

# Health System Inquiry: Is Health Sector Reforms in Bangladesh Imperative?

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## Abstract:

*In Bangladesh, Government is trying to find a perfect health system that best serves its population. Here, we present the results of our study with aim to assess the opinion of various stakeholders about: what are the 1) high-priority areas, 2) moderate priority areas, and 3) low-priority areas to reform the health sectors for Bangladesh.*

*We conducted a cross-sectional, exploratory and anonymous population-based e-survey from February to June, 2021 among individuals aged above 26 years. A semi-structured questionnaire was designed and incorporated into the Google survey tool (Google Forms) and a shareable link was generated and disseminated to physicians, Academicians/Clinicians of Medical Colleges/ Universities, Health System administrators etc. Respondents were also given space to comment on each topic. Comments & reactions of all respondents were categorized into three main headings. These were 1) high-priority areas, 2) moderate priority areas, and 3) low-priority areas to reform the health sectors for Bangladesh.*

*Out of 483 respondents, 476 respondents (80.5% males and 19.5% female) completed the entire survey. The mean age of respondents is 44.70 SD± 10.07 with age range 26-86 years. About 27% of the respondents were from faculties from medical colleges/medical universities and 1.7% were health*

*system administrators. The high prioritized areas where the majority (>60%) of our respondents strongly agreed upon, for instance, good governance, structural referral system should be establishment, and reformation of existing health care procurement & purchasing policy.*

*The moderate prioritized areas where 50 - 60% of our respondents strongly agreed upon, such as securing sustainable financing for health care, further development of existing health infrastructure, and establishment of Health Academy of planning and development (HAPD). The low prioritized areas where less than 50% of our respondents strongly agreed upon, such as decentralization and autonomous health system, public health-oriented infection prevention and control (IPC) program, and implement the national health insurance system (NHIS) under a separate authority etc.*

*Good governance in health departments & health care provider organizations are essential elements for health sector reform. Health sector reform should be sustained, purposeful, planned and evidence-based and fundamental change addressing significant, strategic dimensions of health systems.*

*Key words: Health sector reform, good governance, structural referral system, reformation of existing health care.*

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## Introduction:

Health is considered to be the most valuable goods by the health economists now-a-days. Still, there is a worldwide crisis in the organization and delivery of health care systems. Universal health coverage has been

acknowledged as a key health target in the Sustainable Development Goals and has become a major goal for health reform in many countries.<sup>1,2</sup> In the context of COVID-19 pandemic, it is clear that efforts need to be made to build a more resilient healthcare system. The current COVID-19 crisis holds lessons for Health sector reforms. Many countries are currently engaged in health sector reforms. In the same way health sector reforms have generated much debate in Bangladesh.

Reform means positive change, and health sector reform assured a period of novel thinking and innovation in health systems. The historical context of health sector reforms was concisely summarized by the World Health Report 2000.<sup>3</sup> Each country is trying to find a model of health services that best serves its population. While the solutions may be unique, many of the issues raised by this process are shared by many countries.<sup>4</sup>

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Health needs always exceed the available resources, so priority setting is a key element in health resource allocation. The economics of health care has turned into a relevant area for reformers and governments.<sup>5</sup> However, the process of setting priority for public spending in health has been perpetually difficult, and the subject of considerable debate. Ideally, careful governments should collaborate with other stakeholders during the priority setting process (PSP), including population representatives, local interest groups and development partners, to determine how best to utilize available resources. Such inclusive priority-setting has been recommended for decades.<sup>6</sup>

Bangladesh has a pluralistic healthcare system, which is highly unregulated and consists mainly of four key actors like government, for-profit private sector, not-for-profit private sector, and the international development organizations. In Bangladesh, access to comprehensive, quality health care services are important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all. Government is trying to find a perfect health system that best serves its population. While the solutions are not easy, it requires health system reorganizations.

Health sector reforms are a part of economic restructuring by linking resource allocation and performance, issues of decentralization or autonomy of the government health system, enhancing the power and scope of consumer choice, making health providers more accountable etc., and have generated much controversy. Research on fundamental changes in health sector is needed to provide valid scientific evidence to strengthen health sector reform policies and procedures. There has been no serious attempt at determining the level of settlement on these issues in Bangladesh. For the reforms to succeed it is rational to do necessary health system research on these issues in our country.

Therefore, we decided to assess the opinion of various stakeholders about health sector reforms in Bangladesh. Here, we present the results of our study with aim to assess the opinion of various stakeholders about: what are the 1) high-priority areas, 2) moderate priority areas, and 3) low-priority areas to reform the health sectors for Bangladesh.

**Methods:**

We conducted a cross-sectional, exploratory and anonymous population-based e-survey from February to June, 2021 among individuals aged above 25 years.

This qualitative study approach involves structuring communication in a way that allows a group of respondents to provide valid scientific evidence to strengthen the process and processes of health sector reform.

A semi-structured questionnaire was designed and incorporated into the Google survey tool (Google Forms) and a shareable link was generated and disseminated to physicians, Academicians/Clinicians of Medical Colleges/ Universities, Health System administrators etc (Table-1). The questionnaire was distributed via online version by means of email and social media outlets (e.g., Facebook, WhatsApp, etc.). A friendly reminder was sent to potential respondents to ensure the highest possible response rate.

We used online approaches for data collection to maintain spatial distancing and proper precaution during the pandemic.

**Participants and procedure**

**Sampling method**

The sample size was calculated using the following equation

$$n = \frac{z^2pq}{d^2} \dots\dots\dots (1)$$

$$\Rightarrow n = \frac{1.96^2 \times .5 \times (1-.5)}{.05^2}$$

$$\Rightarrow n = 384.16 \approx 384$$

Here,

$n$  = number of samples

$z$  = 1.96 (95% confidence level)

$p$  = prevalence estimate (50% or .5) (As there is no prior similar study focusing on health system reform in Bangladesh, we made the best assumption ( $p$ ) for the present study would be 50%.)

$q$  = (1- $p$ )

$d$  = precision limit or proportion of sampling error (.05)

Accordingly,  $n= 384$

In this study we assumed a 10% non-response rate, therefore, total estimated sample size was 424 participants.

Our sample size exceeded this estimate.

## Measures

A semi-structured and self-reported questionnaire was utilized during data collection (see questionnaire in Appendix-1). The inclusion criteria of participants were i) being a Bangladeshi resident, ii) being Doctors/Health workforces (e" 26 years old), iii) having voluntary participation, and iv) having good internet access. The exclusion criteria included being under 26 years old and incomplete surveys. Questionnaires with incomplete information or missing data were excluded from the analysis. The study was conducted following the Checklist for Reporting Results of Internet ESurveys (CHERRIES) guidelines.<sup>7</sup>

Participants were not aware of the study aim or outcomes to reduce the risk of any possible bias. The questionnaire was self-administered without intervention by the authors or any specific person, and it did not contain any identifying data of the participants to ensure confidentiality. Questionnaires with incomplete information or missing data were excluded from the analysis.

Survey items were generated through a literature review and informal research meetings. We assembled 28 items about health sector reforms topics and chose a five-point Likert-type scale as an ordinal response format, with the options strongly agree (1), agree (2), neutral (3), disagree (4), and strongly disagree (5), and 4 open-ended questions. Respondents were also given space to comment on each topic. Pretests within the research team & colleagues did not alter the questionnaire. Through pilot testing with allied research contemporaries, the clarity, relevance, and arrangement of questionnaire items were improved.

The survey questionnaire was given to the participants. We sent an email invitation with multiple reminders to participate in the survey.

## Data Analysis:

We performed descriptive data analysis of questionnaire items using Microsoft Excel 2020 (version 16.35).

## Outcome variables:

Comments & reactions of all respondents were categorized into three main headings. These were 1) high-priority areas, 2) moderate priority areas, and 3) low-priority areas to reform the health sectors for

Bangladesh.

## Statistical analysis:

We used descriptive statistics to examine respondents' characteristics and responses using frequencies and percentages. We described categorical variables as frequencies and percentages, and continuous variables as mean (standard deviation) or median (range) values, as appropriate.

## Ethical approval

Ethical approval was obtained from the IRB of DMC.

## Operational Definition:

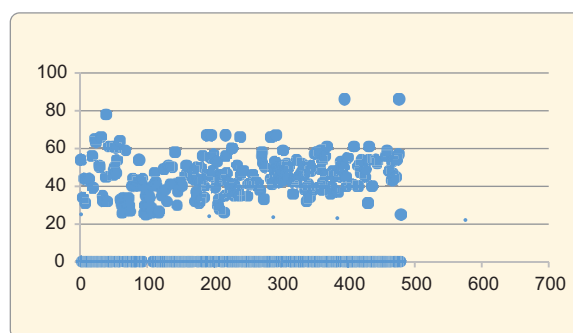
High priority: Where a strongly agreement above 60% was considered as the high prioritized area.

Moderate priority: Where a strongly agreement which was above 50% but less than 60% was considered as the moderate prioritized area.

Low priority: Where a strongly agreement was less than 50% was considered as the low prioritized area.

## Results:

Out of 483 respondents, 476 respondents (80.5% males and 19.5% female) completed the entire survey. The mean age of respondents is 44.70 SD± 10.07 with age range 26-86 years (Fig-1). Approximately 58% of the respondents were from the Clinicians. About 27% of the respondents were from faculties from medical colleges /medical universities and 1.7% were health system administrators (Fig- 2). Overall, less than 30% respondents were satisfied with the current quality of health care and the overall health system of Bangladesh (Fig- 3). The majority of our respondents agreed on the reformation in Bangladesh Health Care System is very necessary (Fig- 4). Health care reformation was broadly



**Fig-1: Age Distribution of Respondents**

identified in several domains. Comments & reactions of all respondents were categorized into three main headings. These were- 1) High-priority areas, 2) Moderate priority areas, and 3) low-priority areas.

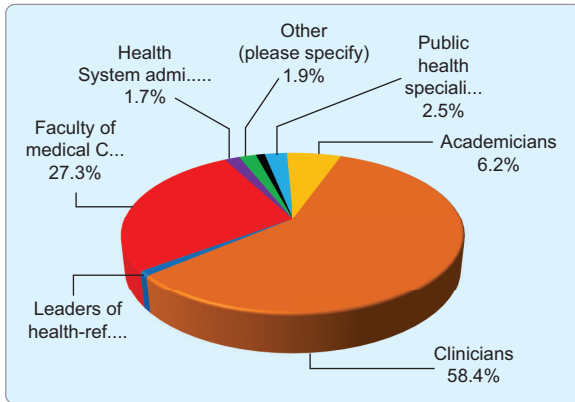


Fig-2: Categories of Respondents

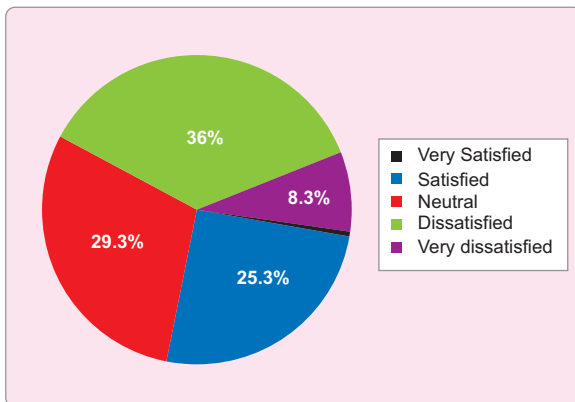


Fig-3: Respondents satisfaction with the health system in Bangladesh.

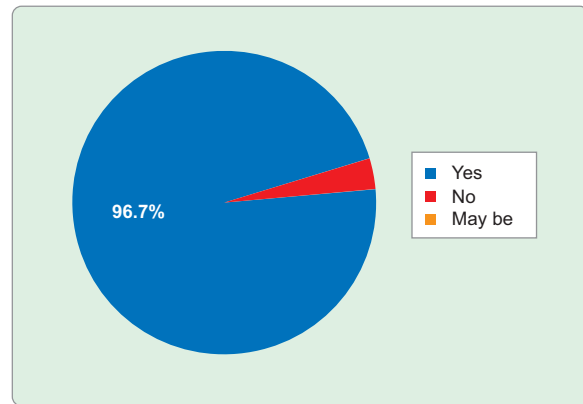


Fig-4: Is health sector reforms necessary in Bangladesh?

The high prioritized areas where the majority (>60%) of our respondents strongly agreed upon, for instance, good governance, structural referral system should be establishment, reformation of existing health care procurement & purchasing policy, and adequate ratio healthcare professionals etc (Fig-5).

The moderate prioritized areas where 50 - 60% of our respondents strongly agreed upon, such as securing sustainable financing for health care, further development of existing health infrastructure, establishment of Health Academy of planning and development (HAPD), and continuous monitoring and evaluation of overall health system function (Fig-6)

The low prioritized areas where less than 50% of our respondents strongly agreed upon, such as decentralization and autonomous health system, public health-oriented infection prevention and control (IPC) program, and implement the national health insurance system (NHIS) under a separate authority etc. (Fig-7).

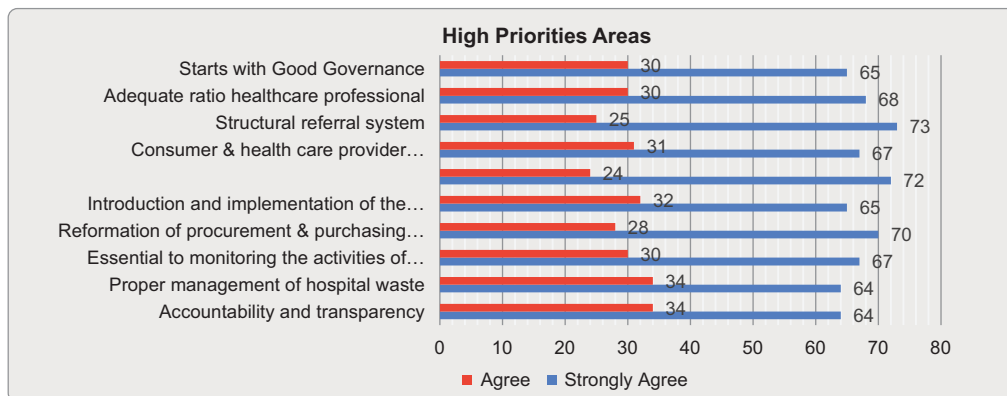
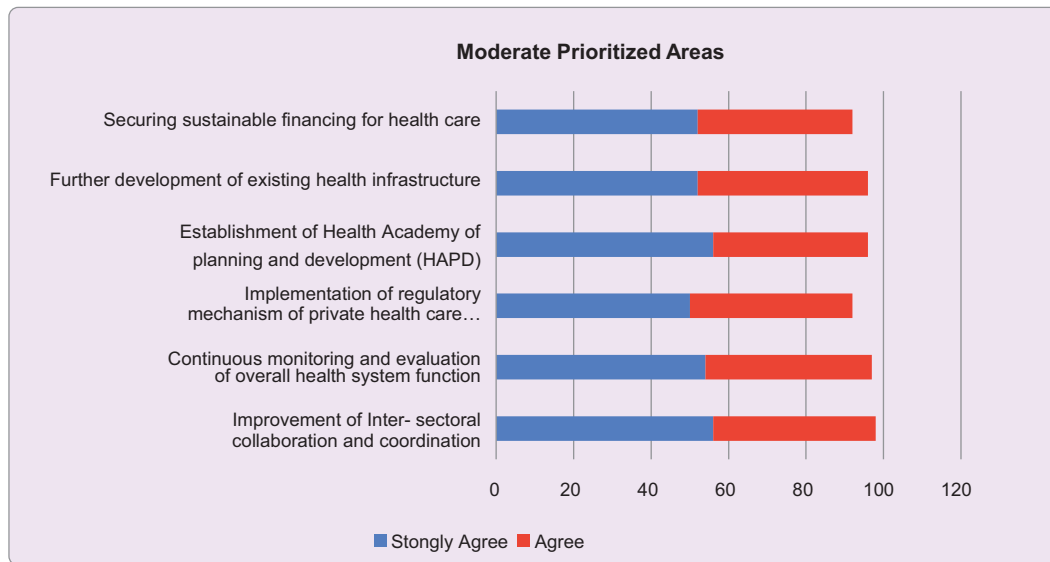
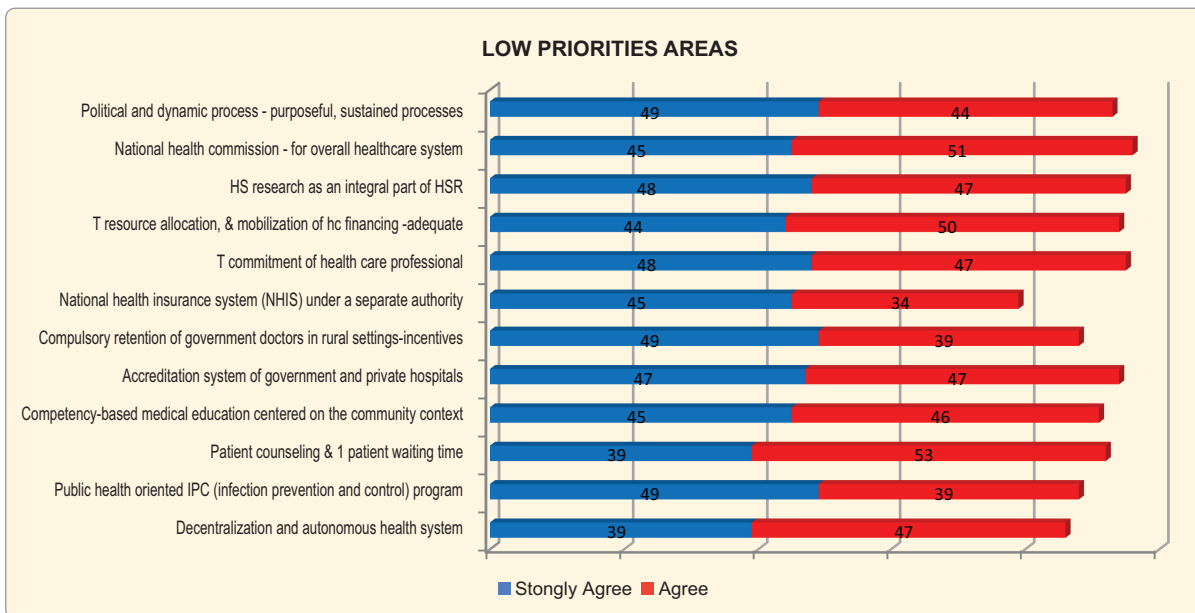


Fig-5: The high prioritized areas of health sector reforms in Bangladesh



**Fig-6:** The moderate prioritized areas of health sector reforms in Bangladesh



**Fig-7:** The low prioritized areas of health sector reforms in Bangladesh

**Discussion:**

Health systems are multifaceted and multilayered. Health care has become a major worldwide concern, and in Bangladesh the health care debate is one of the main issues of economic, social and political agenda. Bangladesh health care sector is going through a

transition process while the government is trying some structural reforms. To enhance the quality of health maintenance services, health system must consistent with achievable goals and within available resources. We attempted to identify areas of health sector where reformation is needed. This study prioritized the areas

of the health sector reform according to the comments of respondents, and tried to figure out the way forward.

#### Good Governance in Health Service:

Good governance for health is about creating a framework within which we provide our patients with good quality healthcare services and maximize health wellbeing all over the country and to achieve universal health coverage. Good governance has several dimensions, such as accountable, transparent, responsive, effective & efficient, equitable, control of corruption, political stability, and follows the rules of law.<sup>8</sup> Our respondents are agreed upon the fact; good governance is one of the vital aspects for ensuring the reformation of the health care sector. Besides in order to maximize the efficiency of our existing health care infrastructure reformation in the administration of health sector and proper monitoring system should be developed. This study was participatory and unity-oriented which is comparable to other studies.<sup>9</sup>

#### Reformation in Health care financing:

A sustainable health care financing mechanism is one of the crucial component for moving towards Universal Healthcare Coverage (UHC). Planned and organized healthcare financing mechanism requires to maximize the efficiency of healthcare organization.<sup>10</sup> In Bangladesh most common health care financing sources including tax revenue, out-of-pocket (OOPs) payments, donor funding, and micro health insurance through different NGOs and Swastho Surokha Kormosuchi-SSK (a piloting health insurance). In our study, we found reformation in health care financing is one of the high prioritized concern area, where our respondents agreed that, health care financing reforms could be done through resource mobilization, risk pooling (National Health Insurance), resource allocation, provision of necessary incentives and strategic purchasing which can be implemented by specific activities such as planning and increased budgeting, which are similar to other studies.<sup>11, 12</sup> Overall governance of health financing systems has improved within the context of service delivery and budget reforms.

#### Rules and Regulation:

The relationship in between doctors and patient are based on the mutual understanding and faith. This bonding becoming faint gradually due to rapid

commercialization of health care and the allied medical profession. In Bangladesh, the law is not enforced to penalize any health care professionals that cause injury to the patients; but is concerned only with negligent acts. However, several incidences have reported by newspaper where doctors are assaulted by patient's party<sup>13</sup>. It is very crucial to have consumer protection acts as well as health care provider protection acts to ensure an effective system and regain the faith in-between doctors-patient. In our study, we found that, to ensure the an equitable and safe health care service delivery mechanism there should be implementation of consumer protection acts as well as health care provider protection acts, which is similar to other study.

#### Health work force development and career progression:

Healthcare workforce one of the fundamental components of health system, where as in Bangladesh the ratio of health workforce is still disparity. Increasing number of efficient healthcare professional is necessary through developing the capacity, so that they can capable of managing the emergency, disaster and pandemic situation. Based on the future needs as well as address present situation the investment in human resources for health is very crucial. It requires to address shortages and improve distribution of health workers, so as to enable maximum improvements in health outcomes, social welfare, employment creation and economic growth.

Health care workforce must have several attributes for example academic foundation within their expertise, knowledge of subject, good communication skills, self-aware about their position and their roles in the department, enhance their opportunity and job satisfaction, ethics, safety practice, must understand the fundamentals of preventing disease, information technology skills, and working together to deliver quality health care. Hospital administrators are facing a crisis to retain the most productive healthcare workforce. For the development of healthcare workforce career there are several areas of reformation, like workforce uneven distribution, and limited training exposure.

Healthcare organizations are pressured to discover new ways to fill critical jobs as well as find ways to retain productive workers. Although internal development of employees for growth provides one solution, many employers avoid investing adequate time or money for

training and development in fear of employees leaving with their new skills. However, opportunities for career growth, learning, and development are among the top reasons employees stay with their employers. In addition, in our study we found that these opportunities for career growth provide a very important recruiting strategy, which is comparable to other study.<sup>14-16</sup>

#### **Decentralization and Autonomous Health System:**

Health systems decentralization involves moving away from centralized control and closer to the users of health services. As a reform measure, decentralization aims to progress management processes, and improve health outcomes by ensuring participation of stakeholders. It also has financial, administrative and political implications. Decentralization of health budget allocation & utilization. In addition, the flexibility of decentralized health services is observed as superior to the rigidities of centralized bureaucratic planning.

In our study most of our respondents claimed that decentralization has a huge impact on health service functioning, so they recommended decentralization as a reform measure for increasing efficiency in the financing and quality of service delivery, which is similar to other studies.<sup>17, 18, 19, 20</sup>

#### **Develop Public Health Oriented Infection Prevention and Control (IPC) program:**

Disease outbreaks and epidemic can be affected a country's health care system partially or entirely. Infectious diseases and Healthcare-associated infections (HAIs) occur worldwide in all countries, irrespective of their level of development, and can affect patients, health-care workers and visitors. An Infection Prevention and Control (IPC) programme, implemented within a health-care facility, is critical not only to prevent HAIs but also to prepare for and respond to communicable diseases crises.<sup>21</sup> An IPC program should be implemented using an integrated approach with several components like system & culture change, organization of IPC programmes, technical guidelines, skilled-mix human resources, surveillance of diseases and compliance with IPC practices, microbiology laboratory support, clean and safe environment, monitoring and evaluation of IPC programmes, links with public health and other services. Planning, executing, and evaluating IPC standards program during an

epidemic/pandemic requires creative and quick strategies to adapt, conserve, reuse, and reallocate IPC space, staff, and systems.<sup>22</sup>

In medical care, clinicians treat diseases and injuries of one patient at a time, whereas public health is an ever-changing field, which focuses on health promotion, disease or injury prevention. Public health employs a wide array of social and community interventions ranging from immunization campaigns to urban design in order to preserve and protect health.

In our study, Majority of our respondents claimed that, Infection Prevention and Control (IPC) program and public health-oriented health care delivery system should be given more emphasized to improve quality of life through the surveillance of cases and health indicators, as well as though the promotion of healthy behaviors of the population of our Bangladesh, the findings are comparable to other study.<sup>23, 24</sup>

#### **Structured Referral system:**

Health care referral system can be defined a dynamic process, in which a health worker at one level of the health system, having insufficient resources and competencies, transfer cases to a higher level of institutions, having advanced technical competencies and all other resources, to provide desired health services.

Usually primary or community health care (PHC/CHC) worker refer patient to the secondary or tertiary health care facility. A referral system essentially integrates 3 major components: the referring physician, the patient, and the consultant referred to.<sup>25</sup> For the efficient reformation of health care system, 95% of our respondents recommended establishment of a structural referral system, to revolutionize the appropriate use of PHC/CHC infrastructure, and ensure proper use of specialized services more efficiently and effectively in order to prevent overburden of specialized institution by direct uses, which is similar to the other studies.<sup>26 27</sup>

#### **Need based Procurement system for local Hospital:**

Procurement and supply management function plays an important role in health service delivery. Purchasing, which is defined as the right supply of the right goods at the right time, at the right cost, also requires the right management of outsourcers, in other words the suppliers.<sup>28</sup> In this perspective, procurement

management can be defined as the process of planning, organizing, conducting, directing, controlling and evaluating procurement activities to achieve organizational goals.

In addition to the purchasing process, the procurement is related to the need to identify and interpret requirements, to investigate potential suppliers, to select the appropriate source, to agree on the details of the order or contract with the suppliers, to deliver the product or service in time and to make payments to the suppliers. In this study, about 73% of our respondents was emphasized reformation of existing health care procurement & purchasing policy to attain efficient health services, which is comparable to other studies.<sup>28, 29</sup>

#### **Ensure transparency and accountability of Health care management:**

Healthcare transparency guarantee health care system's quality, efficiency and consumer experience with care to influence the behavior of patients, providers, payers, and others to achieve better outcomes, which will be available to the public, in a reliable manner. A lack of accountability in healthcare can cause significant impairment to healthcare institutions. A culture of accountability in healthcare improves doctor-patient trust, reduces the misuse of resources, and helps organizations provide better quality care. In the healthcare industry, accountability is very important.

Transparency has several domains, among them price transparency is most important. Government agencies should be negotiated with physicians and hospitals, and publicly reporting the average prices for common health care services. In our study, 95.65% of respondent raised their opinion that transparency and accountability can reduce vulnerability to corruption and unethical practices and improve public trust in government institutions which is similar to other studies.<sup>30, 31</sup>

#### **Quality assurance, Monitoring and Evaluation of Health system:**

Quality Assurance in health care refers to the identification, assessment, correction and monitoring of important aspects of patient care, which aim to assure the performance of the health professionals is consistent with accepted medical standards within available resources.<sup>32</sup> Monitoring progresses and

evaluating results are key functions to improve the performance of those health care workers who are responsible for implementing health services. Monitoring & evaluation show whether a health care service is accomplishing its goal. In this study, 67% of responded strongly agreed that, monitoring and evaluation process should ensure to generate the evidence among all health system pathways and linkages which is comparable to other studies.<sup>32, 33</sup>

#### **Moderate Prioritized Areas**

There were some areas where the agreement percentage from our respondent were in between 50% to 60%, those categorized as moderate prioritized areas. These areas had implication in development of overall health system outcomes. Respondents also mentioned that certain moderate prioritized areas were necessary in the plan of health care reformation such as: improvement of inter-sectoral collaboration and coordination; continuous monitoring and evaluation of overall health system function; Implementation of regulatory mechanism of private health care sector etc.

Respondents also argued several issues like establishment of 'Health Academy of Planning & Development' (HAPD) for capacity building & skill development of medical administrator; further development of existing health infrastructure and. Moreover, respondents were recommended for securing sustainable financing for health care health system reformation, which is comparable with other studies in similar settings.<sup>34, 35</sup>

#### **Low Priority**

There were some areas where the agreement percentage from our respondent were in below 50% were categorized as low priority area. Respondents mentioned that certain low priorities areas were necessary in the plan of health care reformation such as: develop doctor -patient relationship and reduction of patient waiting time; compulsory retention of Govt. doctors in rural settings with incentives; accreditation system of government and private hospitals, training for further development of healthcare professionals etc. Our findings also comparable to other studies.<sup>36, 37</sup>

#### **Policy Recommendation:**

Based on the findings from the experts it is evident that following recommendations are particularly important for the reformation of the health care sector of Bangladesh:



**A) High Priority Recommendations:**

1. Good governance in health ministries, Directorates, local health departments, and health care provider organizations.
2. The reformation in health care financing should be done through resource mobilization, risk pooling, resource allocation etc.,
3. Renovation in the rules and regulation through incorporation of consumer's protection act and provider protection acts,
4. Establishment of a structural referral system, to revolutionize the proper use of specialized services more efficiently and effectively,
5. Development of advancement and expansion of the career pathway for health workforces,
6. Decentralization of health care services specially in health budget utilization, and provision of autonomy where applicable,
7. Infection Prevention and Control (IPC) program and public health-oriented health care delivery system should be given more emphasis,
8. Reformation of existing health care procurement & purchasing policy, and implementation of the need-based procurement system,
9. Ensuring the accountability and transparency of health care management can reduce vulnerability to corruption & unethical practices, and improve public trust in government hospitals,
10. To create periodic assurance of quality of health service through continuous monitoring and evaluation of overall health system function.

**B) Low Priority Recommendations:**

1. Efficient and sound doctor patient counseling and reduction of the patient waiting time
2. Establishment of Health Academy of planning and development (HAPD) for proper training to improve administrative & managerial skill of health care managers.
3. Improvement of the medical education based on the community context.
4. Introduction and implementation of the latest technology.

5. Compulsory retention of government doctors in rural settings with incentives.
6. Focus on ensuring healthy environment through proper management of hospital waste.
7. Development of Accreditation system of Government and private hospitals.
8. Formation of the National Health service commission (Independent body for healthcare).
9. Implementation of the National Health Insurance System (NHIS) under a separate authority for example, Bangladesh Health Commission Authority.
10. Further development of Healthcare infrastructure
11. Advanced training for additional improvement of healthcare professionals.
12. Increase commitment of health care professional.
13. Creation and Implementation of regulatory mechanism of private health care sector.
14. Monitoring the activities of pharmaceuticals company.
15. Improvement of Inter- sectoral collaboration and coordination.

**Conclusion:**

A reformation in the overall healthcare sector of Bangladesh is very crucial. However, prioritization should be given based on the need of the country. This study was a demonstration of the feasibility of assessing consensus on a wide range of health sector-related issues. However, the extent of this study was very limited. Some of the issues might require some specific subject area related material. The involvement of all levels of decision-makers will spawn greater feeling and the issues are more likely to get implemented. The policymakers could deal with such issues by using these recommendations.

However, health sector reform should be sustained, purposeful, planned and evidence-based and fundamental change addressing significant, strategic dimensions of health systems. Clearly health sector reform should include a wide range of action on health systems with health workforce, social & political motivation. Above all, reforms should be passed by lawmakers in parliament.

**Conflicts of interest:** None.

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**Author contributions:**

Alam M S: was the main principal author of this document and have main responsibility- Conception, study design, data analysis, manuscript writing & editing, and submission..

Islam S, and Bashar K: - Data collection, data analysis, manuscript revision, manuscript Editing.

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