumonia, improper investigations were carried for eight (27%) out of 30 cases. Improper treatment was carried out among 16 (53%) out of 30 pneumonia cases. However, quality was also compromised due to excessive or inadequate investigation and choice of drugs in pneumonia management. Instances of prescribing drugs with no indication and not prescribing drugs with clear indications as well as prescribing third generation antibiotics were noticed in teaching/ specialised public sector facilities.

Most of the findings of the study was found to be in line with other recent studies conducted on quality of care. Bangladesh Health Watch Report 2007 also indicated the poor quality of care at various public

facilities manifested through rude behaviour of health providers, limited contact time with patients or rushed consultations, unavailability and inapproachability of providers in times of emergency or other needs etc.

The health facilities have been plagued with these problems and are failing to improve in any of the key areas of quality of care. As the present study indicates, lack of appropriate service providers, both in number and skill mix contribute to compromised quality of care rendered by the public facilities; in the absence of dedicated posts of physicians to provide emergency services in district hospitals, MCWCs and upazila health complexes, these services are provided by paramedics thereby affecting the quality of care. Similarly, health promotion activities were not carried out in most of the public facilities for lack of human resources.

Weak supervision

Centralised management limited the ability to ensure the display of Citizens' Charter and information about patients' rights in many of the public facilities. Weak supervision resulted in irregularity in the formation of management committees and necessary meetings that are mandates of the MoHFW for different levels of facilities where citizens' participation were to be ensured. Role of the Upazila Parishad (UP) is yet to be clarified in terms of their engagement in the local health systems. Similarly, regulatory roles of the public sector over non-government sector failed to materialise due to limited capacity of the public sector.

Resource allocation

Uniformity in allocating human and other resources without considering the actual need, resulted in great inefficiency in service delivery. Some of the facilities are overcrowded while others are underutilised. District hospitals vary in terms of bed capacity and may be equipped with anywhere between 50 and 250 beds. Resources are allocated on the basis of number of beds. Upgrading the capacity of district hospitals or increasing the bed number was usually a political decision rather than a planned action based on population increase, disease burden, availability of other facilities (non-government), and transportation link with the facility etc. Lack of proper planning and coordination led to mismatch of allocation and requirements of the facilities; thus shortage of drugs, non-functioning of

Box 9.1 Poor governance hampers quality of care: Case of an MCWC

Current staffing patterns of the public sector facilities limit their capacity to provide good quality care. In MCWCs, the job of an anaesthetist is filled by a Medical Officer (MCH-FP) of the Sadar upazila, which in itself demands full-time commitment. This additional responsibility interferes with the assigned staff's primary role as a Medical Officer (MCH-FP). Moreover, in some cases, they are required to attend to children in the outpatient department of the MCWCs and are expected to be available round the clock. While the number of beds in the MCWCs are being increased from 10 to 20, the number of designated posts has not been increased. MCWCs are equipped with four support staff (two posts of family welfare visitors and two posts of dai-cum-nurse/nursing attendants) to deliver outpatient services for women requiring antenatal and postnatal care, and children with ailments. They are also responsible for patient registration; dispensing of drugs; immunisation; family planning services, including sterilisation, Intra-uterine Device (IUD) insertion, implant insertion, administering injectables; menstrual regulation; indoor services for managing complicated pregnancies; abortions; normal delivery; assisted delivery; and comprehensive emergency obstetrical care. The stark mismatch between the long list of service requirements and the number of staff available to carry out these responsibilities offers a clear indication as to why quality of services is often compromised in these facilities. Moreover, only one sweeper is entrusted with the responsibility of cleaning the entire facility premises round the clock, including the outdoor, indoor, and operation theatre. Initiatives taken to outsource cleaning services could not be materialised due to non-availability of funds.

equipment, unavailability of service providers etc. are commonly seen in public facilities.

Higher level facilities (district hospitals, medical college hospitals, tertiary/specialised hospitals) fare better in competing for resources than the lower level facilities (upazila health complex) because of their proximity to the power structure (decision makers). Resources are allocated centrally from MoHFW and the Directorates that are often not well aware of the local realities. Problems are further aggravated by the limited authority of the facility manager who are unable to sanction necessary expenditures for repair of generators, water pumps and other utilities that are essential for day-to-day operations.

Existing Recruitment Procedure

Existing recruitment process of the public sector facilities has not been able to address the chronic issue of vacant positions. Doctors and other Class I and Class II officers are supposed to be recruited by the Public Service Commission (PSC). PSC is entrusted with the responsibility of recruiting government officers of all categories and cadres and usually an average of two years lead time would be required to complete one cycle of recruitment. By the time the PSC clears one batch of officers for recruitment, additional vacancies are created at the concerned entities due to natural attrition caused by retirements, resignations, deaths, migrations, etc. Although the

Directorates and district-level authorities can recruit Class III and Class IV employees, they would still require permission from the Ministry of Establishment for these recruitments. Moreover, the Ministry does not allow more than 80 percent recruitment to the existing vacancies. Recently, the Ministry of Finance has asked all ministries to leave 10 percent posts vacant as an austerity measure of the government to face the global recession. The entire recruitment process, starting from compiling vacancy requests to screening and placement, is time consuming and can hardly catch up with the demand at any point in time. Vacancies exist more in lower level facilities and facilities of hard-to-reach areas.

Strategic solutions and challenges of staffing crisis

Staffing situation has improved significantly at the Bangabandhu Sheikh Mujib Medical University (BSMMU) and Institute of Mother and Child Health (IMCH) since these institutions became autonomous and have the authority to recruit staff on their own.

Another strategy for addressing the issue within the purview of the MoHFW is to diversify the service provision. This is reflected in various strategy documents of the government, such as the Strategic Investment Plan (SIP) and the Revised/Programme Implementation Plan (R/PIP) of the Health, Nutrition and Population Sector Programme (HNPS). These commitments are

yet to be fulfilled while the programme term is nearly coming to an end.

There are four posts of sweeper/cleaner in a 50-bed district hospital, and five posts in similar positions in a 31-bed upazila health complex for keeping the facility premises clean round the clock. The criteria for determining the optimum number of sweepers for different facilities was not known. Similarly a 31-bed upazila health complex has only one post of Medical Officer to attend to the outdoor patients. Altogether, there are eight posts in the health wing. One Upazila Health and Family Planning Officer (UH&FPO) is the manager-incharge of the upazila health programme as well as the hospital, while four posts are for junior consultants in medicine, surgery, gynae/obstetric and anaesthesiology. They take care of referred patients in the outpatient area. There is one resident medical officer who usually takes care of inpatient, one dental surgeon dedicated for dental care, and one Medical Officer for the outdoor patients. According to Bangladesh Health Facility Survey, one Medical Officer has to attend to 176 patients a day on an average (BHFS 2009).

However, mere placement of additional medical officers may not be enough to address this issue. Motivational factors required for satisfactory performance of staff is severely missing for all tiers of the service providers in the sector. Lack of career prospects for majority of the physicians, nurses, technicians, and paramedics, excessive workload, poor compensation package, lack of service support mechanisms leads to frustration, poor performance, lack of initiative and is manifested in their interaction with patients (limited caring, misbehaviour

with poor patients, not maintaining privacy, confidentiality etc.). In addition, lack of continuing medical education in the face of rapid advancement in medical science, and aggressive promotion from the pharmaceuticals resulted in compromised quality of services provided by the public sector physicians.

Low expectations from citizens

One of the interesting findings of the study was that clients were generally satisfied with the services they received. Satisfaction was also higher in primary level facilities than in tertiary levels. A study by Creel et al. (2002) depicted that satisfaction does not necessarily indicate that quality is good; it may only mean that expectations are low. Bangladesh Health Watch Report 2007 also showed that while patients were happier when providers behaved politely with them, they often did not complain about unprofessional or rude behaviour and accepted it as normal since they deemed doctors to be "superiors" and therefore entitled to treat them as they wished. Such low expectation from the common citizens is another reason for not making the providers accountable for poor quality of care. While the Citizens' Charter lists the rights that people are entitled to, awareness of those rights may not be adequate.

Cases of positive deviance

Despite the grim situation portrayed by the study findings, there are examples of well-performing health facilities, both in the public and private sector. Experiences from these model facilities may offer lessons to be learnt for future improvement.

Box 9.2 Chowgacha Health Complex: An example of people's participation contributing towards better quality care

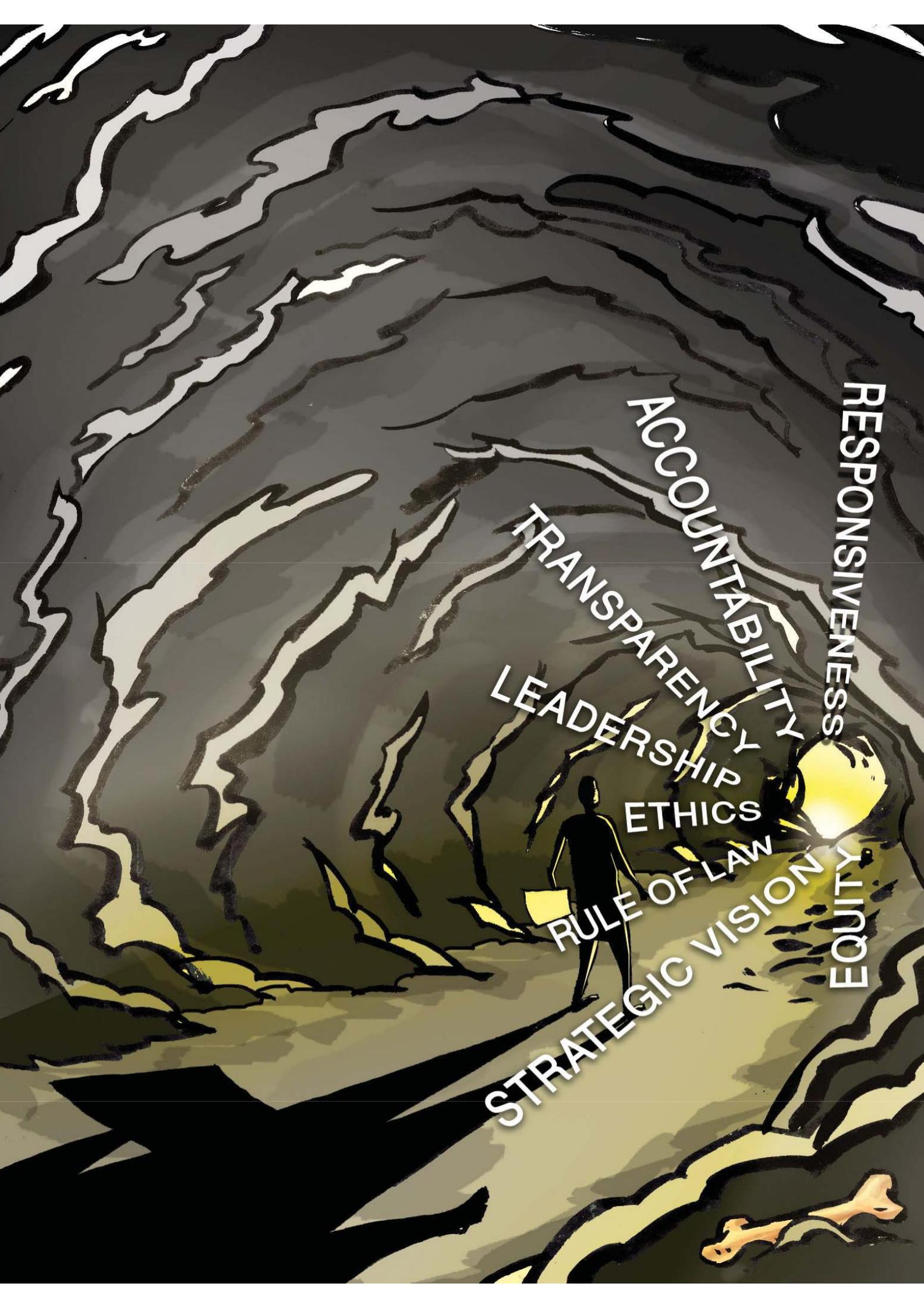
Chowgacha Upazila Health Complex has already earned its reputation as a model health facility in the public sector. The main essence of its success has been spontaneous participation of the local community and the facility's willingness and ability to receive and utilise the contribution with efficiency. Volunteers from local community often work as additional staff while staff members sponsored by local people also help meet the shortage of workforce. Supplies like fuel for generators, instant power supply (IPS), tires for ambulance, blood bags, reagents, cards for patients (such as, antenatal or immunisation cards), mobile phones, dustbins, drugs, etc. are generously contributed by local philanthropists, NGOs, and people's representatives when scarce.

However, the facility seems to have flourished at the cost of the union level facilities since most of the staff working at this upazilla health complex (UHC) originally worked at the union level. The continuing rivalry between the Health and Family Planning wings of the MoHFW adds to the staff crisis; a single lady doctor provides all the antenatal care

(averaging more than 100 a day) with long waiting time while the Family Welfare Visitor (who belongs to the Family Planning wing) is not allowed to share the load. While these issues remain to be addressed, Chowgacha Health Complex still deserves to be considered as a site for drawing lessons on how local level participation and good governance promote quality health services for the common people.

Box 9.3 Ad-din Hospitals providing quality care at low cost

Ad-din Hospitals have many attributes of a model hospital. Ad-din publicly displays its fee schedule for all services, thereby reducing the uncertainty in terms of health care expenses faced by patients and encouraging early care seeking. This saves money and reduces burden of dealing with unnecessary emergencies, morbidity and mortality. Ad-din's fees are often lower than the cost incurred in public facilities taking into account the waiting time, informal fees and supplies required to be purchased. They started out with a low fee structure to attract more patients, particularly from the lower socio-economic group. This has brought economies of scale and the risk has paid off. Ad-din has also proven that low cost doesn't necessarily mean low quality. Quality of care is considered from the technical point of view (e.g. by appointing specialist providers for outdoor care) as well as from clients' perception (low cost, tidiness, being listened to, honoured and respected). It has also experimented with an unconventional layout for the hospitals and incorporated several corporate practices, such as awarding the most courteous employee of the month. Its colourful children's department is a refreshing break from what is commonly seen in other facilities and prompts early recovery. The hospital is always able to maintain cleanliness despite the amount of people staying and visiting the facility.



A stylized landscape featuring a winding path through dark, jagged terrain. The path leads from the bottom center towards a bright, glowing light source on the right. Along this path, several words are written in large, white, sans-serif capital letters, arranged to follow the curve of the path:

RESPONSIVENESS

EQUITY

VISION

STRATEGIC

RULE OF LAW

ETHICS

LEADERSHIP

TRANSPARENCY

ACCOUNTABILITY

Discussion, main messages and recommendations

Discussion

The third report of Bangladesh Health Watch (BHW) is on the theme "governance in the health sector". BHW formulated its definition of governance as the manner in which political, economic and administrative power is exercised by the government in the management of national health affairs at all levels. It considered elements of health sector governance as formulating strategic policy direction; generating information and intelligence and making information accessible; ensuring equity, inclusiveness, participation, consensus orientation; ensuring enforcement of the rule of law, regulatory framework and ethical standards; and ensuring transparency, accountability, responsiveness, effectiveness and efficiency with active involvement of peoples' representatives, civil society and private sector for sustainable health development. BHW also came up with an analysis matrix by which governance of health sector should be assessed (Annex 1). However, a comprehensive assessment of health sector governance would be a daunting task and for this report, BHW tried to cover only a few aspects of the governance analysis matrix. BHW commissioned a total of six studies under two broad headings-governance at macro level (stewardship) and reflection of governance in day to day health care experiences. All the studies used primary and secondary data; and quantitative as well as qualitative data.

The first three chapters of the report presents the findings of the study on health sector governance, emphasising the stewardship function specifically in terms of health policy, regulatory bodies and ethical practices. The role of health policy in good governance of the sector is of utmost importance. An explicit health policy defines a vision for the future outlines priorities and expected roles of different groups, builds consensus and informs people, and in doing so fulfils an important role of governance (WHO 2000). Health policy not only sets out the long term vision of the health sector of the country but also sets the direction

for the health system, the priorities and expected roles of different groups who have important stakes in the health sector. Because of its importance, the health policy formulation process needs to inform people; and efforts at consensus building have to be a part of the process.

Bangladesh had its health policy for the first time formally approved in August 2000. Its formulation process also had a reasonable level of participation of the important stakeholders including the common people. However, the process neither ensured participation of the main opposition political parties nor was it discussed in the parliament or in the Parliamentary Standing Committee related to the Ministry of Health and Family Welfare. Despite these gaps, the NHP 2000 clearly spelt out its objective of providing basic health services to all, devised strategies to achieve this objective, recognised the role of policy actors (public, private, NGO, traditional medicine), provided guidance for prioritising expenditure (for ESP and rural health), indicated organisational arrangements for service provision through a unified structure and specified regulatory controls for ensuring quality.

Soon after the approval, the NHP 2000 faced challenges of reversal in which the political parties, bureaucrats and professional bodies played important roles. Since then, there have been three more initiatives in 2006, 2008 and 2009-to formulate a fresh health policy and revise the existing one respectively. These initiatives were undertaken with political motivation and good intentions. In India, the last health policy formulation process required engagement of 14 research institutes; 21 studies and almost three years of public consultations at different levels. It enjoyed the advantages of policy continuity and constructive roles of the professional bodies and civil society organisations. In the case of Bangladesh, none of the initiatives had a substantive research base for the revision work; and professional bodies are politicised and polarised. In order to avoid debate and challenges, policy documents

contain generic, broad and nicely worded statements. Although NHP 2000 was very explicit about integration and unification of health and family welfare services, the newly drafted NHP 2009 is silent about this issue.

The MoHFW has also taken the initiative to revise the National Population Policy and it is expected that the policy will also be processed along with the health policy. The National Drug Policy and Nutrition Policy are already in existence. A critical review of all the policies under the broad umbrella of the national health policy in order to bring synergy along with proper coordination will be required shortly.

While the health policy sets the overall direction for the health sector of the country, the stewardship function of the government adopts good regulations and the tools for implementation to ensure account-ability and transparency. Therefore, the roles of regulatory and statutory bodies are mandatory to ensure good governance in the health sector. The nexus of functionality, stewardship and good governance is represented in the following diagram.

Different professional regulatory as well as statutory bodies have been set up with a view to develop skilled human resources (doctors, medical practitioners, nurses and pharmacists) and ensure standard health services by regulating the activities of professionals, protecting people's rights and ensuring access to health services. In this regard, Bangladesh Medical and Dental Council (BMDC), Bangladesh Nursing Council (BNC), State Medical Faculty, Bangladesh Pharmacy Council and Bangladesh Board of Unani and Ayurvedic

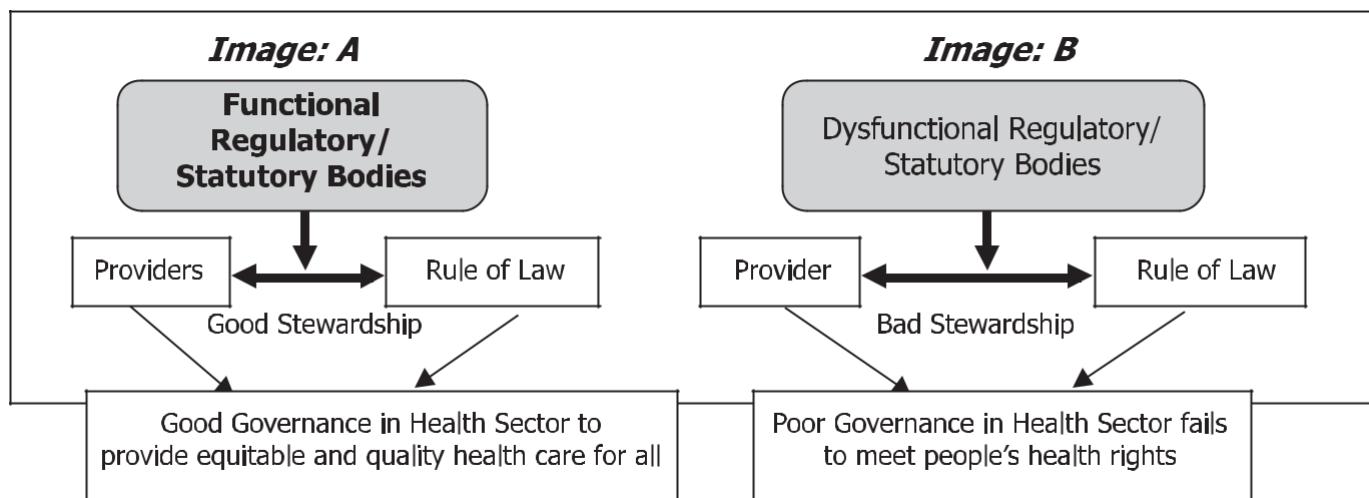
Systems of Medicine have evolved to play the stewardship role in health sector governance in Bangladesh. In addition to this, the Parliamentary Standing Committee is expected to play important supervisory functions of the government to ensure transparency and accountability in the health sector.

The study emphasised on the role of the Bangladesh Medical and Dental Council. However, in general the exploration of the status and functioning of the regulatory bodies yielded a grim picture. The organisational arrangement and functionality of these bodies were analysed through six broad thematic lenses of independence, democratic norms, rule of law, capability, efficiency, and accountability.

It has become general knowledge that BMDC is virtually a non-functional body except for its registration function. It has failed to promote and protect patient's rights for which it was primarily created. In the years of 2007 and 2008 BMDC accepted 25 and 17 complaint letters respectively to initiate investigations against medical and dental practitioners. Although BMDC does not have enough human resources to respond to all complaints and investigate properly it is still surprising that BMDC could not finalise a single investigation report since 1994. In other words, it neither has capacity nor is it functioning. According to the Act, the Council tenure is for three years but for the last 18 years council elections did not take place and no new council was formed.

BMDC cannot initiate independent investigation against the doctors working in government/public hospitals.

Figure 10.1: Health sector stewardship for good governance



In those cases BMDC can only issue show-cause notices to the directors of the hospitals concerned and the hospital's decision will be binding on the BMDC. The BMDC is administered by professional doctors and in the case of investigations and regulations, these doctors have been playing the key role. Therefore, independent investigations and judgments are difficult to obtain due to professional biases in favour of their fellow colleagues. In addition, there is no clear jurisdiction and authority between the BMDC and the health ministry for registration process of foreign doctors. Currently foreign doctors are supposed to get permission from the health ministry and are later asked to get registered from BMDC. In most of the cases foreign doctors avoid registration from BMDC and seek permission from the Ministry. In this aspect, BMDC has failed to protect the interest of the doctors of Bangladesh as well. In terms of medical education and recognition of institutions it seems that the role of BMDC has already been taken over by the Ministry and Director's office of Medical Education of DGHS. Thus, the role of BMDC has become somewhat curtailed. Several political regimes governed the country in the past two decades and none seemed to be interested in addressing this. Neither have any civil society organisation raised any significant concern about the nonfunctional status of the BMDC.

The rest of the regulatory bodies like Bangladesh Nursing Council, State Medical Faculty, Bangladesh Pharmacy Council and Bangladesh Board of Unani and Ayurvedic Systems of Medicine demonstrated similar features in terms of poor functionality, capacity and accountability, democratic deficit and inadequate independence from the government. Ultimately, their poor governance compromises realisation of the rights of people. While not much is happening to improve conditions of these regulatory bodies, the 9th Parliamentary Standing Committee has shown signs of promise, unlike its predecessor in the 8th Parliament.

The parliamentary supervisory role is designed to prevent unlimited exercise of power of the executive branch, ensure proper use of public resources and accountability of the state agencies. However, the Committee remains largely ineffective as the ruling party mostly occupies committee chairmanships, dominates committee proceedings and ignores opinions of the opposition party. Its formation is usually delayed

and the meetings are not held regularly. Committee member attendance per meeting was only 4.68% (TIB 2006). The committee also fails to ensure compliance with their recommendations. There is no time limit for the concerned ministries, persons and executive branches to respond to committee recommendations and decisions. In the 8th parliament, 217 decisions were made by the parliamentary standing committee on health ministry but only 55 decisions (TIB 2006), less than 30%, were implemented. The tendency to bypass committee recommendations by the Ministry has created lack of institutional accountability and transparency and perpetuated irregular practices and corruption in the health sector. The committee is seriously handicapped by the lack of resources as they don't have any research staff or policy aides. Fortunately, in the 9th Parliament, the standing committees were formed within the stipulated time. Initiatives have been taken to resource the committees with adequate staff. The committee had met five times till October 15, 2009, formed three sub-committees to deal with different issues and has issued different directives to the Ministry. Overall, these are signs of marked improvement over the previous performances. However, the Parliamentary Standing Committee on health in India convened public hearings on health and population policy and relied on studies conducted by their reputed research agencies for policy formulation. In Bangladesh, the Parliamentary Standing Committee on the Ministry of Environment also organised public and expert hearing on issues related to climate change and environment. Bangladesh Health Watch, in a roundtable on the health policy organised in August 2009, recommended that the Parliamentary Standing Committee undertakes public and expert hearings on the draft health policy as a part of their review process; and thereby ensures public participation in the national health policy formulation process.

Although professional regulatory bodies are supposed to protect the rights of the patients and people in general, it is also expected that the practice of medical ethics through codes of conduct by medical professionals will safeguard the patients and maintain minimum standards in medical practice. However, our secondary analysis and key informant interview based study revealed another grim picture. A study of TIB 2007 showed that two out of five patients reported

harassment in receiving services from public hospitals. Among them, almost half of the patients reported that they had to pay a bribe to the hospitals for service. Doctors are reported as the highest bribe takers, and nurses are in second position. The TIB Corruption Survey 2007 also notes that 22.7 percent of the patients who depend on public health services reported that they had been advised to visit the private chamber/clinic of the doctor consulted.

The lack of ethical practice is not caused by any single factor rather it is deeply rooted in all elements from medical education to health administration. Ethics is taught in a fragmented and superficial manner with no attention to developing behaviours and habits. Ethics is traditionally ignored by the medical students. The WHO Ethical Standard Course is not mandatory. Doctors and nurses, who are liable for the poor ethical standard in the medical profession, are not the only ones to blame. The professional regulatory bodies that are in charge of enforcing the practice are to be held equally responsible for poor ethical practices. The management environment in which they work is also liable. Most of the doctors are amenable to aggressive pharmaceutical promotion. On top of this, they are also susceptible to the promotional offers of private laboratories, clinics and hospitals.

While this is the scenario of health sector governance of the country at the macro level, we had also examined the state of governance of the health sector from a micro perspective by commissioning five additional studies which are summarised here. The study on quality of care used the services of six professors who examined cases of caesarean section and pneumonia to determine the quality of care in public, private and NGO facilities. The study findings are in line with the recently conducted facility survey 2009 and other recent studies. There is widespread perception about poor quality of health services irrespective of the ownership of the facility by the government, private sector or NGOs. In the study observation-in terms of treatment protocol-almost all the cases of CS and pneumonia were treated with appropriate protocol and with proper indications. However, quality was found to be compromised through excess or inadequate investigation, in choosing drugs in pneumonia management by prescribing drugs with no indication, by not prescribing drugs with clear

indication and by using third generation of antibiotics in teaching/specialised public sector facilities. These findings also match with the findings of our commissioned study on essential drugs.

Usually in the private sector, patients are subjected to expensive health care due to high cost and unnecessary or doubtful investigations including laboratory tests. Yet it is interesting to see that accident and trauma patients as well as those needing emergency attention are least served by the private clinics and hospitals; only public facilities provide services to them. Complaints about the public facilities are related to unavailability of the designated health personnel, negligence of the clients, unauthorised and illegal payments at public health premises, pilferage of drugs and other essential supplies. The centralised system with weak monitoring and supervision aggravates the situation. Weak governance in health service delivery causes the poor and the vulnerable members of the society suffer the most in terms of both cost and deficient service delivery.

Another commissioned study examined how far the outcome objectives of the National Drug Policy in terms of availability, affordability, and rational use have been achieved with respect to essential drugs in the public and private sector PHC facilities in both rural and urban areas of Bangladesh. It was found in the study that polypharmacy is on the rise (33% from 5% in 1994). There is less use of Essential Drugs in the PHC facilities; and UHCs and urban NGO clinics do not follow the Essential Drug List (EDL). Though the list of essential drugs was available in 47% of the UHCs (from 28% in 1994) and 55% of the urban clinics none of the facilities had all the 20 listed essential drugs. Only 6% of the UHCs and 15% of the urban clinics had at least 15 of the 20 essential drugs. The use of essential drugs by UHC has reduced to 63% from 85% in 1994. Antibiotic use is on the rise and drug shops prescribe them most (60%). The use of antibiotics by the UHC providers has increased to 50% in 2009 from 25% in 1994. Although Bangladesh pioneered a National Drug Policy in 1982, Bangladesh is behind other low-income countries in rational use of drugs. Most importantly, anarchy prevails in the pricing of the essential drugs with wide variation. For example the ratio of lowest to highest price for Iron-Folic Acid (IFA) tablets was 1650%, for a bottle of B-Complex tablets was 650%, for Mebendazole tablets was

900%, for Benzylbenzoate lotion was 817%, for Chloramphenicol ointment was 543%, for Miconazole ointment was 592%, and for Metronidazole tablets was 500%. These findings evidently suggest a weak state of drug governance.

The weak state of drug governance has also been substantiated in our study on pharmaceutical promotional practices and the state of implementation of regulatory provisions. The pharmaceutical companies in the country have an estimated number of 20,000 medical representatives (MR) to promote and market their products. There is fierce competition amongst the companies to get the bigger share of the market estimated at more than half a billion dollars. The pharmaceutical companies maintain databases of physicians and monitor the prescription of doctors in terms of use of drugs. The MRs maintain a high level of contact with the physicians for sharing product information and they manage to get easy access to the physicians. The MRs were found to be highly target oriented with attached incentives for target fulfilment. A system of "reward" for physicians from the pharmaceuticals for prescribing their drugs is in existence and some of the adopted marketing techniques do not comply with ethical norms. The physicians are somewhat dependent on the MRs for product information. Such product information may contain fewer cautions, fewer side effects, fewer contra-indications and more than the approved indications.

Promotional gifts and inducement costs are ultimately borne by the patients. Patients are also exposed to contra-indications and side-effects of the drugs either due to polypharmacy and/or due to biased information of the product literature. The health cost of such effects is yet to be determined. Most importantly, MRs take away valuable time of the doctors in public places where mostly poor patients go to receive services; and thereby deprive the poor patients for their business promotion.

The study also found that the MRs have started to include the village doctors (*palli chikitshoks*) in their sphere of influence for marketing drugs. Less known companies rely more on the rural market and drug sellers also prefer to sell their products since more profit margin can be attained from them. The example of 27 children's deaths due to paracetamol syrup in July

2009 can be cited in this context. This once again demonstrates the appalling state of drug governance.

The operations of the Directorate of Drug Administration (DDA) is seriously handicapped. There are only two laboratories which cannot meet the demand of the sector that has grown exponentially over the last 27 years. Product literature which is being used to update medical professionals is alleged to contain biased information for pharmaceutical promotion. The DDA cannot screen them properly due to inadequate human resources. The problem is not only acute at the headquarter; DDA human resources at the district level and below are virtually absent.

"Shortage of manpower is one of the main constraints that we are struggling with. In 1982 we had only 110 manufacturers in the country. At present we have around 800 manufacturers out of which 237 is Allopathic, 266 is Unani, around 170 is Ayurvedic and rest are others. Annually the manufacturers produce medicines of 5,000 crore taka. The pharmaceutical market has expanded but not our manpower and resources to cope with this market. Currently we have only 52% workforce. Since 1982 only two new appointments were given. On the other hand, many of our staffs retired which increased the crisis of workforce. We sent a proposal to the Ministry of Health to appoint new staffs. We have requested for 389 of total staff in the department to increase our capacity. Ministry of Health has accepted our proposal and sent it to The Ministry of Establishment. The proposal was sent in 2004 but till now it is in the Ministry for the approval. The governments changed over these years but the proposal left unapproved." - (A DDA official, Chapter 6).

The clause 11.3 of the election manifesto of the ruling party mentioned that "an appropriate pharmaceutical policy to bring self-sufficiency in the production of medicines of international standard ... will be formulated." It is high time that the Government starts acting on its election commitment; and as the first and foremost task in this regard it needs to give high priority to strengthening the DDA in terms of human resources and technical capacity.

Our study on blood transfusion revealed poor governance in terms of implementation of the registration requirements and regulations related to

safe blood supply. Blood transfusion was carried out in some facilities even if they were not registered with the DGHS to do so. Such facilities were mostly private commercial while some were private non-commercial. Only seven of the enlisted 25 centres under the Safe Blood Transfusion Programme (SBTP) of the DGHS included in the study had facilities for preparation of blood components. 33 out of the 37 centres (89%) reported that they screen blood for Transfusion Transmittable Infections (TTIs). However, only 18 centres reported screening blood for all five TTIs as required under the SBTP. Reasons for not screening blood included not perceiving all diseases as important and lack of awareness about the importance of blood screening among the relatives/ attendants of the patients, shortage of trained manpower in the facilities, lack of funding, and insufficient lab facilities and screening products.

Training on SBT has been provided mostly to government staff (19 out of 21) while the number of trained staff in the private sector whether commercial or non commercial were found to be much less (13 out of 21). Guidelines on screening and selecting donors, collecting, testing, matching, transfusing, and storing blood, training staff, health and safety procedures, use and maintenance of equipment, behaviour and dress code were mostly absent in private facilities (14 out of 19 functioning centres) and in some government centres (five out of 18 functioning centres). The majority of the managers who supervised blood transfusion system did not have knowledge about SBT (31 out of 42). Eight centres out of 17 private centres reported that they only transfuse blood after due testing and cross-matching of their own blood bank. However, an equal proportion of centres to be reported transfusing blood without any screening. The majority of the centres (30 out of 37) did not have any license/ accreditation for blood transfusion service. Some private centres reported that they have a license for blood transfusion (12 centres out of 19) while none of the government centres had a license. The staff in government and private non-commercial centres (24 out of 37) did not perceive the need for having a license and considered themselves above such requirements. Though many of the centres are supervised by DGHS personnel it is not clear why most of the centres (30 out of 37) do not have a license yet.

The above noted findings clearly indicate that rigorous implementation of the regulatory functions would be critical for ensuring safe blood transfusion. Given the public health importance of safe blood transfusion, training and other capacity building opportunities should be provided to all the centres irrespective of government, non-government or private affiliation. The regulatory function should be bestowed upon an independent body. It is evident from the fact that when the regulatory function and implementation are being carried out by the same agency, they tend to pay less attention in complying with the required regulations.

Our study on hospital diet, perhaps the first of its kind in Bangladesh, revealed a picture of how scarce resources are being wasted and indicates a way through which we can extract most out of the same investment with knowledge based management and good governance.

Diets given to diabetic patients in the hospitals had 25% less carbohydrate than the Recommended Dietary Allowance (RDA) and the intake was even lower than RDA with a shortfall of 55%. The average amount of protein in the supplied diet was 67 grams and the intake was only 42 grams. Thus, there was a loss of 25 grams of protein per patient per day. The situation of fat intake was even worse with an average supply of 22 grams opposed to RDA of 60 grams per day. With a loss of nine grams, the intake of fat was 80% less than the RDA. The situation in a specialised diabetes hospital was also far from satisfactory. The kidney patients in the hospitals were over supplied with protein, nearly six times than that of the RDA, and under supplied with other nutrients. However, the real intake was short of the RDA by 27% for protein, 91% for fat, 79% for carbohydrate and 82% for Energy (Kcal). A significant part of the nutrients supplied to the kidney patients was wasted. Liver patients were supplied with diet containing a lower amount of nutrients than the RDA. The shortfall was 56% for protein, 76% for fat, 63% for carbohydrate and 61% for Energy (Kcal). Malnourished patients were supplied with a diet containing lower amount of nutrients than the RDA. The shortfall was 33% for protein and 48% for Energy (Kcal). The appropriateness of diets given to diabetic, kidney, liver, and malnouri-shed patients in the specialised hospitals was no better than the situation described above.

Main messages and recommendations

Based on the findings emerging from the above studies and current debates on health sector governance, Bangladesh Health Watch (BHW) would like to provide some key messages for policy makers. The perennial issue of poor quality health care described in this report was mostly an outcome of either the lack of a regulatory framework or its ineffective implementation.

Our first message is about strengthening the regulatory/statutory bodies for the interest of the people; and upholding patients' rights along with the rights of the service providers. In the absence of strong regulatory frameworks, institutions, regulations and strict implementation of regulatory measures, the quality of health care will continue to be unsatisfactory. To treat patients effectively and efficiently, hospitals will require adequate numbers of quality health professionals and support workforce. Thus, the regulatory institutions responsible for health workforce production require strengthening in terms of course content, examination process, faculties, registration of graduates, and periodic assessment of performance of health care providers for renewal of registration. Most importantly, they need to pave a user-friendly way to address genuine grievances of the patients and uphold patients' rights, if necessary without waiting for further direction.

In order to ensure the above, BHW recommends the following actions:

- z Carry out detailed review immediately on the existing status of these regulatory bodies and clarify their roles in order to
 - revitalise their existence, especially that of the BMDC;
 - update all the acts related to their formation and proper functioning with extensive consultation with the stakeholders and based on evidence;
 - strengthen their legal and logistical powers;
 - enhance democratic practices through ensuring participation of the relevant stakeholders including representatives from the civil society in these councils;
 - ensure a democratic process for council governance and merit based recruitment;

- enhance the mandates of these bodies; and
- implement the right to information act to ensure free flow of information for the common people.

- z Develop accountability policies and processes within regulatory bodies to ensure transparency of information on the regulation of medical professions and health care.
- z Strengthen management and administrative skills and capacity to perform regular administrative and supervisory functions.
- z Establish divisional monitoring units within BMDC and BNC to oversee the activities of medical and dental practitioners and publish and update the names of the registered medical, dental and nursing professionals with respective specialties and sub-specialties (if any) on their respective websites.
- z Produce accessible, people-friendly annual publications which will clearly feature how the regulatory bodies have performed in their supervisory and disciplinary roles and with what outcomes, and had taken initiatives to improve their accountability to the public.
- z Encourage and strengthen the role of civil society organisations, especially those focusing on the rights of the citizens and consumers, to play an active and vigilant watchdog role in monitoring the functionality of the regulatory bodies for the interest of the people.

Our second message would be that inappropriate use of drugs and lack of adherence to the list of essential drugs is the result of weak supervisory capacity of the regulatory mechanism and aggressive push from the pharmaceutical companies while marketing their products.

In order to address the above issue, BHW recommends the following actions:

- z Completely reorganise and strengthen the Directorate of Drug Administration (DDA) in terms of human resource and technical capacity (e.g., establishment of drug testing labs). Ensure a rigorous approval process for product literature. Reconstitute the Committee for Implementing the Code of Pharmaceutical Marketing Practices.

- ⌘ Ensure that the Essential Drug List is on public display in all the PHC level facilities in the country irrespective of urban or rural locations or public, NGO or private attachment of the facilities. MoHFW should send an urgent directive to this effect.
 - ⌘ Make available Essential Drugs for common illnesses as listed in the national EDL at PHC level facilities, especially the public sector facilities throughout the country. DGHS should ensure the supply and monitor this regularly through their official chain.
 - ⌘ Make a clear commitment in the national health policy to education and training combined with managerial and regulatory interventions for rational drug dispensing at the 80,000 plus drug shops in the country as well as public and private sector health facilities. Combine this with an explicit commitment to an institutional mechanism of implementation.
 - ⌘ Undertake further research to determine how to promote rational prescription, avoidance of poly-pharmacy and overuse and misuse of antibiotics, generic prescribing, and prescribing from the national EDL; and on how the consulting time can be increased for quality provider-patient interaction.
 - ⌘ Bring gifts-giving practice by pharmaceutical companies under strict regulation and ensure that parity is maintained for all civil servants. Bring visits by medical representatives under regulation, especially in public hospitals.
 - ⌘ Find ways to make the promotional budgets of the pharmaceutical companies transparent so that it is clear what percentage of the drug price is channelled towards promotional efforts. Direct audit firms responsible for auditing these companies to look into the promotional practices and identify any deviations from ethical practices in their audits.
 - ⌘ Take appropriate regulatory action to ensure that pharmaceutical companies comply with the
 - IFPMA¹ Code of Pharmaceutical Marketing Practices
 - WHO Ethical Criteria for Medicinal Drug Promotion²
 - ⌘ Undertake a comprehensive evaluation of National Drug Policy using structural, process and outcome indicators to have a state-of-the-art knowledge on the Bangladesh situation. This will provide policy makers the necessary guidance in improving the present condition with respect to production and rational use of drugs.
- Our third message is on safe blood transfusion and weak implementation of the safe blood transfusion regulations.*
- In order to address the above issue, BHW recommends the following actions:
- ⌘ Widely disseminate blood transfusion policy to providers as well as to the general public.
 - ⌘ Bring the functioning non-SBTP private commercial centres immediately under strict regulations and monitoring of the government and restart services in the non-functioning SBTP-enlisted public facilities without delay.
 - ⌘ Make licences mandatory for blood bank operation, with renewal of licenses conditional on the performance of the centres. Licensing criteria should be equally applicable to the government, non-government and private entities.
- Our fourth message is about adequacy and appropriateness of hospital diets which are neither on the hospital agenda nor on the list of priorities in terms of patient management protocol.* This lack of prioritisation is evident from the absence of dieticians and nutritionists in the facilities and absence of guidelines to be followed by the hospitals.
- In order to address this issue, BHW recommends the following actions:
- ⌘ Make the employment of qualified nutritionists and dieticians mandatory in hospitals.
 - ⌘ Introduce standard protocols for dietary management in hospitals.
 - ⌘ Assess the status of diets in hospitals and clinics at all levels and implement systematic monitoring and evaluation of patients' diets in every hospital.

¹ Codes promulgated by the International Federation of Pharmaceutical Manufacturers and Associations (revised in 2006).

² A document prepared and revised in 1985 and endorsed by the Third World Assembly in 1986.

The fifth message would be about adherence to ethical practices by the health professionals and addressing the prevailing weaknesses in the course content in order to prepare future health professionals to combat ethical dilemmas successfully in real life at every level of health service delivery.

In order to ensure the above, BHW recommends the following actions:

- ⌘ Emphasise and strengthen ethics training in medical education at undergraduate and post-graduate levels, particularly by familiarising students with the practical and operational side of medical ethics and incorporating the WHO module into the curriculum.
- ⌘ Mandate the professional bodies to introduce ethics into continuing professional education and make this compulsory for all registered medical practitioners.
- ⌘ Ensure that the Patients' Charter/Bill of Rights is widely publicised by rights-based organisations and by the regulatory bodies.
- ⌘ Encourage stronger participation by human rights and consumers rights related civil society organisations to play a more active watchdog role in monitoring ethical practices in the health sector.

Our final and overarching message is about the national health policy which would govern the entire health sector of Bangladesh. The revision or formulation process should ensure participation of all the important stakeholders for its consistent implementation. To ensure continuity as a public policy, health policy should not be narrowly conceived as a "policy of the ruling party" rather it should be viewed as the policy of the state.

In order to ensure the above, BHW recommends the following actions:

- ⌘ Develop a transparent mechanism for informing people in general about the progress of the national health policy revision or formulation process and ensure participation of all the important stakeholders so that it is implemented consistently.
- ⌘ In order to develop a sense of ownership and to avoid unjustified policy revisions, ensure adequate engagement of the opposition political parties in the policy process, particularly through the vital role that the Parliamentary Standing Committee can play as a cross-party parliamentary body.
- ⌘ Ensure that policy formulation or revisions are research-based, need-based and participatory, rather than mere expressions of the preferences of the political regimes. In particular, use the mechanism of the Parliamentary Standing Committee to organise public and specialist hearings on the national health policy to optimise stakeholders' participation.
- ⌘ Recognising that a stronger civil society can play an effective role in offsetting the arbitrary acts of the ruling parties regarding policy revisions, encourage NGOs, as a part of civil society, to act as a watchdog over government stewardship as opposed to remaining in a mere complementary role.
- ⌘ Undertake a critical review of the approved national policies, e.g. health policy, population policy, nutrition policy, drug policy to bring synergy in the sector; and if possible-prepare a synthesised policy document.

Annexures

Bangladesh Health Watch matrix on governance of the health sector

PRINCIPLES	Strategic Vision	Equity, Inclusiveness, Participation and Consensus Orientation	Rule of Law and Regulatory Framework	Transparency (Control of Corruption) and Accountability
Levels of Assessment				
National Level	<ul style="list-style-type: none"> - Where does health rank in the overall development framework by resource allocation, and as percentage of total government expenditure? - Decentralisation - analysis of current plans 	<ul style="list-style-type: none"> - How well is the system performing in terms of providing equal health care opportunity regardless of social class, gender, race, ethnicity, etc.? - The level of coordination and participation sought among various stakeholders in the health care system. 	<ul style="list-style-type: none"> - Regulatory framework - Public and private sector - How immune is the national health care system to the political situation of the country? 	<ul style="list-style-type: none"> - What is the level of willingness, in terms of allocation of resources and policy for making information available to the public? How transparent is the process? - What is the level of decentralisation?
MoH Policy Level	<ul style="list-style-type: none"> - Is there a National Health policy/strategic plan available stating objectives, strategies with a timeframe and resources allocated? - Who forms policy, why and how? 	<ul style="list-style-type: none"> - Financial support mechanisms, health insurance, voucher schemes, etc. - How responsive is the policy making process in terms of mediating differing interests to reach a broad consensus based on the best interest of the country? 	<ul style="list-style-type: none"> - Service provision for public and private sector - Drug regulation - Blood supply - Registration and certification of health care providers; particularly physicians 	<ul style="list-style-type: none"> - Mechanisms for making government, NGO, and other private health care providers accountable - Tracking mechanisms for utilisation of government and aid resources
MoH Implementation Level	<ul style="list-style-type: none"> - What priority programmes are being implemented and how do they correspond to the policy objectives? - What are the causes of failure in implementation of national policy? 	<ul style="list-style-type: none"> - At district, sub-district levels what mechanisms are present for citizens' participation? How active and effective is the cooperation between public and citizen at this level? What initiatives are taken to promote the interest of the disadvantaged groups? 	<ul style="list-style-type: none"> - How active is the enforcement of regulation at this level? How does the system work? Who is in charge and how do they report to the higher authority? 	<ul style="list-style-type: none"> - How to make the informal sector accountable? - Health care provision monitoring rule
Citizens'/ Consumers Level	How well are the citizen's needs and expectations reflected in the policies made and implemented?	<ul style="list-style-type: none"> - What are the citizen's expectations and experiences in terms of equal treatment, opportunity to participate and claim their basic health care rights? 	<ul style="list-style-type: none"> - Are the citizens aware of the existing framework? Do they have the options to complain about problems regarding law and regulations? How responsive is the system towards citizens concerns? 	<ul style="list-style-type: none"> - Patients' rights, policy, practices - Accountability of the leaders - Missing culture of accountability - Expert vs. lay attitude - Compliance with Hippocratic Oath

Adapted from the "Framework for Assessing Governance of the Health System: Gateway to Good Governance" - a presentation made by the Eastern Mediterranean Regional Office, World Health Organisation (WHO) at a capacity building workshop on health system development for WHO staff, Alexandria, May 20-24, 2007.

Responsiveness, Effectiveness and Efficiency	Information and Intelligence	Ethics	Leadership and Governance Capacity
<ul style="list-style-type: none"> - What are existing mechanisms of receiving feedback from service recipients? - How do citizens voice their rights and concerns? 	<ul style="list-style-type: none"> - HMIS: Status and use: What information is available about the health system and health in the country and how accessible is it? What is the reliability of information available for development of policies? 	<ul style="list-style-type: none"> - National committee on medical ethics - Research ethics 	<ul style="list-style-type: none"> - How are the leaders leading? - Policy, strategic planning, research unit/division? - Leadership/management training
<p>Human and Financial resource planning:</p> <ul style="list-style-type: none"> - Allocation of resources in terms of primary, secondary and tertiary health care - What are the rules and actual practices? Where are the gaps? - Doctor: Nurse: Patient ratio 	<ul style="list-style-type: none"> - Access to information- policy and guideline. What evidence is there for the use of information in the decision making process? 	<ul style="list-style-type: none"> - Ethics committee in hospitals and clinics: Status and need 	<ul style="list-style-type: none"> - Do we have any strict policy for the managerial post at district hospitals? Are the guidelines followed?
<ul style="list-style-type: none"> - How responsive is the system? - Quality control of hospitals and clinics - How is the capacity of planning, analysis, coordination, implementation, and evaluation of the health system? 	<ul style="list-style-type: none"> - Information system to track down placement of government health professionals 	<ul style="list-style-type: none"> - Quality of drugs - Practices of prescribing drugs - Push selling by pharmaceutical companies 	<ul style="list-style-type: none"> - Leadership and management at hospitals/ upazila level health facilities: current conditions and recommendations
<ul style="list-style-type: none"> - Barriers in creating enabling environment for doctors deployed in remote areas - Availability of service, ensuring presence of health care providers; Availability of drugs; Referral linkages - Non-medical expectations of patients 	<ul style="list-style-type: none"> - Connecting upazilas with ICT - Status 	<ul style="list-style-type: none"> - What are the institutional mechanisms to promote and enforce high ethical standards in health care? 	<ul style="list-style-type: none"> - Are the citizens aware of their ethical rights? Do they know about the process and procedure of to access to the system for their rights? Do they get response from the system? - Do the citizens have any voice regarding efficient management and functioning of the local health system?

Methodologies

In order to operationalise the broad objectives of the Bangladesh Health Watch 2009 as outlined in Chapter 1, six independent but interconnected studies were designed. The following gives details of the design of each study.

Study cluster 1: Health sector governance

Chapter 2: Health policy

Data for the issues on health policy formulation and implementation were also collected from both the primary and secondary sources. Primary data were collected through in-depth and open-ended interviews. Seventeen people were interviewed focusing on the key players of three policy documents prepared in 2000, 2006 and 2008, and those involved in policy implementation which included the bureaucrats, politicians, health experts, journalists, NGO representatives and medical professionals.

Chapter 3: Functions of regulatory and statutory bodies

Data for the section on regulatory bodies were collected from both secondary and primary sources. Secondary sources include review of relevant literature available in the parliament library, Press Institute of Bangladesh (PIB), National Archives and reputed journal websites. For primary data, eight Key Informant Interviews (KII) were conducted. High officials of BMDC, BMA and BNC, health education and delivery organisations, representatives from health right organizations and a former member of the Parliamentary Standing Committee on Health were interviewed.

Chapter 4: Ethics in the health sector

The study on ethics in health sector required both primary and secondary data collection. An extensive

amount of literature was consulted, including journal articles on health education and health ethics, reports of international organisations and NGOs, and media reports. A structured, Key Informant Interview (KII) was used for obtaining primary information. Nine interviews had been conducted with current and ex-officials at organisations like Bangladesh Medical and Dental Council (BMDC), Centre for Medical Education (CME), Bangladesh Medical Association (BMA), Ganashasthya Kendra (GK), Bangladesh Paribesh Andolon (BAPA) and Population Service and Training Centre (PSTC). Based on the objectives of the study, interviewees were selected from four major groups: i) medical educationalists, ii) health professionals, iii) representatives of regulatory authorities, and iv) representatives of health NGOs.

Study cluster 2

Chapter 5: Availability of essential drugs and their use in the public and private primary health care facilities

Objectives: To study how far the outcome objectives of the National Drug Policy in terms of availability, affordability, and rational use of essential drugs in the public and private sectors PHC facilities in both rural and urban areas of Bangladesh have been achieved.

Specific objectives:

1. Study the availability of Essential Drugs (as per latest Essential Drugs List) in the public and private sector health care facilities in the rural (UHC, Drug shops) and urban (Dhaka City Corporation) areas of Bangladesh.
2. Study the affordability of Essential Drugs by exploring the price differentials of different brands of drugs for common illnesses (e.g., diarrhea, dysentery, ARI, hyperacidity, fever, worm infestation etc.).

3. Study the rational use of drugs by allopathic health care practitioners (MBBS doctors, Medical Assistant/SACMOs, and village doctors) through studying their prescribing behaviour for specific illnesses including dispensing practices by pharmacists/drug dispensers and consumer (patient/attendants) understanding and compliance.

Materials and methods

Study design

This study was designed as a facility-based cross-sectional study which can be easily implemented using science graduates as data collectors, as experience has shown the difficulty of involving doctors/students (medical/pharmacy) for short assignments, especially in the rural areas. Moreover, our purpose was not to assess the QoC of the doctors/medical audit but to assess the specific aspects of the behaviour of the health providers with respect to the rational use of drugs at the grassroots. Given the use of standard indicators (Table A2-5.1), WHO suggests that it can be implemented "by individuals without special training or access to many resources" (e.g., testing drugs for quality) (INRUD & WHO, 1993).

Table A2-5.1: WHO core indicators to investigate drug use in health facilities (INRUD and WHO 1993)

Prescribing indicators	
1	Average number of drugs per encounter
2	% of drugs prescribed by generic name*
3	% of encounters with an antibiotic prescribed
4	% of encounters with an injection prescribed
5	% of drugs prescribed from essential drugs list
Patient care indicators	
6	Average consultation time
7	Average dispensing time
8	% of drugs actually dispensed
9	% of drugs adequately labelled
10	Patient's knowledge of correct dosage
Facility indicators	
11	Availability of copy of essential drugs list
12	Availability of key drugs

* not recorded in this study

The study combined cross-sectional quantitative survey with occasional observations. The different components of the survey were: -

- Availability** of Essential Drugs in different facilities (availability of essential drugs list; availability of essential drugs for common illnesses).
- Affordability:** Mini-market survey for price of essential drugs for common illnesses.
- Rational use of drugs:**
 - Prescribing practices* average number of drugs prescribed, % antibiotics prescribed, % drugs prescribed by generic name, % Inj. prescribed, % drugs prescribed from the EDL for common illnesses by different providers (such as the MBBS doctors, Medical Assistants, village doctors) at upazila and urban (City Corporation) levels.
 - Dispensing practices* at these health facilities (average dispensing time, % drugs actually dispensed, % drugs adequately labelled, information given on dose regimen).
- Understanding and compliance** with dosage regimen and perceptions of patients/attendants on drugs availability, affordability, efficacy and cost of drugs through exit interview.

Sampling

- I. Rural sample: A total of 30 Upazila Health Complexes (UHCs) was taken at random from the six divisions proportionate to the size of the divisions (Table A2-5.2).

Table A2-5.2: Distribution of upazillas included in the study proportionate to the size of the divisions

Division	Total No. of UHCs	% of total	No. of sample UHCs out of 30	Comments
Dhaka	120	25	8	
Chittagong	96	20	6	
Rajshahi	124	26	8	
Khulna	59	12	4	
Barisal	40	9	2	
Sylhet	37	8	2	

Also, one drug shop each from the neighbourhood of the UHC/market where a medical assistant/ *palli chikitshak* provides treatment was included to represent the informal sector (total 30 shops).

- II. Urban sample: This was exclusively taken from Dhaka City Corporation (DCC) area due to constraints in resource and time. Under the Urban PHC Project (UPHCP), eight NGOs are providing outpatient (preventive and curative) services in 10 areas of the DCC. Of these, DCC and one NGO are serving in two areas each and the rest six NGOs are working in one area each. From each area, two clinics were randomly chosen from a list of clinics provided by the NGOs in their respective areas. Thus, the urban sample comprised of a total of 20 clinics.
- III. Patients: Thirty patients attending OPD for common acute illnesses were enrolled in the study from each facility (UHC, drug shop, urban clinic) from the total patients visiting in two typical working days (consecutive) until the required number of patients was obtained. Patients were selected by systematic random sampling to avoid bias from timing of the survey (rush hours in the beginning or end of clinic sessions) or freshness or fatigue of the health care providers/workers. For details, see below: [Total patients = {(30+30) x30}+ {30 x 20} = (1800+ 600) = 2400]

Tools

A structured form was developed and tested to record relevant data on prescribing and dispensing practices from patient-provider interaction. Another pre-tested, semi-structured questionnaire was used for recording information from the exit interview. A reference list of key essential drugs for common illnesses was prepared for this study from the government approved latest EDL dated 8 April 2008 (see Table A2-5.3 below). The common illnesses were selected from top 20 morbidities reported by BBS and reality check of patient registers from the UHCs, and the key drugs selected by the investigators who are both medical graduates and public health specialists. This reference list was used to check whether key drugs for common illnesses were available in the facilities and also, for

information on the prices of drugs (maximum and minimum) through mini-market survey.

The survey

The study passed through the usual institutional review process at BRAC Research and Evaluation Division and ethical review board of the James P Grant School of Public Health, BRAC University for ethical approval. Data were collected through observation and recording information (prescribing and dispensing practices), face-to-face interview (exit interview) and mini-market survey (price of essential drugs) by the interviewers after obtaining informed verbal consent. All interviewers hired for the study underwent a five-day training which consisted of didactic lectures on the content of the instruments

Table A2-5.3: Reference list of key essential drugs for common illnesses (from EDL)

SI.	Common illnesses/conditions	Key drugs
1	Fever (with cold), pain	Acetaminophen (Tab) Acetylsalicylic acid (Tab)
2	Hyperacidity including peptic ulcer	Aluminium hydroxide+Magnesium hydroxide (Tab, Liquid) Ranitidine (Tab)
3	Diarrhoea	ORS
4	Dysentery, amoebic	Metronidazole (Tab, Syrup)
5	Typhoid fever	Ciprofloxacin (Cap, Tab, Syrup)
6	Worm infestation	Mebendazole/albendazole (Tab)
7	ARTI including pneumonia	Amoxycillin (Syrup) Co-trimoxazole (Tab, Syrup)
8	Vitamin deficiency including iron deficiency	Iron+Folic acid (Tab) B Complex (Tab, Syrup) Ascorbic acid (Tab)
9	Hypertension	Atenolol (Tab), Nifedipine (Tab)
10	Hypersensitivity reactions	Prednisolone (Tab)
11	Eye/Ear infection	Chloramphenicol (Eye/Ear drops) Chloramphenicol (Eye ointment)
12	Skin infection (fungal)	Miconazole (skin ointment/cream)
13	Ascabies	Benzylbenzoate lotion
14	Wound (surgical)	Chlorhexidine solution (dressing)

(structured check-lists, questionnaires) followed by repeated practice sessions outside the study areas and long de-briefings. There were 20 interviewers

including two supervisors who were divided into six teams. The day-to-day field activities of the teams were overseen by a field researcher based in the upazila field office. The whole survey activity was supervised and managed by the authors who made frequent field visits and provided assistance and guidance when needed. The survey was completed within 30 working days (18 Feb. - 24 Mar. 2009, including training).

Prescribing and dispensing practices

For this part of the study, the randomly selected UHC/Urban Clinic was observed for two consecutive days (excluding any atypical day such as NID etc.) during the usual office hours (9am to 1:30 pm). A structured format was used to record relevant information of the 30 OPD patients selected through systematic random sampling. The survey team (two members) started the day by taking permission from the UHFPO/Clinic-in-Charge to proceed with the study in the particular facility, exploring whether there is an EDL (in file or posted in public) in the facility, and going through the record of the past seven days to get an idea about the average no. of patients attending the facility. The latter information was used to decide upon the interval required for taking systematic random sample of 30 patients. Thus, each 'n'th patient was included for observation.

One interviewer placed himself at the door of the Doctor's chamber and recorded the time of entry and exit of the sampled patient by a stopwatch. The prescribing indicators were recorded by scrutinizing the prescription slip immediately after the doctor-patient interaction, outside the doctor's chamber. Another interviewer posted near the dispensary followed the sampled patient when s/he came out of the chamber. The time of submitting the prescription slip to the dispenser and the time when the drugs were served was recorded and the dispensing time calculated. The no. of drugs in the prescription slip, the no. of drugs served by the dispenser and the labelling of the drugs served were recorded. Labelling was defined as a mean by which the drug can be identified (e.g., name of the drug inscribed on to the cap or tab, or if disposed of in original package). Next, the same interviewer conducted the exit interview of the patient (attendant of the patient if minor) to

elicit information on their understanding of dosage of the drugs dispensed, satisfaction with services, and prices of essential drugs. The interview was conducted in a place away from the prescribing and dispensing sites and within the premises of the facility. The whole process continued in this cycle until information of 30 patients was recorded.

Simultaneous with the activities at the UHC, the third member of the team was posted at the most popular private practitioners (MA/SACMOs, *Palli Chikitshaks*) drug shop in the market nearest to the UHC. He had to attend the shop both at the morning and evening to cover the practicing time of the particular provider. The tool used for recording information at the drug shops was slightly modified. He recorded relevant information on prescribing and some aspects of dispensing (e.g., labeling of drugs sold, dosage instruction etc.). Next, he conducted an exit interview of the patient, a little away from the drug shop and the provider to maintain privacy. He stopped until 30 patients were found or the expiry of two days, whichever was earlier.

Checking drug stocks in the UHCs and Urban Clinics

The reference list of key essential drugs for common illnesses was used to check whether the listed drugs were available on the day of survey. The list was read one by one before the store-keeper/dispenser and he was asked to show the drugs, if present. When the drug could be shown, only then it was recorded as available.

Mini-market survey

To find the market variation in prices of essential drugs for common illnesses, a mini-market survey was conducted. In the vicinity of the UHC studied, 10 drug shops were randomly chosen and the prices of the drugs using the above reference list of key essential drugs were recorded. The prices were obtained from the sales people at the drug shops.

Data management and analysis

SPSS PC+ version 12 was used for data analysis. Summary statistics of the different drug use indicators were calculated and tabulation done to present data comparing different facilities (UHCs, Drug shops and Urban Clinics in DCC area) and the six divisions.

Chapter 6: Pharmaceutical promotions: Regulatory provisions, status of enforcement, awareness and compliance

Study Objectives

The objective of the study was to investigate the extent to which pharmaceutical promotional practices influence non-compliance of the regulatory guidelines, namely, the Drug (Control) Ordinance of 1982 and the Code of Pharmaceutical Marketing Practices, promulgated in 1994. The objective was also to explore the challenges in enforcing the regulations and the factors that play into causing these challenges.

In an effort to achieve this broad study objective, the following modalities were adopted:

- ⌘ Reviewing of existing rules and regulations regarding drug promotion practices and assess the status of implementation, level of awareness and compliance of these rules and codes;
- ⌘ Exploring the challenges in enforcing the existing rules and codes and identify factors that render these regulations nearly ineffective;
- ⌘ Exploring the existing drug promotion strategies and practices currently adopted by the pharmaceutical companies;
- ⌘ Studying the perception of the doctors and regulatory authorities on current drug promotion practices;
- ⌘ Assess the factors that guide prescribing decisions and patterns of the physicians and how that relates to the principles of Rational Use of Drugs (RUD).

Methodology

The study investigations took place in three districts - Dhaka, Bogra and Chittagong, to be able to identify variations in promotional practices and level of enforcement of regulations. The sites outside of Dhaka were selected based on consultation with the Technical Advisors of the study team. Bogra is one of the important drug distribution depot for Northern Bengal and Chittagong is a representation of South and South-eastern regions. The study primarily employed qualitative research method tools.

In-depth interviews: Eleven interviews were conducted with medical representatives of various

pharmaceutical companies - local and multinational, 14 physicians, 8 rural medical practitioners (RMPs) and palli chikitshoks (PCs), and five representatives from regulatory authorities.

Observation: Pharmacies were observed in 16 sites, six health care institutions (two private and four public), 10 drug stores and in all three districts combined.

Round-table discussion: A roundtable discussion was held with CEO's and Senior Executives (mostly from the Marketing department) of 11 local and multinational pharmaceutical companies were invited to a round-table. The objective of the round-table was to gather the industry's perspective on existing regulations for pharmaceutical promotional activities, their role in promoting more transparent and uniform practices, and their views on CSR.

Prescription survey: The study team collected a list of cardiologists who regularly prescribe drugs of a particular pharmaceutical company. Twenty doctors randomly selected from this list were visited and 102 prescriptions were collected from these sites located in Dhaka, Mymensingh, Chittagong, Bogra, Syhlet and Khulna. An analysis was done based on prescriptions made for one particular anti-hypertensive that was being promoted during the data collection period.

Challenges

- Generally defensive position of pharmaceutical companies
- Securing information from medical reps due to concern of confidentiality
- Senior executives of pharmaceuticals often reluctant to share information
- Suspicion by guards at medical facilities during observation
- Observing drug stores without causing concern of the drug seller/chemist
- Reluctance of doctors in sharing information on gifts and inducements
- While observing institutions, interactions between medical representatives and doctors could not be observed in most cases once the representatives went into the chambers.

Chapter 7: Blood supply and transfusion services

Objectives

The objectives of the study are to assess current situation of SBT services and to assess implementation status of existing policies. Thus, the proposed specific objectives are to:

- determine existing BTS facilities of government and private centers
- examine existing quality assurance system for BTS
- identify managers who manages blood transfusion services at the government system; and assess their awareness of BTS policy and its implementation
- assess the process of regulatory authorities for licensing BTS
- explore advocacy, educational and training facilities and activities available for managing blood transfusion services
- explore quality and safety issues of screening blood borne diseases; and process of blood

collection and screening in the government, private and commercial sectors

- identify trained personnel available in BTS (directly involved)
- explore factors responsible for unsafe blood supply and transfusion
- identify gaps, weakness, and positive deviances to recommend policy formulation

Study design and methodology

List of health facilities in all the six Divisions in the country with provision for blood transfusion as per official record was collected from the office of the Director General of Health Services. There were 3,000 of such facilities in the six Divisions. The facilities were stratified into six strata, such as 1) Government and private medical college hospitals (39 nos.); 2) District hospitals, specialized hospitals, and MCWCs (128 nos.); 3) Upazila health complexes (478 nos.); 4) Non-commercial blood banks (16 nos.); 5) Commercial blood banks (100 nos.); and 6) Private clinics and pathology centers (2239 nos.).

Table A2-7.1: Distribution of study centres by geographic location

Geo-location Types of centres	Dhaka	Chittagong	Khulna	Rajshahi	Dhaka Metropolitan	Chittagong Metropolitan	Total
Government (GoB)	42.9 (3)	57.1 (4)	62.5 (5)	57.1 (4)	50.0 (3)	28.6 (2)	50.0(21)
Medical College	0.0	14.3 (1)	12.5 (1)	14.3 (1)	16.7 (1)	14.3 (1)	11.9 (5)
District Hospital	14.3 (1)	14.3 (1)	25.0 (2)	28.6 (2)	0.0	14.3 (1)	16.7 (7)
Upazila Health Complex	14.3 (1)	14.3 (1)	25.0 (2)	14.3 (1)	0.0	0.0	11.9 (5)
MCWC	14.3 (1)	14.3 (1)	0.0	0.0	0.0	0.0	4.8(2)
Specialized Hospital	0.0	0.0	0.0	0.0	33.3 (2)	0.0	4.8(2)
Private non-commercial (Pnon-C)	14.3 (1)	14.3 (1)	12.5 (1)	14.3 (1)	16.7 (1)	14.3 (1)	14.3 (6)
Red Crescent	0.0	14.3 (1)	12.5 (1)	0.0	16.7 (1)	14.3 (1)	9.5(4)
Sandhani	14.3 (1)	0.0	0.0	14.3 (1)	0.0	0.0	4.8(2)
Private commercial (PC)	42.9 (3)	28.6 (2)	25.0 (2)	28.6 (2)	33.3 (2)	57.1 (4)	35.7(15)
Private Commercial Blood Bank	14.3 (1)	14.3 (1)	12.5 (1)	14.3 (1)	16.7 (1)	14.3 (1)	14.3 (6)
Private Medical Colleges	14.3 (1)	0.0	0.0	0.0	16.7 (1)	28.6 (2)	9.5(4)
Private Clinics	14.3 (1)	0.0	0.0	14.3 (1)	0.0	0.0	4.8(2)
Private Laboratory/ Pathological Centres	0.0	14.3 (1)	12.5 (1)	0.0	0.0	14.3 (1)	7.1 (3)
N	7	7	8	7	6	7	42

n is in the parentheses

A sample of two facilities was randomly chosen from the second category and one facility was randomly chosen from each of the rest five categories. This has resulted in 42 facilities for inclusion in the study sample (Table A2-7.1). The sampling was done in a manner that two third of selected facilities had Government safe blood transfusion programme and the rest without the programme.

The respondents of the study were personnel directly involved with blood transfusion services. From each selected centre a relevant personnel was interviewed and also the blood collection, screening, and transfusion system was observed.

The training of data collectors, a physician and a social science graduate, involved exposure to Red Crescent and ICDDR,B. They spent a day at ICDDR,B and three days at Red Crescent, observing the standards maintained by the ICDDR,B and Red Crescent. The data collection was carried out during March to June 2009.

Chapter 8: Quality of hospital diets for patients with selected chronic diseases

Aims

To assess appropriateness of hospital diets received by patients and their intake in five specific disease conditions i.e. diabetes mellitus, coronary heart disease, renal failure, liver diseases, and severe protein energy malnutrition in urban and rural hospitals in Bangladesh compared to their therapeutic recommendation.

Specific aims

1. To assess the types and total food intake over 24-hours (which diet is provided by the hospitals & which they intake personally).
2. To assess the quality, quantity and appropriateness of hospital diet for five different diseases.
3. To conduct the anthropometrics measurement (weight, height) of the study participants.
4. To document the mechanism of health system for appropriate dietary management in the hospitals.
5. To review the system of diet allocation along the hospital policy.

Study design

The study was a prospective cross-sectional descriptive study with five diseases in several hospitals of Bangladesh.

Study population

Study population was selected from patients who are admitted at the study hospitals.

Inclusion criteria

- ⌘ Patients of only one diagnosis was selected in this study.
- ⌘ Patients aged 30-60 years diagnosed with Coronary Heart Disease, Renal Failure and Nephritis, Diabetes, Liver disease (Cirrhosis & hepatitis).
- ⌘ Under five children especially for protein energy malnutrition.
- ⌘ Patients who are admitted in the hospitals.

Exclusion criteria

- ⌘ Patients < 30 years.
- ⌘ More than five years old children especially for protein energy malnutrition.
- ⌘ Mentally unfit.

Sample size

Assumption

The sample size was estimated with the assumptions that it would be possible to detect there has been given more than 25 % energy from RDA to the patients in Bangladesh.

Study period

Enrolment of the study population was begin in April 2009 and completed in May 2009.

Sampling frame

One large medical college hospitals and one large district hospital was identified from each division of Bangladesh. Subjects were selected randomly for each disease group patients in any hospital. Subjects were also selected from specialized hospitals e. g. BIRDEM, NIKDU (National Institute of Kidney Disease and Urology) and NICVD (National Institute of Cardiovascular Disease) to fulfil the sample size for three disease group. Protein energy malnourished patients were selected from Dhaka Shishu Hospital and liver disease patients will be selected from Bangabandhu Sheikh Mujib Medical University (BSMMU) Hospital.

Randomisation procedure for diabetes mellitus, kidney disease, coronary heart disease and protein energy malnourished patients:

Sample size distribution for one disease:

6 Districts hospital	= 2 patients × 6	= 12 patients
6 Divisional Medical college hospital	= 2 patients × 6	= 12 patients
Specialised Hospital		= 26 patients
Total		= 50 patients

Quantitative Data Collection Procedure

Anthropometry

Weight

UNISCALE had been used to take weight of the hospitalised patients with precision of 2 decimal places (0.00kg). The person was placed over the scale & weight was taken. Specially if the child was frightened, time was allowed to settle down. The child along with its mother was placed over the scale & reading was taken. Then the mother was placed alone over the scale & reading was taken. The difference between two readings was original weight of the rachitic child.

Height (for diabetes, kidney, heart, liver disease)

Two trained field research assistants of ICDDR,B took height of every suspected person. One of them acted as an assistant, another one was measurer.

Length (for children aged 0-23 months)

Length board had been used to measure children of 0-23 months of age. The assistant laid the child carefully over the board & placed the head against the head board. Then the measurer fixed the knees with left hand & placed the footplate firmly against the child's heel to take the measurement.

MUAC

Mid upper arm circumference (MUAC) was measured to assess the nutritional status of the rachitic child. TALC tape had been used to measure MUAC. For measurement, midpoint of the left upper arm had been marked by identifying the midpoint between tip of shoulder & elbow. Then the tape was wrapped around mid-point to take measurement.

Questionnaire for hospitalized patients:

After identification of a patient, full questionnaire was completed. Patients were interviewed about current and past feeding practices in hospitals. Issues to be explored include dietary intake, hygiene practice, frequency of feeding, and gender bias on feeding and medical care practices.

Outcome variable

- ⌘ Dietary adequacy. (Deviation from recommendation).
- ⌘ Proportion of patients with nutrient deficits.
- ⌘ Amount of carbohydrate intake by patients with diabetes.
- ⌘ Amount of fat intake by patients with heart disease and liver disease.
- ⌘ Amount of protein intake by patients with kidney disease.
- ⌘ Body weight and height.

Quantitative data analysis

Questionnaire data was computerised, edited and analysed by using SPSS software. After completion of the study, data will be using SPSS software (Version 11.5). The analysis will be done after the calculation of major nutrients from the dietary intake in each group of patients. The means of hospital supply will be compared with recommendations by Z test (SND). Results will be significant at 5% probability level.

Qualitative study was done in each hospital

In-depth interview was conducted by the trained research assistants to understand patient-provider interfacing. In-depth interview was conducted with the patients to understand their observation about hospital diet:

- ⌘ Quality and quantity of hospital diet
- ⌘ Serving system of hospital
- ⌘ Hospital diet hygiene
- ⌘ Frequency of diet
- ⌘ Awareness about high calorie food intake
- ⌘ Causes and consequences about diseases (diabetes, coronary heart disease, kidney disease etc.)

Chapter 9: Governance issues affecting the quality of care

Methodology

For literature review, we searched online database and sources for terms describing quality of care (keyword: quality care), facilities, health system governance, doctor-patient relationship, providers attitude, physical facilities, waiting time, quality management and performance in various domains (keywords: competence, health knowledge, attitudes and practice, outcomes assessment). We retrieved potentially relevant articles and reviewed their reference lists to identify studies that our search strategy may have missed. We also searched our personal archives to identify additional studies. We included studies if they 1) were original reports providing empirical results and 2) measured knowledge, guideline adherence, or some other quality-of-care process or outcome.

In addition to documents review, key informants' interview, discussions with top officials and facilities managers and key providers of public and non-public sectors (including NGOs) were conducted to assess and analyze policy implications, effect of organisational structure, service delivery system and resource allocation in delivering quality of services.

Public sector facilities at different levels along with NGO facilities and for profit private sector facilities (both in rural and urban areas) were visited to observe physical and other facilities. Maternal and child health services were explored as cases. Also indoor and emergency services were reviewed, as catastrophic illness influence poverty issue more than mild, cold cases which are treated as outdoor. Cases of caesarean section for maternal health and pneumonia for child health were reviewed to ascertain technical quality of care by adviser investigators particularly in tertiary facilities. In public sector, Upazila Health Complex providing Emergency Obstetrical Care, Maternal and Child Welfare Centers (MCWCs) at district level, District Hospitals, Medical College Hospitals together with Azimpur Mother and Child Health Training Institute (MCHTI), Institute of Child and Mother Health (ICMH), Bangabandhu Sheikh Mujib Medical University (BSMMU) Hospital were looked into. Similarly indoor and emergency services providing NGO and for profit facilities were also reviewed. Sampling of the facilities was a mixture of random and purposive. Similarly, respondents were chosen on random and purposive basis. At facilities level, organizational structure,

service delivery system and resource availability were looked into along with physical facilities. Service providers and recipients were interviewed. Reception, registration, waiting time before being attended, tidiness, toilet facilities and conditions, providers' categories, availability of drugs and other equipments, advise provided, status of patients' bill of rights, citizens' charter, providers' accountability and technical competence, role of management, notions of rights and expectations, respect, dignity, and assurance of confidentiality that the patients receive from the service providers were also looked into. Health promotional activities and citizens' participation into the facilities were also investigated. Existence of quality of care promotional system and pattern of push from pharmaceutical companies were also explored.

Structured/semi-structured questionnaires, check-lists were be used to collect information. Data were analyzed qualitatively and quantitatively.

Data collection tools, check-list/semi-structured questionnaire guidelines

Observation

- ⌘ Organisational structure - staff: Specialist, Doctor, Nurse, Paramedics, Aya, Sweeper - no. of posts, actually available
- ⌘ Service delivery system and resource allocation: outdoor, indoor and emergency; who provides which services, time availability of providers
- ⌘ Physical facilities-building conditions including status of electricity and running water supply (reception, registration, adequacy of space for waiting and service delivery, tidiness of space, toilet facilities, privacy, dispensing, indoor facilities including provision of beds with adequate and clean linen, mattress, pillow, mosquito net and emergency facilities, diagnostic facilities)
- ⌘ Availability of drugs, equipments, reagents with amount and adequacy
- ⌘ Waiting time for receiving services-advice, actual service, including diagnostic services
- ⌘ Role of management-quality of care promotion
- ⌘ Clients' bill of rights, Citizens' Charter-availability
- ⌘ Providers' attitude-rights to information for patients, providers' accountability, notions of rights and expectations, respect, dignity, assurance of confidentiality

- * Health promotion
- * Scope of community participation

Sampling

Two divisions - one from eastern part, (Khulna) and the other from western part, (Sylhet) were chosen as primary sampling framework:

- * Randomly one upazila health complex providing comprehensive Emergency Obstetrics Care (EOC) services was chosen from each division (2)
- * Randomly one district level MCWC was chosen from each division (2)
- * Randomly one district hospital was chosen from each division with the consideration to capture different bed-types within the samples (2)
- * One Medical College Hospital was chosen from each division (2)
- * Azimpur MCHTI, ICMH and BSMMU Hospital were also within samples (3)

Thus, in public sector, sampling are 11:

Upazila Health Complex-2

Chowgacha of Jessore district from Khulna Division, and Bianibazar of Sylhet district from Sylhet Division

District MCWCs-2

Meherpur from Khulna Division, and Moulovibazar from Sylhet Division

District Hospitals-2

Jessore 250 bed from Khulna Division, and Moulovibazar 100 bed from Sylhet Division

Medical College Hospitals-2

Khulna Medical College Hospital from Khulna Division, Sylhet M A G Osmani Medical College Hospital from Sylhet Division

Other Hospitals-3

*Azimpur MCHTI, Dhaka
ICMH, Mutual, Dhaka
BSMMU Hospital, Dhaka*

For the NGOs and for-profit private sector, almost similar number of (09) facilities were chosen as comparators:

- * Square Hospital, Dhaka
- * Ibrahim Memorial (BIRDEM) Hospital, Dhaka
- * Shishu Hospital, Dhaka
- * Ad-din Hospital, Dhaka
- * MSCS UPHC CRHCC, Bashbari, Dhaka
- * MSCS, Sylhet
- * Ad-din, Jessore
- * Lamb Hospital, Parbotipur
- * Kumudini Hospital, Mirzapur

Except for Square Hospital, no other hospital from the for-profit private sector were included in the study due to non-availability and unwillingness to participate. Total sampled health centres or hospitals are thus 20.

Subsection I: Definitions on quality of care (QOC)

Author/Organisation Definition

Donabedian (1980)	Quality of care is the kind of care which is expected to maximise an inclusive measure of patient welfare, after one has taken account of the balance of expected gains and losses that attend the process of care in all its parts.
IOM (1990)	Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.
Department of Health (UK 1997)	Quality of care is: <ul style="list-style-type: none"> * doing the right things (what) * to the right people (to whom) * at the right time (when) * and doing things right the first time.
Council of Europe (1998)	Quality of care is the degree to which the treatment dispensed increases the patient's chances of achieving the desired results and diminishes the chances of undesirable results, having regard to the current state of knowledge.
WHO (2000)	Quality of care is the level of attainment of health systems' intrinsic goals for health improvement and responsiveness to legitimate expectations of the population.

Notes: IOM: Institute of Medicine; WHO: World Health Organization.

ANNEX 3

Tables for Chapter 7

Table A3-7.1: Centres providing BTS by their SBTP enlistment status and types

Issues	SBTP (%)				Non-SBTP (%)				Total	
	Types of centers				Types of centers					
	GoB	Pnon-C	PC	Total	GoB	Pnon-C	PC	Total		
Whether providing blood transfusion related services										
Yes	85.0 (17)	100.0 (4)	100.0 (1)	88.0 (22)	100.0 (1)	100.0 (2)	85.7 (12)	88.2 (15)	88.1 (37)	
No	15.0 (3)	0.0	0.0	12.0 (3)	0.0	0.0	14.3 (2)	11.8 (2)	11.9 (5)	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	20	4	1	25	1	2	14	17	42	

GoB = Government ; PC = Private commercial ; Pnon-C = Private non-commercial ; n is in the parentheses

Table A3-7.2: Screening of blood for TTIs among functioning centres by SBTP enlistment status and types of centres

Issues	SBTP (%)				Non-SBTP (%)				Total	
	Types of centres				Types of centres					
	GoB	Pnon-C	PC	Total	GoB	Pnon-C	PC	Total		
Whether screen blood for various transfusion transmissible infections (TTIs)										
Yes	94.1(16)	75.0 (3)	100.0 (1)	90.9(20)	0.0	50.0 (1)	100.0 (12)	86.7 (13)	89.2 (33)	
No	5.9(1)	25.0 (1)	0.0	9.1(2)	100.0 (1)	50.0 (1)	0.0	13.3 (2)	10.8 (4)	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	17	4	1	22	1	2	12	15	37	
Availability of comprehensive blood screening facility for TTIs (M)										
Centres that screen for all five above mentioned diseases	58.8 (10)	50.0 (2)	0.0	54.5 (12)	0.0	0.0	50.0 (6)	40.0 (6)	48.6 (18)	
Centres that screen for at least four diseases	88.2 (15)	75.0 (3)	100.0 (1)	86.4 (19)	0.0	50.0 (1)	75.0 (9)	66.7 (10)	78.4 (29)	
N	17	4	1	22	1	2	12	15	37	

GoB = Government ; PC = Private commercial ; Pnon-C = Private non-commercial ; M = Multiple Responses ; n is in the parentheses

Table A3-7.3: Special training received on SBT by SBTP enlistment status and types of centres

Issues	SBTP (%)				Non-SBTP (%)				Total	
	Types of centres				Types of centres					
	GoB	Pnon-C	PC	Total	GoB	Pnon-C	PC	Total		
Have special training										
Yes	90.0 (18)	75.0 (3)	100.0 (1)	88.0 (22)	100.0 (1)	0.0	64.3 (9)	58.8 (10)	76.2 (32)	
No	10.0 (2)	25.0 (1)	0.0	12.0 (3)	0.0	100.0 (2)	35.7 (5)	41.2 (7)	23.8 (10)	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	20	4	1	25	1	2	14	17	42	

GoB = Government ; PC = Private commercial ; Pnon-C = Private non-commercial ; n is in the parentheses

Table A3-7.4: Knowledge of SBT and SBT policy by SBTP enlistment status of centres and their types

Issues	SBTP (%)				Non-SBTP (%)				Total	
	Types of centres				Types of centres					
	GoB	Pnon-C	PC	Total	GoB	Pnon-C	PC	Total		
Knowledge about meaning of Safe Blood Transfusion (SBT)										
Correct answer	25.0 (5)	0.0	100.0 (1)	24.0 (6)	0.0	50.0 (1)	28.6 (4)	29.4 (5)	26.2 (11)	
Incorrect answer	60.0 (15)	100.0 (4)	-	76.0 (19)	100.0 (1)	50.0 (1)	64.3 (9)	64.7 (11)	71.4 (30)	
Don't know	0.0	0.0	0.0	0.0	0.0	0.0	7.1 (1)	5.9 (1)	2.4 (1)	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Knowledge about safe blood transfusion policy of the government										
Yes	90.0 (18)	75.0 (3)	100.0 (1)	88.0 (22)	0.0	100.0 (2)	35.7 (5)	41.2 (7)	69.0 (29)	
No	10.0 (2)	25.0 (1)	0.0	12.0 (3)	100.0 (1)	0.0	57.1 (8)	52.9 (9)	28.6 (12)	
Non response /missing	0.0	0.0	0.0	0.0	0.0	0.0	7.1 (1)	5.9 (1)	2.4 (1)	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	20	4	1	25	1	2	14	17	42	
Knowledge about government policy regarding blood screening (M)										
Must screen for 5 diseases	55.6 (10)	66.7 (2)	0.0	54.5 (12)	-	50.0 (1)	60.0 (3)	57.1 (4)	55.2 (16)	
Don't know	11.1 (2)	0.0	0.0	9.1 (2)	-	0.0	0.0	0.0	6.9 (2)	
N	18	3	1	22		2	5	7	29	
GoB = Government ; PC = Private commercial ; Pnon-C = Private non-commercial ; M = Multiple responses ; n is in the parentheses										

Table A3-7.5: Source of blood collection by SBTP enlistment status of centres and their types (Among functioning centres)

Issues	SBTP (%)				Non-SBTP (%)				Total	
	Types of centres				Types of centres					
	GoB	Pnon-C	PC	Total	GoB	Pnon-C	PC	Total		
Sources of blood collection (M)										
Professional Blood Donor	0.0	0.0	0.0	0.0	0.0	0.0	16.7 (2)	13.3 (2)	5.4 (2)	
Family/Relatives	100.0 (17)	75.0 (3)	100.0 (1)	95.5 (21)	0.0	50.0 (1)	100.0 (12)	86.7 (13)	91.9 (34)	
Voluntary donation	70.6 (12)	100.0 (4)	0.0	72.7 (16)	0.0	100.0 (2)	75.0 (9)	73.3 (11)	73.0 (27)	
Voluntary collection	23.5 (4)	100.0 (4)	0.0	36.4 (8)		100.0 (2)	8.3 (1)	20.0 (3)	29.7 (11)	
Exchange	5.9 (1)	0.0	0.0	4.5 (1)	0.0	0.0	0.0	0.0	2.7 (1)	
From other blood bank	64.7 (11)	25.0 (1)	0.0	54.5 (12)	100.0 (1)	50.0 (1)	25.0 (3)	33.3 (5)	45.9 (17)	
N	17	4	1	22	1	2	12	15	37	

GoB = Government ; PC = Private commercial ; Pnon-C = Private non-commercial ; M = Multiple responses ; n is in the parentheses ; Voluntary collection include blood collected from donation session, Badhon, Heart Foundation

Table A3-7.6: Have license for blood bank by SBTP enlistment status and types of centres (among functioning centres)

Issues	SBTP (%)				Non-SBTP (%)				Total
	Types of centres				Types of centres				
Issues	GoB	Pnon-C	PC	Total	GoB	Pnon-C	PC	Total	Issues
Have license/approval for blood banking									
Yes, permanent one	0.0	0.0	0.0	0.0	0.0	8.3 (1)	0.0	6.7 (1)	2.7 (1)
Applied for license	0.0	0.0	0.0	0.0	0.0	50.0 (6)	0.0	40.0 (6)	16.2 (6)
No	100.0 (17)	100.0 (1)	100.0 (4)	100.0 (22)	100.0 (1)	41.7 (5)	100.0 (2)	53.3 (8)	81.1 (30)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	17	1	4	22	1	12	2	15	37

GoB = Government ; PC = Private commercial ; Pnon-C = Private non-commercial ; n is in the parentheses

Tables for Chapter 8

Table A4-8.1: Quantity of nutrient supplied for diabetic mellitus patients in all the studied hospitals (n=50)

Nutrients and Energy	Amount supplied gram (Mean ± SD)			RDA in gram	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
	Supply	Wastage	Intake			
Protein(g)	67±23	25±10	42±24	50	+34	-18
Fat(g)	22±11	9±10	13±7	60	-63	-80
Carbohydrate(g)	180±68	72±35	108±65	240	-25	-55
Energy(Kcal)	1114±338	481±258	633±247	1800	-38	-65

* + indicates surplus, - indicates shortfall

Table A4-8.2: Quantity of nutrient supplied for coronary heart patients in all the studied hospitals (n=50)

Nutrients and Energy	Supply (Mean ± SD)	Wastage (Mean ± SD)	Intake (Mean ± SD)	RDA	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	53±22	29±7	24±22	50	+ 6%	-52%
Fat(g)	14±7	7±5	6±5	11	+ 27%	-45%
Carbohydrate(g)	179±14	100±45	79±17	138	+ 30%	-43%
Energy(Kcal)	977±321	531±135	446±193	1000	-2%	-55%

* + indicates surplus, - indicates shortfall

Table A4-8.3: Quantity of nutrient supplied for kidney patients in all the studied hospitals

Nutrients and Energy	Supply (Mean ± SD)	Wastage (Mean ± SD)	Intake (Mean ± SD)	RDA	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
Protein(g)	79±30	57±13	22±10	30	+163	-27
Fat(g)	22±10	14±9	7±5	75	-71	-91
Carbohydrate(g)	199±59	136±98	62±37	300	-34	-79
Energy(Kcal)	1223±635	855±218	368±141	2000	-39	-82

* + indicates surplus, - indicates shortfall

Table A4-8.4: Quantity of nutrient supplied for liver patients in all the studied hospitals (n=50)

Nutrients and Energy	Amount supplied gram (Mean ± SD)			RDA in gram	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
	Supply	Wastage	Intake			
Protein(g)	44±27	25±10	18±3	100	-56	-82
Fat(g)	17±8	10±6	6±2	70	-76	-91
Carbohydrate(g)	130±95	78±16	51±13	350	-63	-85
Energy(Kcal)	868±486	562±272	305±80	2200	-61	-86

* + indicates surplus, - indicates shortfall

Table A4-8.5: Quantity of nutrient supplied for PEM patients in all the studied hospitals (n=50)

Nutrients and Energy	Amount supplied gram (Mean ± SD)			RDA in gram/kg bd-wt	Supply/RDA (% shortfall/surplus from RDA)*	Intake/RDA (% shortfall/surplus from RDA)*
	Supply	Wastage	Intake			
Protein(g)	12±3	1±0.5	11±2	18	-33	-39
Energy(Kcal)	467±234	20±11	363±123	900	-48	-60

* + indicates surplus, - indicates shortfall

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