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Perspective

Public healthcare facilities and its utilization: Bangladesh perspective

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Abstract

Considerable segment of the populace in Bangladesh is disinherited of a major human right: access to high-quality healthcare facilities. Bereft of an appropriate healthcare structure would lead to acute effects in numerous other segments of the nation. The goal of this study is to assess the whole scenario of the public healthcare facilities in Bangladesh. Furthermore, selected aspects regarding utilization of these facilities involving outpatient departments (OPD) visits, bed turnover rate (BTOR), bed occupancy ratio (BOR), hospitalization and death, and childbirth practices have also been evaluated. All the pertinent data required for the analysis of the study were hoarded from the Health Bulletin issued by the Director General of Health Services (DGHS) in 2016. The outcomes of the study reveal that majority of the OPD visits (89%) took place in the primary level healthcare facilities whereas the secondary level hospitals had the highest BTOR. Hospitalization of patients was the highest in Dhaka division (23%) and lowest in Barisal division (6%). Most of the deaths of admitted patients (69%) were registered at the tertiary level hospitals while UHC were liable for most of the childbirths (90%). The analytical findings of the study will facilitate the respective agencies to formulate proper evaluations concerning the abovementioned characteristics of public healthcare facilities in Bangladesh and implement efficient resolutions as well.

Keywords: DGHS; hospitals; CC; maternal and child healthcare; UHC

Introduction

Bangladesh encompassed over 160 million population in 2018 as stated by the last Bangladesh Demographic and Health Survey (BDHS) [1]. The country has experienced outstanding headway concerning maternal and child health between 1994 and 2014 [2]. The under-5 death rate was cut by nearly 9% during that period [2]. But the proportion of mothers taking assistance from a medically trained provider (MTP) for childbirths was just over 40% in 2014 [3]. Inefficient deployment of the prevailing healthcare facilities including skilled birth attendance (SBA) and antenatal care (ANC) during childbirths was the leading cause for maternal and newborn deaths in Bangladesh [4]. Socio-economic disparity was observed to be a determining factor for insufficient access of healthcare facilities [5]. Many projects were undertaken by the government to lower the maternal and child death rates. But the maternal mortality ratio (MMR) was 196 per 100000 live births in 2016 in accordance with the last Bangladesh Maternal Mortality and Health Care Survey (BMMS) which was still too high [6]. The significant proportion of childbirths occurring at home without any skilled personnel was responsible for such high death ratio [7].

The government healthcare organizations were the main sources for accessing healthcare facilities in Bangladesh two decades ago [8]. But the situation has changed entirely afterwards. The non-government healthcare sector has been one of the biggest and quickest expanding sectors in the country. The number of non-government healthcare organizations has outstripped the number of government healthcare organizations to a great extent by now [9]. Moreover, the non-government healthcare organizations are providing service to a considerably higher number of patients than their government counterparts today [10]. However, the standard of efficiency and productivity of these non-government healthcare organizations is still not the highest one [11]. The experience of the admitted patients regarding the conduct of nurses and other staffs has not been great too [12]. It was revealed through the outcomes of a study that nurses and other staffs working

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for the non-government healthcare organizations in Bangladesh endured mediocre socio-economic status [13]. Consequently, they were unable to deliver explicit service owing to cultural impediments.

A directive was endorsed by the government of Bangladesh in 1982 to safeguard its citizens from delinquency of the non-government organizations and ensure their rights as well [14]. Although the government is feverish in promoting the non-government healthcare sector, adequate attention has not been given in sustaining the liability and good ascendancy to standardize the sector [15]. Therefore, people's right to healthcare facilities were downplayed. Healthcare facilities provided by the non-government organizations mainly benefited the people of superior economic status [16]. Although the non-government healthcare sector is a crucial part of the healthcare system in Bangladesh, its service is still limited to those who can afford to reimburse [17]. In this study, overall scenario of the public healthcare facilities in Bangladesh has been assessed. Additionally, selected features regarding utilization of these facilities including outpatient departments (OPD) visits, bed turnover rate (BTOR), bed occupancy ratio (BOR), hospitalization and death, and childbirth practices have also been evaluated.

Methodology

The apposite information entailed to assist the analytical goal of this study have been accumulated from the Health Bulletin issued by the Director General of Health Services (DGHS) in 2016 [9]. Bangladesh is a country alienated into 8 executive divisions which are dissented into 64 zilas. The zilas are further divided into 495 upazilas. The primary level healthcare is endowed via 482 public hospitals at the upazila level. The secondary level healthcare is given through 64 district hospitals while the tertiary level healthcare is ensured by 33 hospitals. An antrostomy of the left maxillary sinus was performed, fracturing an implantation pedicle osteoma in the lateral-external wall, drilling the implantation base, the rest of the normal mucosa (**Figure 2**). Pathological report: biopsy (B-16-472) that coincides with the presurgical diagnosis: spongy osteoma of the maxillary sinus, mucosa without cellular atypia.

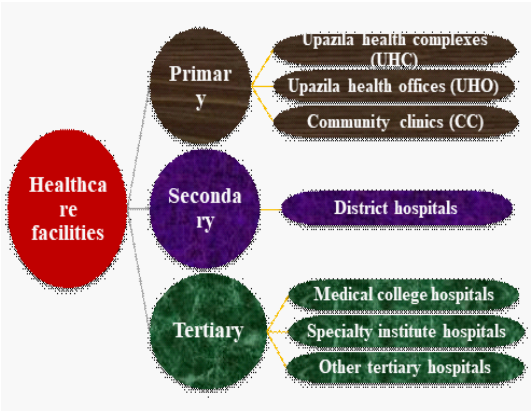

Figure 1: Conceptual framework.

Descriptive analyses based on certain features about existing healthcare facilities and its utilization at different levels in Bangladesh have been performed in this study. Some of the key facets include outpatient attendance, bed turnover rate [BTOR=Number of admissions/Number of beds], bed occupancy ratio [BOR=(Total inpatient days*100)/(Number of beds*365)], admissions and death rates of the admitted patients etc. The corresponding statistical analyses have been performed by Microsoft Excel-365 to accomplish the objectives of this study.

Results and Discussion

Primary level healthcare facilities

The primary level healthcare delivered through massive public healthcare services offers open medical facilities to citizens at the community stage. Community clinics (CC), maternal and child healthcare, residential healthcare, school healthcare package, and adolescent healthcare package are the major components of primary level healthcare facilities.

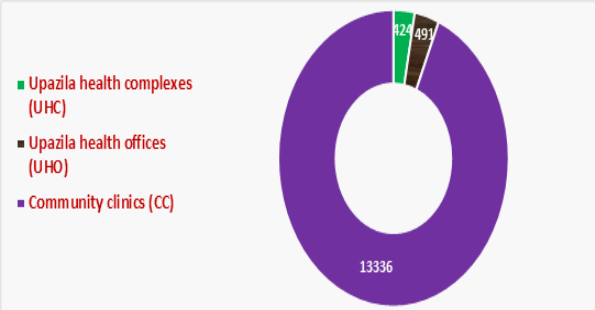

Figure 2: Distribution of primary healthcare facilities [Source: DGHS]

CC are the bottom tier healthcare facilities providing services to nearly one crore underprivileged rural people monthly. Since a significant part of the population procures healthcare facilities from the CC, physicians at the UHC are having extra time to manage the complex and emergency cases. There are 22046 residential health employees, 79% of them are health assistants, 16% are assistant health supervisors, and 5% are health supervisors [9]. The DGHS has been arranging training for the birth attendants in almost 94% upazilas since 2003 so that they can persuade people to utilize the available primary healthcare facilities.

Secondary and tertiary level healthcare facilities

The secondary and tertiary level healthcare facilities offer sophisticated services compared to its primary counterpart. The district hospitals are defined as the secondary hospitals while the medical college hospitals providing specialty healthcare across disciplines are defined as the tertiary ones. Hospitals providing high-end health facilities in certain areas are also termed as tertiary hospitals.

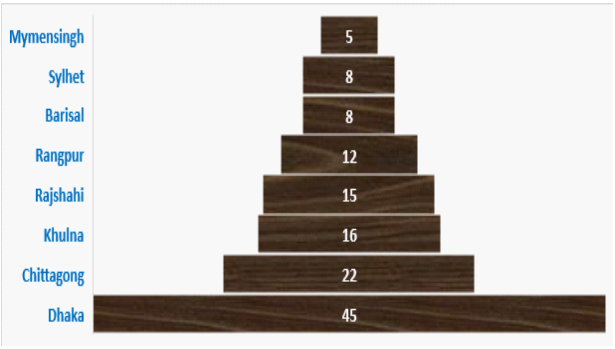

Figure 3: Divisional allocation of secondary and tertiary hospitals [Source: DGHS].

Figure 3 indicates the dissemination of secondary and tertiary hospitals according to governmental division in Bangladesh. Dhaka possesses the maximum number of secondary and tertiary hospitals, while Mymensingh has the lowest ones. Nonetheless, the dissemination will be altered when the newly built government medical college hospitals begin their operation [9].

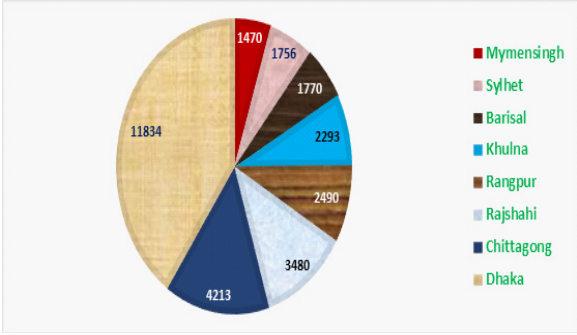

Figure 4: Number of beds in secondary and tertiary hospitals by division [Source: DGHS].

Figure 4 demonstrates the allocation of beds in the secondary and tertiary hospitals according to governmental division in Bangladesh. As expected, almost 40% of beds are available in hospitals under Dhaka division, while Mymensingh has the least ones. Number of beds work as a proxy to evaluate the strength of prevailing healthcare facilities across the geographic divisions.

Utilization of healthcare facilities

Utilization of healthcare facilities is the usage of available healthcare facilities by people to prevent and cure health related complications. Utilization of public healthcare facilities has been increasing incessantly over the years in Bangladesh.

Outpatient departments (OPD) visits: Over 170 million OPD visits transpired in 2015 across different levels of healthcare facilities as demonstrated by **Figure 5**. It can be clearly observed in figure 5 that the superior the hierarchical level of healthcare institution, the greater is the load of patients.

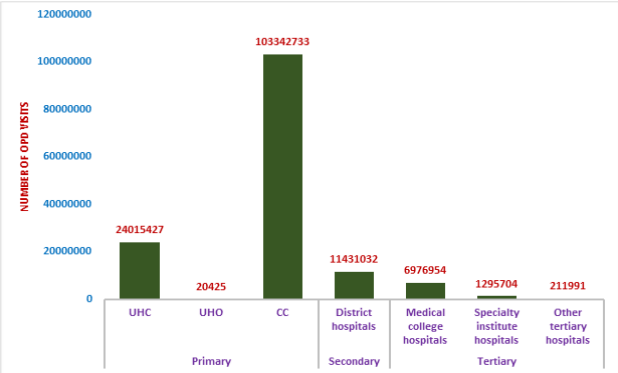

Figure 5: Distribution of OPD visits according to healthcare facilities [Source: DGHS].

It is apparent from figure 5 that majority of the OPD visits (89%) took place in the primary level healthcare facilities. Over 100 million OPD visits were covered single-handedly by CC, followed by UHC, district hospitals and medical college hospitals respectively. Merely 5% of the visits happened at the tertiary level hospitals. This clearly indicates that utilization of the primary level healthcare facilities is resulting in lesser burden of patients at the tertiary level hospitals.

Bed turnover rate (BTOR): BTOR is a measure of the efficiency which demonstrates the pace of rotating the admitted patients in hospital beds. A high BTOR implies that the corresponding hospital provides basic treatments only while a low BTOR implies that fewer hospital beds are being utilized and the corresponding hospital might retain the patients needlessly. However, a small BTOR is anticipated if the hospital deals with patients affected by chronic diseases. In short, the BTOR of tertiary level hospitals is expected to be lower than that of the primary as well as secondary level hospitals.

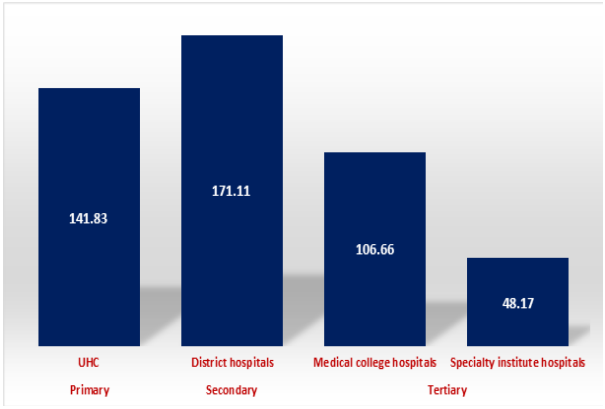

Figure 6: Distribution of BTOR according to healthcare facilities [Source: DGHS].

Figure 6 displays the distribution of BTOR according to healthcare facilities in 2015. It indicates that the tertiary level hospitals had BTOR on the lower side while the primary and secondary level hospitals had BTOR on the upper side in 2015.

Bed occupancy ratio (BOR): BOR, on the other hand, is a measure of the deployment of existing bed-capacity which indicates the acceptance level of the hospitals among the patients. It differs with the type of existing services in the hospital. The BOR of tertiary level hospitals is anticipated to be higher than its primary and secondary level counterparts.

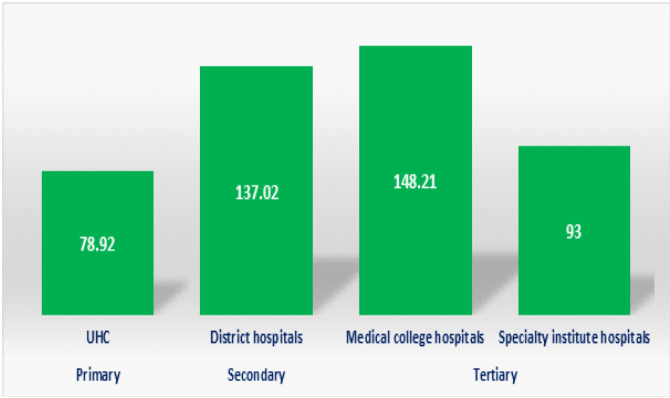

Figure 7: Distribution of BOR (%) according to healthcare facilities [Source: DGHS]

Figure 7 demonstrates the distribution of BOR (%) according to healthcare facilities in 2015. It is apparent from Figure 7 that the medical college hospitals have the maximum BOR while the UHC at the primary level have the minimum one.

Hospitalization and death: Figure 8 shows the allocation of hospitalization according to various administrative divisions of Bangladesh

in 2015.

Figure 8: Distribution of BOR (%) according to healthcare facilities [Source: DGHS]

As it can be seen in Figure 8, nearly 23% of overall admissions took place in Dhaka division which was the highest one while around 6% of overall admissions took place in Barisal division which was the lowest one in terms of hospitalization.

Figure 9 illustrates the distribution of deaths according to healthcare facilities in 2015. Around 105855 deaths were registered in the hospitals under the three different levels against 5711641 admitted patients indicating an overall death rate of 1.85% against admission [9].

Figure 9: Distribution of deaths according to healthcare facilities [Source: DGHS].

As Figure 9 shows, around 69% of the overall deaths were registered at the tertiary level hospitals while about 24% of the overall deaths were registered at the secondary level hospitals and about 7% were registered at the secondary level hospitals.

Childbirth practices: **Figure 10** demonstrates the distribution (%) of normal, assisted, and cesarean childbirths according to healthcare facilities in 2015. Majority of the childbirths happened in UHC (90%), followed by district hospitals (7.7%), and medical college hospitals (2.3%) in 2015 [9].

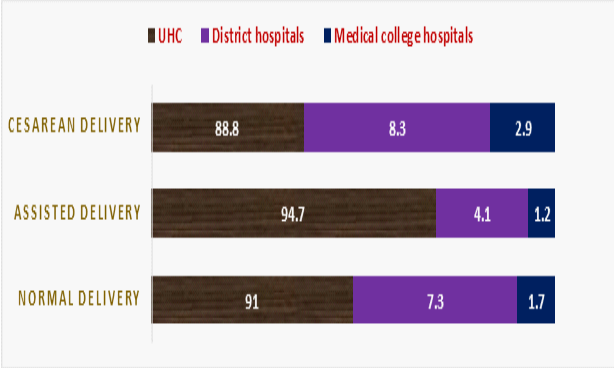

Figure 10: Distribution (%) of normal, assisted, and cesarean childbirths according to healthcare facilities [Source: DGHS].

Figure 10 shows that UHC were responsible for most of the cesarean childbirths (88.8%) while only 2.9% cesarean childbirths happened in medical college hospitals. Analogous results can be observed for assisted and cesarean childbirths as well.

Conclusion

Bangladesh is constantly enhancing many of its health-related indicators. The country has attained most of the points of Millennium Development Goals (MDGs) successfully on time and is looking ahead to achieve Sustainable Development Goals (MDGs) inside 2030. Hence, the upcoming years are going to be very crucial for the respective authorities of the nation. This study will provide a real illustration of whole public healthcare system in the country. It will enable the respective agencies to recognize all the limitations in the existing system as well. This study also underlines various crucial facts concerning the utilization of public healthcare facilities in Bangladesh. The prevailing challenges requires to be resolved for exalting the system so that the disadvantaged and predisposed citizens can attain proper healthcare facilities. The health sector in the nation demands a robust management desperately to fabricate and execute effectual policies. The government needs to come up with calculated purposes and determination to renovate the public healthcare facilities in Bangladesh.

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