

A WIDE REVIEW OF HEALTH AND ECONOMY OF BANGLADESH AMID COVID-19 PANDEMIC

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ABSTRACT

COVID-19 has affected 213 countries around the world, killing around 480,000 and infecting close to 9.4 million by June 24, 2020 (worldometer.info). Bangladesh, a low-middle-income South Asian economy, has experienced an epidemiological and demographic transition with rapid urbanization and a gradual increase in life expectancy. It is the world's seventh most populous country and the country's population is expected to almost double by 2050. The increasing burden of transmissible diseases in Bangladesh can be attributed to rapid urbanization and nearly 50% of the country's slum residents live in the Dhaka division. Institute of Epidemiology, Disease Control, and Research National Rapid Response Team investigated 26 disease-outbreak incidents in 2017. The joint survey conducted by the Power and Participation Research Center and the Bangladesh Rural Advancement Committee Institute for Governance and Development reveals that per capita daily income of urban slums and rural poor people drops by 80% due to the current national shutdown forced by the government to stop the increase of COVID-19. About 40–50% of these inhabitants took loans to get together the daily operating cost. The country has only 127,000 hospital beds, of which 91,000 are in government-run hospitals. Researchers say that the economy of the country loses 33 billion BDT per day from its repair in addition to agriculture sectors during the nationwide shutdown.

Keywords: Domestic violence during lockdown, Health-care refutation, Poor devotion to self-quarantine, Natural disaster amid COVID-19, Repatriation of refugee personnel, Supply chain crisis.

INTRODUCTION

Notwithstanding, the sad state of major indicators such as negative growth in exports-imports; significant drop in revenues; decrease in private sector investment; and increase in bad loans documented in 2019 [1-16]. The government of Bangladesh was optimistic that the depressing trend of these indicators could be reversed somehow. But that optimism has now been severely dented by COVID-19's severe attack. The decline in domestic and global demand for manufactured goods, especially in the garment industry, risks creating unemployment, and deepening poverty. The urban poor will be hardest hit as the figure of additional poor people in rural areas will be higher. The Institute of Epidemiology, Disease Control, and Research (IEDCR) was the only Institute in Bangladesh with COVID-19 testing facilities until March 26, when a second facility received testing rights. Central testing has not yet been able to react effectively to the wave of suspected COVID-19 patients in these under-resourced public institutions. Amidst this worldwide crisis, Bangladesh has been identified as one of the 25 most vulnerable countries to be exaggerated by the fast spreading virus [17,18]. By April 25, 2020, it was long-established in 63 out of 64 districts (Fig. 1) [19]. Bangladesh confirmed its first coronavirus cases on March 8 and the first death on March 18. At June 24, 2020, 66 laboratories of the country tested 18,000 samples and 3946 new cases detected [20,21]. Reluctance of the authorities concerned and bureaucratic peculiarities has shown that the availability of a kit delays the detection of the novel infection with coronavirus. In addition, the Bangladesh government has not so far sought to proactively limit the transmission from primary cases to the community [22].

CURRENT STATE OF EPIDEMIOLOGY

Nearly 70% of the 119,198 coronavirus cases (up to June 24, 2020) detected in Bangladesh have been reported in the Dhaka division and nearly 50% of them are in the capital, Dhaka [23,24]. It was more than 80% in Dhaka division and 60% in capital Dhaka at the very beginning. Several reasons could be there, as COVID-19 test was less outside Dhaka at earlier stage. Furthermore, huge people moved before and after the lockdown process and the disease spreads. However, more than 50% infections and around 50% deaths reported in 15 days period (May 20–June 5). Approximately 68% of them are men while they comprise

73% of the dead, according IEDCR and expert are pointing two main reasons, outside exposure and hygiene do [25]. An psychoanalysis of the coronavirus patients by age demonstrated that the highest amount of the infected populace 24% – was between 31 and 40 years, followed by 22% in the age bracket of 21–30 years and 16% aged 41–50 years, according to IEDCR (Fig. 2). Virologists have noted a lack of difficult that would give a clearer picture of the true number of coronavirus infections. As expected, number of novel infections raised after the country has softened its limits on factories to pave the way for reopening despite the worsening COVID-19 situation in the country (Fig. 3) [26]. Although, 8% infected, no death was report among the age bracket of 11–20 years (Fig. 4). However, 11,590 have recovered and there have been 746 deaths, reported by US Embassy in Bangladesh. More or 800 Bangladeshi died in abroad so far and around 35,000 expatriates are infected in different countries (highest 16,000 in Singapore) [27]. Bank, kitchen market, public transports, and hospitals are believed to be the major places of infection spread by the experts.

PRESENT HOSPITAL SITUATION WITH COVID-19 PATIENTS

Many patients with fever, cold, and mouthful of air difficulties that are also COVID-19 health issues have gone untreated as they are sent to the IEDCR for coronavirus testing by the hospitals in Dhaka [28]. Most hospitals are unable to provide physicians and other healthcare associates with personal protective equipment (PPE) such as masks, gloves, and infected patients at any time [29-35]. Many doctors do not provide services that fear the contagion and according to the patients, laboratory technicians are shunning workplaces, and stopping medical tests. In some cases, serious patients who were not affected by COVID-19 moved from one hospital to another but were unable to receive treatment and eventually died, reported the media. In one more case, the doctor fled leaving the patient behind [36-40]. Doctors and other physical condition care professionals say they do not even have enough protective gear and the health-care system cannot cope with the outbreak [41]. Experts believe older people suffering from coronavirus most need ICU support [42]. There are more than 0.8 million older people in the country. A 100-bed hospital should contain at least five ICUs, in accordance with international standards [43]. In fact, hospitals in Bangladesh have a total of <1200 ICU beds (432 government,

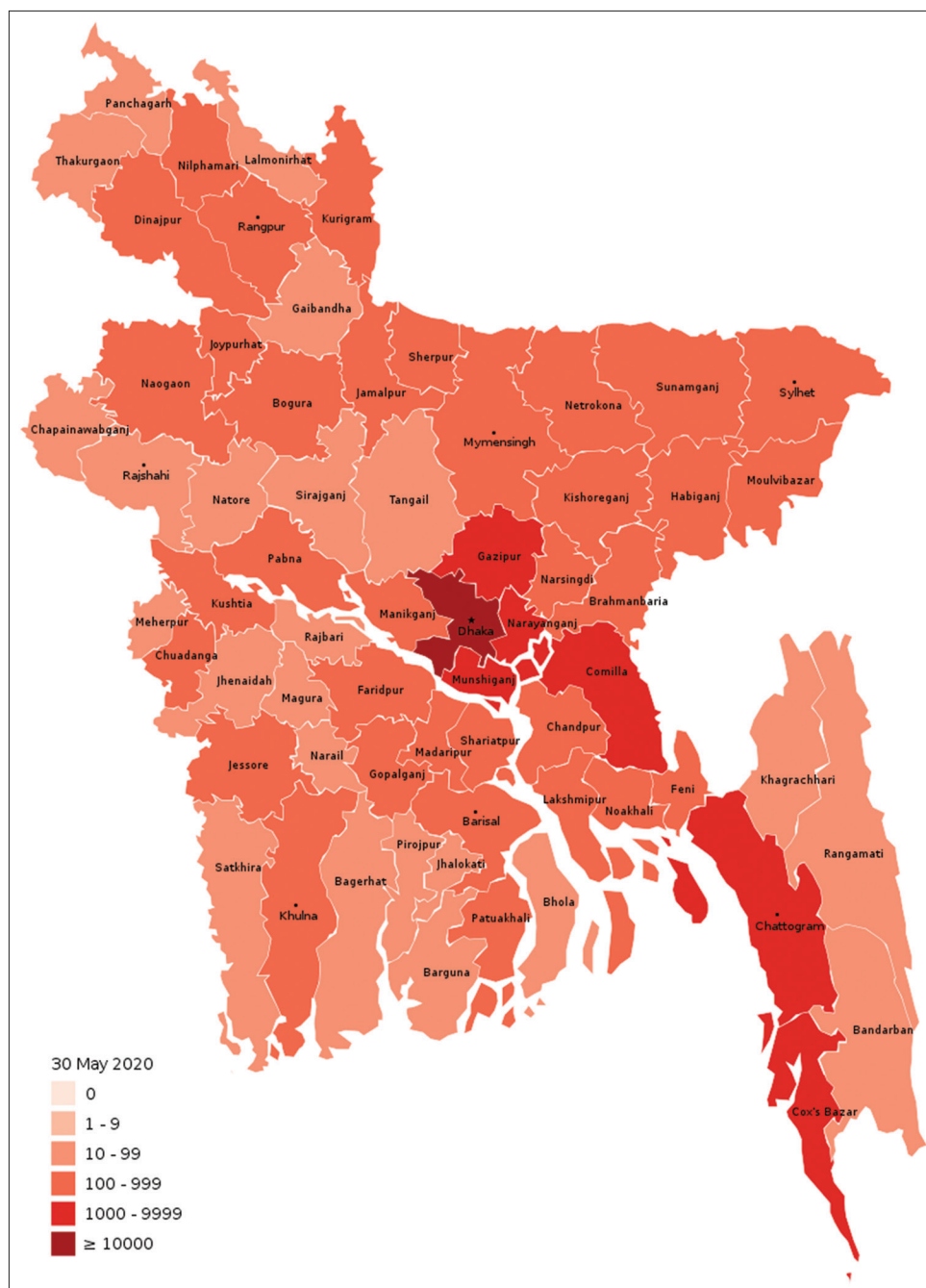


Fig. 1: Region wise COVID-19 infected cases in Bangladesh, as of May 30, 2020 [22]

737 private) versus a population of 161.4 million people. There are allegedly 1769 ventilators in Bangladesh at this moment or in the pipeline, which means a standard of one ventilator for every 93,273 populace [44,45]. Interestingly, COVID-19 is also producing large quantity of hazardous checkup waste, with PPE used in hospitals being the main component [46,47].

PUBLIC AWARENESS VERSUS ATTITUDE

Most people in Bangladesh are now conscious that the disease can happen to anybody and can even cause death [48]. Although a countrywide Bangladesh Rural Advancement Committee Survey (March 31–April 5, 2020) say that nearly 40% of respondents have no idea how to prevent infection of the virus [49,50]. The shutdown, first announced on March 26, was extended for the 4th time to May 16 [51-53]. The government has discouraged group after 6 pm,

instructing everybody to stay at home [54]. The populace is fooling law enforcers by travelling from one region to another by more often than not vehicles that transport goods [55]. Furthermore, on April 13, 2020, garment workers walk the street demanding their due wages during the lockdown in the midst of concerns about the capital outbreak, Dhaka [56,57]. Surprisingly, around 100,000 people attend a funeral gathering for a popular Muslim cleric who ignored physical distance and hygiene calls from various sectors [58-61]. In this lockdown, where 30 people were injured and one person’s leg was cutoff during the clash over establishing dominance, violence also reported [62-64]. Several other violations are also reported in print and online media, inside and outside the capital, such as unnecessary public gathering, gossiping, roaming without a specific reason, and staring at home under lockdown [65-71]. Decision-makers say “Chinese lockdown plan” will not be highly relevant to Bangladesh due to poor socio-economic conditions for humans and

other factors (such as government capacity, supporting infrastructure, technology, and medical amenities). This danger is compounded by thousands of Bangladeshi workers recurring from COVID-19-struck countries and poor adherence to self-quarantine recommendations due to limited teaching and monitoring mechanisms [72-75]. Although general holidays extended, the administration has decided to let businesspeople to keep shops and shopping malls open, bearing in mind Ramadan and Eid-ul-Fitr [76]. The figure of shops with <15 workers in the state is 5.6 million. Approximately 12 million employees work at those shops [77]. Hence, the transmission to the community may not be fully protected. Government employees, however, will not be allowed to leave their workplaces during Eid-ul-Fitr 2020, one of the Muslim religious festivals. And also, inter-district public transport will remain stopped up during the period, according to the order of the cabinet division [78].

HEALTH PROVIDERS AND LAW ENFORCERS GOT INFECTED

According to The Directorate General physical condition Services' latest figures of registered physicians, there are 93,358 Bachelor of Medicine, Bachelor of Surgery (MBBS) doctors, and 9,569 BDS doctors in the country [79,80]. The last health bulletin in print by the Health Ministry says that the country has only six doctors, nurses, and midwives for every 10,000 population [81]. Challenge to the country's already-overburdened healthcare system is being exacerbated by a string of COVID-19 cases among doctors. More than 700 doctors have been infected with COVID-19 so far, along with some thousands other allied health professionals, making up 11% of the total infections reported in the country. As well infection, some 600-700 doctors are also in home or institutional quarantine [82-85]. Directorate General of Health Services is recruiting a record number of 10,000 doctors, nurses, and health officials in a single month (May-June, 2020) [86,87]. Around 10,000 members of Bangladesh's carrying weapons forces and additional than 200,000 police officers and fire armed forces are operational to control the COVID-19 eruption. More than thousand police officers have been placed in quarantine and more than 7000 of them have become infected, with more than 100 tested COVID-19 positive in April 2, 2020 alone [88-92]. Although, finance ministry of the country declared incentive BDT 0.5 million to government officials and employees working with existence risk in the field including doctors, nurses, health workers, police, and local administration [93].

TRIAL OF UNLICENSED DRUGS AND UNAPPROVED DIAGNOSTIC AIDS

A group of Bangladeshi doctors of a private Bangladesh Medical College in Dhaka, claim achievement after using antiprotozoal medicine ivermectin and doxycycline antibiotic for COVID-19 infected patients [94,95]. Earlier, a number of other hospitals tried hydroxychloroquine, controversial for its life-threatening heart rhythm evils and hepatotoxicity [96,97]. Some of the company of Bangladesh has taken endorsement or started production of antiviral drugs such as favipiravir (Avigan®, Japan) and remdesivir and they are about to be

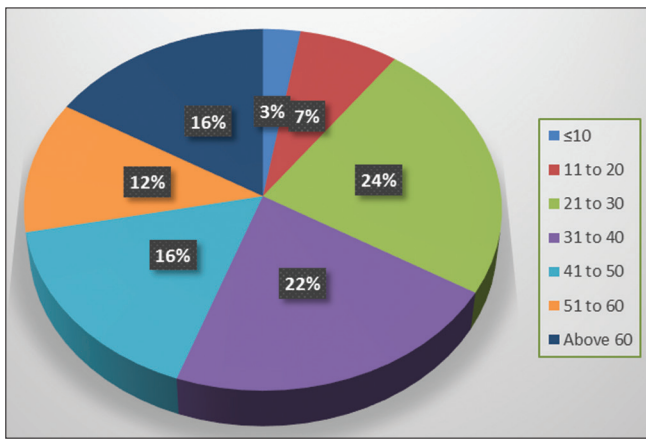


Fig. 2: Age distribution in percent. Data from the institute of epidemiology, illness manage, and research showed that 62% of the infected cases were aged between 21 and 50 years

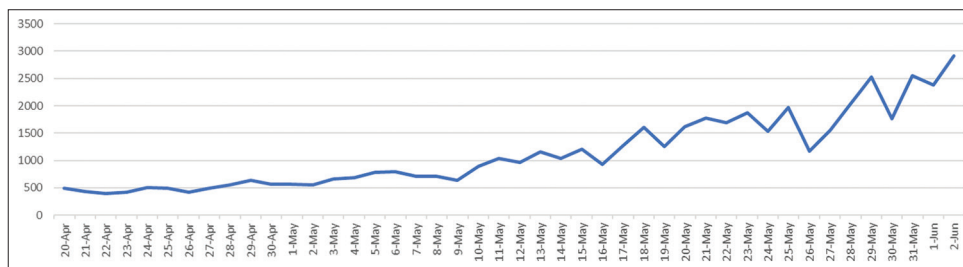


Fig. 3: COVID-19 new cases detect in Bangladesh from April 20 to June 2, 2020. The curve was almost flat. This means the disease rate was not increasing among lockdown. Practically, number of tests conduct so far is too small not truly represents the actual situation. However, the curve showing a important turn after May 8, when the lockdown is partially withdrawn

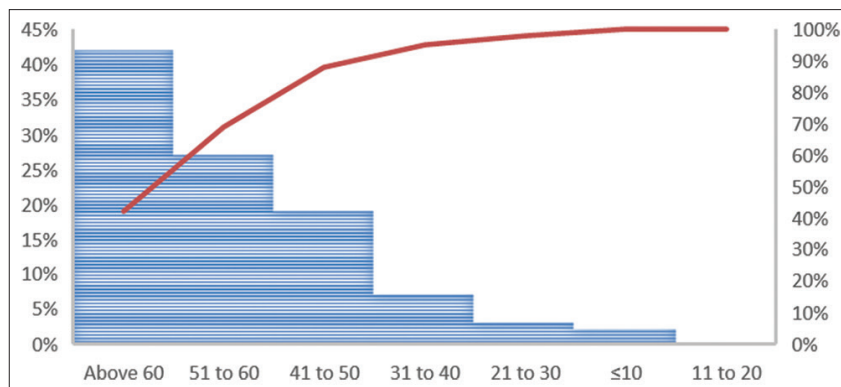


Fig. 4: COVID-19 test positive age distribution in the middle of Bangladeshi population. According to IEDCR, highest death report in patients on top of 60 and no death reported in the infected cases aged between 11 and 20 years

used for the COVID-19 patients, although not authorized by WHO/FDA for the same [98-100]. Although, the government has issued a warning against using coronavirus antibody test kits without permission from the health authorities amid questions over the accuracy of results [101,102]. Experts are also expecting misuse of these drugs, if found in drug stores.

PRICE TREK OF THE DAILY NECESSITIES AND NATURAL DISASTERS AMID COVID-19

Where income of the poor drop by 80%, the prices of necessary commodities surged, addition to buyers' woes amid the COVID-19 crisis flanked by March and April, 2020 [103]. The misery of some 7 million slum dwellers around Dhaka is multiplying due to lost earnings and price hikes of customer goods [104]. Customers alleged some unscrupulous traders have hiked the prices of commodities to make quick buck throughout Ramadan [105]. After the first container of coronavirus was confirmed in Bangladesh the very after that day the highest court of the state had to "direct" the government to take essential steps to stop price hike of masks, hand wash, plus sanitizers, or storing them to make extra profits later [106]. Nearly 35% of the country's sum import is China based and prices of various disposable medical instruments (bouffant caps, shoe cover, medical clothing, test flooring, surgical gauze and sponges, surgical gloves, divan sheet, lab test instruments, and diagnostic reagents) have been showing an upward trend due to decline in their shipment [107]. Although, Trading Corporation of Bangladesh launch open market sale of key necessary items in front of the fasting month of Ramadan, people queue/social estrangement is rarely maintained there [108-110]. Syndicates are capturing advantage of poor surveillance by government agencies to monitor prices. Increasing in the demand for crop is allowing many unscrupulous traders to increase prices 2 months ahead of Ramadan. This is increasing the range for such traders to make more money through sign [111-113]. An opposite scenario is found by means of the farmers, as the prices of their produces have decline sharply for lack of marketing following the lockdown amid the outbreak [114-117]. A massive brook of desert locusts may be heading toward Bangladesh and India passing in excess of the Indian Ocean. This likely attack from the crop destroying insects may worsen the state of affairs further [118]. Furthermore, hailstorm, flood, and additional natural disasters are predicted for this year [119,120]. All these can multiply the severity of disaster in a close to future.

ECONOMIC CRISIS AMONG PANDEMIC SITUATION

About 80% of the country's sell abroad earnings are from RMG division and include 13% to the GDP of the country. The major export destinations comprise the United States, U.K., Germany, France, and plus Italy [121-124]. Pressure to meet manufacture deadlines from American and European garment brands and possible loss of business to competitors have prompted factory owners to reopen manufacturing units [125]. These crowds could come out new vectors of the COVID-19 plague in Bangladesh. The country has around 10.0 million workers overseas, with a majority in the Middle East and the US, UK, and Malaysia [126]. However, most Bangladeshi migrant work in West Asia, where declining oil prices contain hit economies. Many will be compulsory out of their jobs and will have to go back home to unemployment [127]. This is not surprising because hold up in US and EU economies have had ripple effects in the Bangladesh financial system. Meanwhile, banks be trying to come to terms with the office of Finance instruction of 6% and 9% caps to interest rates on deposits and loans; vulnerable asset excellence; moribund assets market; and a struggling microfinance sector as access to donor funds and bank finance become more competitive [128,129]. It is value noting that in the past 3 months, confidential sector credit growth was already waning. Banks were experiencing an additional force in paying customers as money withdrawal was more than any normal time, out of fear of lockdown. The central bank has taken several initiatives to meet the liquidity crisis in the bank sector and conquers the current economic crisis [130]. However, growth rate for Bangladesh, as predictable by IMF, now stands

at 2% for 2020 against 7.9% in 2019 [131]. Furthermore, The GDP is predictable to grow by 8% in FY2021, according to the ADB [132].

THE COUNTRY'S SUPPLY CHAIN AT RISK

57,500 tons of clean fruits, 1,473 tons of onions, 475 tons of auburn, and 850 tons of garlic – in 2,500 containers – contain remained stuck at the Chittagong Port yard till April 25, due to the slow delivery of goods amid the COVID-19 shutdown [133,134]. Behavior at Chittagong port have come to a standstill as the amount of import containers has exceeded the port's storage capacity due to slow delivery of goods. It may keep the ship waiting and it will add to the demurrage for importers. The numeral of containers at the port yard is rising significantly since the importers are taking delivery of containers slowly as the country is going through lockdown [135-137]. As sales of fresh fruits decrease, importers are not releasing their consignment from the port causing huge overcrowding of freezer containers in the port. Manufactured goods delivery from the port has declined due to the shortage of convey workers and vehicles, as well as slow revenue collection. A number of importers expressed that they had brought in harvest amid a number of difficulties, but they were unable to obtain deliveries due to the pandemic [138]. However, the CPA is trying to transfer a number of containers to privately run Inland urn depot (ICDs) known as "Off-dock" as an alternative measure to tackle the state of affairs.

RISING DOMESTIC VIOLENCE AND PSYCHIATRIC ILLNESS

Millions of people approximately the globe are hassled and nervous due to an assortment of associated reasons such as fear of being infected and losing loved ones, losing livelihoods, job insecurity, and feelings of helplessness. Social distancing can cause long-term pressure, anxiety, lack of confidence, low self-esteem, negativity, frustration, and low motivation and overall downfall of cerebral health, which could become the major cause for physical illness [139,140]. Violence next to women and children is on the go up in Bangladesh amid the COVID-19 lockdown due to lack of social behavior and financial pressures are increasing rifts within families [141-143]. Fighting against women is common in this country, especially against women who come from the impecunious sections of society. Rights activists say that the lockdown has completed women and children more vulnerable to domestic violence and abuse as many of them are confined to their homes with no exterior support. According to a recent review more than 4700 women and 450 children be subjected to domestic violence in 27 out of 64 districts of Bangladesh in April, by more than 1600 women and 420 children facing aggression for the primary occasion in their lives. More than 90% of the youngster victims were ill-treated by their parents and relatives [144-147].

FUTURE RECOMMENDATIONS

Awareness campaign

The awareness campaigns should be persistently conducted by the government, private organizations, and the media to involve group of people participation with mutual distancing to be effective. Deploying utmost manpower for the next few months to all those areas of the country where coronavirus impure patients have been identified and their families and all those who come in contact with the infected person. Adequate diagnosis and isolation/quarantine be supposed to be implemented in their own homes.

Coordination among authorities

The National tragedy Council, under the leadership of Hon'ble Prime Minister, was shaped on an urgent source. As much labor as, it has been, the time has come to fold that whole work to make it more integrated. The rationale for this is that other ministry be not yet fully included with the health ministry.

Promoting telehealth

During epidemic outbreaks, home mind is particularly effective when health authorities are not apparently safe to implement social coldness systems and hospitals. Telehealth can provide convenient access to

custom care in a crowded hospital or in checkup practice without the danger of exposure.

Distance learning

For too extended, we contain seen a pained plus negative approach toward online education from policymakers. The majority teachers in Bangladesh do not have any experience of teaching online and are new with online judgment techniques. They should be trained to provide distant learning.

Idea of test-booth

The samples can be collected by setting up coronavirus test booths without PPE like in South Korea in premises of medical colleges, districts, upazilas, union hospitals, and group of people clinics so that samples can be collected quickly anywhere in the country. Those who do not comprise experience in illustration collection should be trained quickly through online/video conferencing.

Supporting the helpless

Only persons who can afford be supposed to pay and to bring free food to all the poor and low-income people from door to door, by Army, Navy, BGB, Police, RAB, Ansar, Deputy Commissioner, UNO, and public representatives. Then no one will get in trouble and no excuses will be left to get out of home. China, South Korea, Taiwan, Vietnam, India, and Kerala have been successful with this method.

Separate quarantines

A large number of express trains, steamers, high quality hotels, Ashulia Iztema grounds, stadiums, and public and private hospital beds are currently unused in Bangladesh. All these train bogies, steamer cabins, hotel cabins, and unused grounds can be converted into isolation centers for infected people. Isolation/quarantine cannot be 100% effective at home, as not everyone has more than one separate toilet and adequate room in their home.

Monitoring people from abroad

All those who have entered Bangladesh recently from abroad through airports, land ports, seaports, railways, and their families, or all those returning home should be tested for coronavirus and to be monitored accordingly.

Ensure more test

Allowing all A-grade private hospitals to conduct rapid coronavirus testing and treatment and announcing reasonable/fixed test fees by the government. Services of other hospitals/clinics, which were closed due to fear of coronavirus, should be re-opened.

Provide more medical oxygen

According to the WHO, most people with COVID-19 develop only mild or uncomplicated illness, while approximately 14% develop severe disease that requires hospitalization and oxygen support. Only few hospitals, including Dhaka Medical College Hospital, Bangabandhu Sheikh Mujib Medical University, Sir Salimullah Medical College Hospital, Square Hospitals, Apollo Hospital and Anwer Khan Modern Medical College Hospital, have central oxygen supply facility. This facility should be increased.

A larger health budget

At <1% of GDP, government health spending in Bangladesh is among the lowest in the world. The WHO recommends allocating at least 5% of a country's GDP and 15% of the total budget for the health sector. Government should spend additional resources directly on government doctors, drugs, hospitals, and health centers and also increase the allocation in education to ensure quality by recruiting qualified teachers, retaining them by providing incentives and ensuring better infrastructural facilities and resources.

Implement lockdown until crisis is over

All government and private offices, educational institutions, garments, factories, except for the essential service providers, should be closed

until the coronavirus infection is brought under control. When lifting restrictions, it is important to be able to track and deal with any side effects, which could possibly be an increase in cases after lifting the restrictions which is why the nation has to be equipped to deal with that before it happens thorough testing and provide of defensive gear. This may result in the crisis occurrence again; so, the nation needs to be prepared.

Ensure more safety measures

At what time buying drugs, foodstuff, raw markets, fruits and fish, guidelines should be disseminated for all who go out and bring these products home (money, clothing, packets, and bags can also be impure with the bug).

Monitoring comorbid population

The popularity of comorbidities in the COVID-19 patients counting hypertension, cardiovascular disease, diabetes mellitus, smoking, chronic obstructive pulmonary disease, malignancy, chronic kidney disease, and obesity may be risk factors for severe patients compare with non-severe patients. Everybody is susceptible to this virus, but the elderly and those with underlying diseases are more at risk of adverse outcomes. Given that COVID-19 has a comparatively long incubation period and throughout this time the impure person can transmit the virus without showing symptoms, it is strongly recommended that patients with chronic or underlying diseases avoid any close contact with other people in the group of people, especially in epidemic areas.

Boosting immunity campaign

To boost the immune scheme and preventing coronavirus, every being be supposed to consume ginger, cinnamon, cloves, muggy honey, black cumin, turmeric, triphala and tulsi, along with tea, consuming hot water and gargles twice or thrice every day, and adding Vitamin C or Vitamin C twice a day.

Employing more allied healthcare associates

Overburden by patient loads, physicians have increasingly turned to pharmacists in US, UK, UAE, and Australia for medicine information, particularly, inside institutional setting. Pharmacy is trained in about 100 public and confidential universities in Bangladesh and concerning 8000 pharmacy students graduate every year. They can be more beneficial to the community if the high-quality hospital and community practices are introduced properly.

Controlling the concurrent outbreaks

Intermittent rainfall, hotness difference, and higher humidity as a result of climate change are affecting the adjust in disease occurrence. Along with COVID-19, the country should also get healthy prepared for the imminent dengue season. There were more than 100,000 report cases inside the country in 2019, so proper mosquito prevention should be everywhere.

Protect victims of domestic violence

Voice is supposed to be raised against domestic violence along with concern development of victim shaming, lack of sympathetic of the cycle of abuse, social stigma, lack of knowledge, capability of supporting domestic violence victims at the community level, etc. Steps should be taken by means of the aims to leverage the power of social media to influence positive conversation, greater than before awareness, empathy, call to action to end gender-based violence and child abuse.

Safe and controlled use of disinfectants

Fire service, WASA, City Corporation, municipalities at all divisional, district, Upazila, and union levels of the realm have to spray disinfectant on the streets every day. All vehicles coming from exterior should be sprayed keeping in mind that it could be detrimental (e.g., bleaching powder) for responsive external organs such as human eyes and face.

Prevent repatriation, support the migrant, and ensure safe arrival

All the workers to be sent back by different employ countries, on arrival, will have to be placed under institutional quarantine, but the

establishment may be hard put to accommodate them if they reach your destination at a time. Hence, their phased arrival will create things rather easy for the receiving authorities. Bangladesh cover should maintain a close link with the relevant ministry in the matters of post-arrival formalities and quarantining the repatriated personnel. This is expected to create a difference. Furthermore, foreign office should ask compensation for them, at a suitable time, for the loss that Bangladesh will sustain in view of taking back its workers.

CONCLUSION

Since there is no vaccine and exact anti-viral drugs so distant, public health events are considered as an effective tool to mitigate the impact of the virus in the group of people. Besides the system of healthcare, institutional safeguard against COVID-19 infection during a pandemic assault is also important. A strong public physical condition infrastructure that can constructively believe for future preparedness, development, and research in the direction of emerging and re-emerging infectious diseases is compulsory. The method includes group of people engagement in which individuals develop the potential to avoid COVID-19 contacts and entail community-based approaches, in which planners, employers, and social activists can adopt strategies to protect vulnerable group and the community from COVID-19 infection. Although, Bangladesh is not new to major international emergencies or disasters, Bangladesh's community and private sector leaders need to come jointly just to address the immediate threats to health-care systems and the long-term effects on the country's economy.

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