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State of Caregivers, Experimentation and Preparing for the Next One

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Abstract

Bangladesh witnessed many pandemics. But COVID-19 touched millions of people and exposed vulnerability in our health system. It opened our eyes to where to mobilise resources to fight the next looming disaster. First, this article tries to discuss some uncomfortable truths the pandemic exposed. Then it concentrates on how COVID-19 undermines the idea of the interconnected global community. It also highlights the importance of a vaccine for the poor and financing the vaccination programme. Then it probes what influences churning out doctors through building a model, which helps to better comprehend human development in the health sector in the post-COVID world. Finally, it suggests where to spend government-allocated funds for research in the wake of COVID-19.

Keywords *Health · Human development · National government expenditures*

JEL Classification H51 · I150

1. Introduction

Very few of us are prepared for the havoc caused by COVID-19. What COVID did, and is still doing, is only comparable to war: it crippled the economy, stopped the rhythm of vernacular activities and devastated individual lives. None would ever think such a disaster would strike the globalised countries and leave them helpless and isolated. COVID brought to the surface the vulnerabilities of the health system in poor and rich countries.

2. COVID Management in Bangladesh

COVID -19 management in Bangladesh turned out to be a failure. It drew the ire of people following the controversy, corruption, two-minded decisions and inability to take firm steps when it was needed most.

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It is always challenging to monitor social distancing in a densely populated country like Bangladesh. But regarding the simple screening of the disease, Bangladesh lagged behind many developing countries. It did not screen at a larger scale. More test means more detection of COVID patients. There had been 362043 confirmed cases of COVID-19 till September 29, 2020. The detection rate was 2125 per million. The number of tests and detection rates in a country with 160 million people should not be the reason for complacency. Testing centres were less than fifty in September 2020. Bangladesh also lacked adequate staff and equipment to carry out tests on a broader scale (Hoque,2020a).

The worst came in July 2021. July 1 recorded the highest number of death,143, caused by COVID-19-related complications ("Shob Record Chhariye",2021). The detection rate rose 32% in the cruellest month ("Deshe Shonakto Dine",2021). By that time, confirmed COVID-19 cases crossed 900,000 marks; the last 100,000 were detected in just 29 days ("Akranto Not Lakh",2021).

In addition, misgovernance in the health sector left a blot on the government's reputation. Fake COVID-19 tests in Bangladesh made headlines on world media. The vital overseas employment market sustained consequences as many countries were reluctant to accept fake COVID-19 certificates furnished by Bangladeshi labs. A hospital owner even landed in jail for running such fraudulent activities.

A simple sequence like collection-test-report was not corruption-free and revealed the health sector's ugly wound, ridiculing the government's achievements. Inadequate ICUs and beds, poor service, insufficient caregivers, low number of specialised hospitals, and inability to arrange rapid test and vaccination programs are not compatible with middle-income countries.

Bangladesh was one of the few countries where a private hospital-based researcher first conceived and developed the rapid test kit for COVID-19. Unfortunately, loggerhead with the government made its distribution in the local market untenable. Later other countries introduced the rapid antigen and antibody test kits.

A Bangladeshi research lab agreed with a Chinese company to carry out a phase-III trial of a Chinese vaccine. The lab even arranged 4500 volunteers in exchange for a fee and 100000 ampules of the vaccine. Authorities put on hold the agreement. Meanwhile, the government also nodded to a private-to-private deal with an Indian pharmaceutical company that will mass-produce vaccines developed by the Jenner Institute (Hoque,2020a).

Later in a bizarre event, the Chinese company claimed it was running out of funds and requested the Bangladesh government to cofinance its Bangladeshi phase-III trial here. This latest decision caused a furore among specific quarter who called into question its willingness to carry through the trial.

Many high-profile politicians and bureaucrats fell victims to the prevailing anarchy in the health sector during the lockdown. In normal times, they go abroad for expensive medical treatments. Propagation of coronavirus shut doors of those

countries for our VIPs, making them experience first-hand medical services born out of their ideas and policies.

The losses were so heavy that the government could not remain calm to the cry of trying the criminals. Small fries like a Department of Health Education driver and a retired director were charged and handed over to Anti Corruption Commission to assuage the angry mob. Meanwhile, the smarter ones perched on, the higher echelon of the organogram may be seeking loopholes to remain unscathed. The sorry state of our COVID management does not give us a feeling of grandeur of a nation emerging out of its structural problems prevailing in society and bureaucracy.

3. Globalisation: The Unlikely Victim

Pandemic also put to the test the spirit of Globalization. While richer countries stockpiled vaccines, poorer ones pleaded to make some concessions on the intellectual rights of the vaccines. On the other hand, many African countries refused to use vaccines donated by other countries as America stopped shipping vital ingredients to India to manufacture vaccines citing a law that requires that domestic urgency reign over export, BJP-led government in India was criticised at home and in the neighbourhood for failing to deliver vaccines to the states and neighbouring countries in time (Sirur,2021). Even the CEO of Serum Institute, the company responsible for manufacturing and distributing the AstraZeneca vaccine in this part of the world, fled to the UK and was invited to set up a plant there. Bangladesh, a country with public facilities to manufacture vaccines before the 80s, shut down general production facilities during the liberalisation phase. Bangladesh's frantic search for a vaccine did not get serious attention. Many citizens await a second dose of the vaccine at home. When the vaccine was made available: vaccine nationalisation started to show its ugly colour as the multilateral donor agencies started lending to poorer countries to begin mass vaccination. These most exempted vaccines do not have WHO approval. Russian Sputnik fell victim to such a policy. Poorer countries like Bangladesh and the Philippines opted for costly Chinese vaccines. While Middle Eastern countries like Saudi Arabia and Kuwait made it clear foreign workers must have the western vaccine, causing further woes to Corona-battered poor workers (Hoque,2021a).

4. A Vaccine for the Poor

The vaccination program stopped after the US had stopped sending RNA messenger to India (Sirur,2021). Bangladesh signed an agreement with the Serum Institute of India to deliver 30 million ampules of the AstraZeneca vaccine. It only received 7 million doses before the US ban on ingredient export came into effect. Following the debacle, the government entered negotiations with China, Russia and USA for the vaccine. Sinopharm's vaccine purchase was confirmed. In addition, the US sent 2.5 million doses of the Moderna vaccine. Earlier Bangladesh had taken delivery

of 2 million doses of Pfizer vaccine from GAVI. These are signs of goodwill, sent in small batches. But Bangladesh needs a bulk amount of vaccines.

Some countries in the Middle East, where many Bangladeshis work, made it clear they would not allow a migrant worker with a jab of the non-Western vaccine. So many Bangladeshis went through costly quarantine procedures despite having Sinopharm's vaccine. The government decided to give them the Pfizer vaccine.

Commitment to finance vaccination programs is plenty. But it is unclear how many doses one individual requires as a variant after variant does their damage. For poorer countries, it is not possible to purchase additional booster shot that costs more than $ 10. Local production could be a solution as the cost will be reduced significantly. Despite repeated pleas to call the vaccine a global public good and to relax the TRIPS laws, no progress has been made (Hoque, 2021b).

This crisis should be seen as an opportunity to increase the capability and strength of our pharmaceutical companies instead of clipping their wings. There is no vaccine for the "poor". Let us mobilise efforts to develop a vaccine for the poor. It is a pity that a country that led from the front in the fight against cholera by devising oral saline has not yet come forward with a vaccine for all. It is naïve to assume that the world will develop a vaccine for the poor amid this strong wind of vaccine nationalism.

Under the banner of "Extended Program for Immunisation", which aims to vaccinate children against acute diseases like polio, diphtheria, Hepatitis etc., Bangladesh has gained the experience of conducting such a large-scale vaccination program. So this scale of vaccination program will not pose a considerable challenge to authority.

There will be no herd immunity unless most of the population gets vaccinated. At the same time, there will be no normalcy unless the government is prepared for the most aggressive and nefarious variants of the COVID-19. Very few people and government could afford a vaccine cost between $15 and $10. So there is no option but to develop a vaccine that will be afforded by all (Hoque,2021c).

5. Culture of Experimentation and State of Caregivers

Abdul Guffar Chowdhury, veteran journalist and lyricist of language movement anthem, in his memoir "Dhire Bohe Buriganga (Gently Flows the Buriganga)", mentioned a class of Kabiraj" or traditional healers (Chowdhury, 2000). Before the tumultuous years of partition in the late 40s, Savar, the countryside on the outskirts of Dhaka, once housed these "Kabiraj" whose herbal medicines earned them a reputation across India. These vibrant, enterprising classes of professionals experimented with local herbs and made traditional medicines. The violent partition severely weakened the traditional medical practices.

After Pakistan came into being, Kundeshwari, Sadhana, Hamdard, AP did remarkably well, but a turbulent time of liberation war broke that ecosystem. The glorious days of herbal medicine never returned. Research and experimentation

not only in herbal medicine but in the health sector, in general, are conspicuously absent.

6. Methodological Issues

Coronavirus unveiled that many of our government health facilities do not have enough ICUs and specialised beds in the ICU across the country. This pandemic may be over in future, but it proved how vulnerable and less equipped our health system is. We spend more on APC, Tanks and defence facilities to make them NBC (Nuclear, Biological and Chemical) compliant. The time has come to replicate the process in the health sector as the threat of another pandemic or chemical or incendiary disaster looms. We need to build NBC-compliant ICUs, doctor's chambers, and patient's wards across the health facilities of Bangladesh.

Most importantly, we have to train and churn out health providers. I tried to build a model with data available in Bangladesh Economic Review 2019, Henley Nationality Index and Odhikar to see what influences produce doctors in Bangladesh (Ministry of Finance,2019) (Odhikar,2021). The period chosen was 2006-2017. I decided on Leamer's extreme bound analysis (EBA) approach to construct the perfect model. I picked up the number of registered doctors (Doc), number of beds in government hospitals and dispensaries (Bed), number of medical colleges (Med), number of dental colleges (Den), ADP spending on health, population and family welfare (ADP) and victims of political violence(Pol). The idea was that we needed more doctors with increased hospital beds. Several Medical colleges influence the churning out of doctors. So does the number of dental colleges. Increasing health expenditure could also play a role in delivering health professionals. I was eager to see whether governance could shape churning out doctors. A lagged variable was chosen in this regard as political turbulence this year could delay the graduation of doctors in future. However, I treated this variable as a doubtful one and considered Bed and Med as free.

First, I regressed Doc on Bed. Then I regressed Doc on Bed and Med. After that, I regressed Doc on Bed, Med and Den. Later I regressed Doc on Bed, Med, Den and ADP. Then Doc on Bed, Med, Den, ADP and Pol (1-period lag). Subsequent stages of regression increased both the R^2 and Adj R^2. We have five coefficient estimates for Bed, 4 for Med, three estimates for Den and 2 for ADP. The coefficient of Bed oscillated between 0.13 and 0.377. That of Med varied between -0.186 and 4.4. The coefficient of Den ranged between -0.2 and 43.56. The coefficient of ADP moved between 10.9 and 11.38.I put my trust in Bed, Med and ADP as the inclusion of other variables did not produce fragile estimates of their coefficients. I also noticed that the inclusion of the Pol (lagged) variable yielded the wrong sign for the Med variable, contrary to the conviction that increasing medical colleges produce more doctors. So I went for other variables to measure the governance. I went for the Kälin-Kocherov Quality of Nationality Index (QNI) (Henley,2021). QNI ranks qualities of nationalities. Each nationality receives an aggregate score

based on economic strength, human development, ease of travel, political stability and overseas employment opportunities for citizens. So I thought QNI could be a better measure for governance. But data were available for 2011-2018. So I ran the regression for this period. After the regression, I found that Med produced the opposite sign. So I discarded this variable, too and my attempt to see the role of governance in making doctors turned out to be a damp squib (Hoque,2020b).
And I finally rested my trust on the following model:
$Doc_t = a + b\ Bed_t + c\ Med_t + d\ ADP_t$

7. Findings and Analysis

The model fits well. However, the intercept demonstrated a substantial standard error, and the coefficient for Med was insignificant. ADP expenditures on health and number of hospital beds in Govt hospitals play a significant role in the number of registered doctors. In my model, an increase in 1 crore taka in ADP on health led to around ten registered doctors churning yearly. Though Bed turned out to be significant, its coefficient is less than one. The result was:

$Doc_t = 20088.07 + 0.16\ Bed_t + 0.37\ Med_t + 9.87 ADP_t$
(t = 3.86, p=0.00 , se=5194.24) (t=2.25, p=0.05, se=0.069) (t=0.16, p=0.87, se=2.35) (t=2.54, p=0.034, se=3.88)
(F=49.33, p=0.00)

Increasing health expenditures may increase the number of healthcare providers, but I do not know whether it is enough to raise the quality of service delivery. Abdul Guffar Chowdhury, in that memoir, shared an anecdote of service delivery at Dhaka Medical College Hospital in 1953. In the general patient ward, paratyphoid patient Guffar stayed a few more days to get cured. As in those days, the patients who managed to buy medication for paratyphoid had a better chance of survival. Those who could not manage to purchase medicine succumbed to death. The medical authority could not do more. A well-to-do-of leukaemia patient was also admitted to the same ward. He did not know his days were numbered. One day the patient died. Relatives engaged in an altercation with the medical staff when they found that the naked dead body had been draped in a white bed cover and his silk Punjabi, moneybag, and golden necklace were missing (Chowdhury, 2000). Sixty-seven years later, one may call into question the improvement of service delivery in our health facilities. An increase in health spending may increase the number of healthcare providers, but whether it may ensure quality service delivery and spur research activities in the health sector is a subject of another scrutiny.

8. Conclusion

It is good news that the government mobilised Tk 100 crore for research activities in health ("Government will spend",2021). Government has to ensure that research

projects from Medical Universities and institutes, genuine research physicians, and medical equipment manufacturing projects vie for such funds. For policy and socioeconomic research on health issues, there is ample funding from institutions like the Ministry of Planning, corporate NGOs and other public health organisations at home and abroad. There is no need to allocate funds from Tk 100 crore on policy research.

The latest development in COVID medication hints that oral pills have been developed in the West, and a local biotech company received government approval to develop a local vaccine. Soon local pharmaceutical companies may produce the drugs and vaccines in bulk if everything goes fine. However, the spread of the new variant, Omicron, underscores that there is little room for complacency in the fight against COVID-19. We have to recommit to mobilising more resources to spur science education and research activities. They are the quintessential things without which the country cannot take off to the next stage of development. Improving the governance situation in educational institutions is no less critical in this endeavour.

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