Public Healthcare and Governance: Two Wheels to Ride the Cart Against COVID-19 Pandemic

Prabuddh Kumar Mishra* and Anuj Singla*

ABSTRACT

Within months of the emergence of the first case in China, COVID-19 has spread around the world like a wildfire infecting millions of population. The world, today, is fighting a war- a war being waged by the most advanced species against tiny microcosms. Public healthcare infrastructure, in these testing times, becomes the most important tool to fight coronavirus. But, when even the most developed healthcare systems are faltering, the plight of countries with weak health infrastructure becomes unthinkable. Here, comes the role of governance. Good Governance enables us to tide over the problem even when the requisite resources are lacking. The paper analyses the vital role played by the governance along with the public health infrastructure in tackling the pandemic especially when the latter is not so strong. It firsts assesses the capacity of Indian public healthcare infrastructure to handle Coronavirus and also discusses the timely intervention and innovation used by the government to make up for the gaps in the public healthcare system thus showing the crucial role of governance. It also uses the case studies of Italy and South Korea in this context along with the example of the United States of America. The paper ends with discussing the future implications of coronavirus on the system and lives of people which can make them better and stronger.

Keywords: COVID-19; Public Healthcare System; Governance; India.

Introduction

Somewhere in December of 2019, the Wuhan city of China started seeing cases of unknown illness among the people. The cases were initially dubbed as pneumonia cases (Zhou et al., 2020). Little did the authorities realise that they were the beginning of a pandemic that was

* **Prabuddh Kumar Mishra** and **Anuj Singla**, Department of Geography, Shivaji College, University of Delhi, India. Corresponding Author Email: prabuddh@shivaji.du.ac.in

soon going to strike the whole world and bring everything to halt. This was the coronavirus. It stems from the family of viruses that is the cause of various diseases in both humans and animals like the common cold or the more serious diseases like Middle East Respiratory Syndrome (MERS-Cov) (Infected 2260 people with a fatality rate of 34.5 percent) and Severe Acute Respiratory Syndrome (SARS-Cov) (infected 8096 people with a fatality rate of 9.5 percent) which have earlier wreaked havoc in the world (Petrosillo et al., 2020). But, the worst was yet to come. Initially speculated to be the recurrence of SARS virus, the scientists soon realised that it was a novel virus, never seen before, with unexpectedly high capacity of spreading and named it 2019-nCoV then (Zhou et al., 2020). It was renamed as Coronavirus because of its molecular structure. The virus has a crown of proteins known as peplomers extending from its centre and so the name(World Health Organisation). Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by a coronavirus.

The source of the virus is not confirmed yet, but it is being surmised that the virus has originated from the wet food markets of the Wuhan city (Murugesan et al., 2020). Since these markets do not fulfil hygiene standards, the chances of the spread of various diseases increase. The original host of the virus is believed to be the bats since these organisms are the storehouses of various zoonotic viruses which include Ebola, HIV and rabies (Li et al., 2005). As the confirmed cases of the disease surged inside and outside China, WHO announced the spread of the virus as a global health emergency on January 30, 2020 (Lal et al., 2020). The disease has spread to more than 200 countries, infecting 45,25,497 and has killed 3,07,395 people all over the world (WHO, 2020). The coronavirus has made its impact in most of the places except Africa. Despite a huge number of travellers from China, Africa has, by large, been able to avoid the disastrous impacts of the virus(Soy, 2020). [1] In India, the number of coronavirus cases till May 19, 2020, stood at 1,11,203 with 3,428 deaths (Desk, 2020). The table below represents top and bottom 5 states and union territories according to the number of positive cases.

Table 1: Top and bottom 5 states according to the number of positive cases

Region with highest number of cases	Positive cases	Region with lowest number of cases	Positive cases
Maharashtra	39,297	Arunachal Pradesh, Dadra and Nagar Haveli, Mizoram	1
Tamil Nadu	13,191	Meghalaya	13
Gujrat	12,539	Puducherry	18
Delhi	11,088	Manipur	20
Rajasthan	6,015	Andaman and Nicobar Islands	33

Note: The tally above includes foreigners who have been infected with COVID-19 and the data is till May 19. Daman and Diu, Lakshadweep, Nagaland, Sikkim reported no cases. (Source: *Deccan Herald)*

The coronavirus has put to test every pillar of the society from economy to social bond and harmony. But, one thing that has been put to severe stress is the healthcare facilities. It is the public healthcare infrastructure which is put into action first, as people start complaining of illness and throng the hospitals. Healthcare systems around the world have been thrown out of order as they continue to face huge shortages of healthcare staff and resources including in the developed countries. In this context, it becomes important and interesting to assess the public healthcare system of India and its capacity to handle the pandemic.

The paper analyses the Indian public healthcare system based on two criteria. Firstly, whether the public health policy or other such policy envisages a possibility of being inflicted with such pandemic and has any plan to deal with it and secondly, the capability of public health infrastructure to fight. It will also briefly discuss the disparity in the state of public healthcare infrastructure and level of preparedness for dealing with the coronavirus among different states of India. The following part studies these aspects.

Legislation and Health Policy Framework of India

India lacks both a legal and health policy architecture required to prevent and control epidemic diseases. In the absence of any appropriate legislation, the government was forced to invoke the archaic and obsolete Epidemic Diseases Act 1897. The century-old legislation was brought into existence by the British India government mainly to help the government control the frequent plagues. However, the Act does not lay any plan-of-action or provisions such as quarantine measures, medical policy to be followed (Rakesh, 2016). All it provides for is the ability of the government to take 'exceptional measures' while remaining silent on outlining the duties of the government and protecting the fundamental rights of the citizens in the face of health emergencies (Tewari, 2020). To fill this vacuum, a Public Health (Prevention, Control and Management of Epidemics, Bio-terrorism and Disasters) Bill, 2017 was drafted by the government, though the same has not been tabled in the parliament yet.

On the policy front, India has equipped itself with the Biological & Public Health Emergencies (BPHE) guidelines, included in the National Disaster Management Plan in 2019 (National Disaster Management Authority). The section provides a set of short term, medium-term and long term goals to be achieved by 2022, 2027, and 2030 respectively to make the country health disaster-resilient. Maintaining stocks of essential medical supplies, developing community-based network, establishing decontamination systems, Intensive Care Units, an inter-agency response plan are some of the goals (National Disaster Management Authority). However, timely implementation of these aims and

the formulation of comprehensive legislation are needed to make the country resilient in the true sense.

Though the policy envisages a situation of being stuck with a pandemic and lays out holistic goals, the goals are yet to be achieved and the existing infrastructure is incapable of absorbing a large number of infections. India's healthcare system is characterised by sub-par infrastructure, deficiency of manpower, and public investment way below the required level to take care of the needs of its huge population.

India's Public Healthcare Infrastructure

One of the major shortcomings is the low doctor to population ratio. The shortage of human resources in the health sector in the country can be gauged by the fact that there is only one government doctor for every 11,039 people (much lower than the recommendation of one doctor for every 1000 people) (Central Bureau of Health Intelligence-CBHI). The doctor to population ratio varies across states to the extent that it is 1: 43,788 in Bihar and 1: 2028 in Delhi. States like Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh have poor doctor to population ratio while relatively developed states like Goa, Delhi, etc. have a better ratio (Sen, 2020).

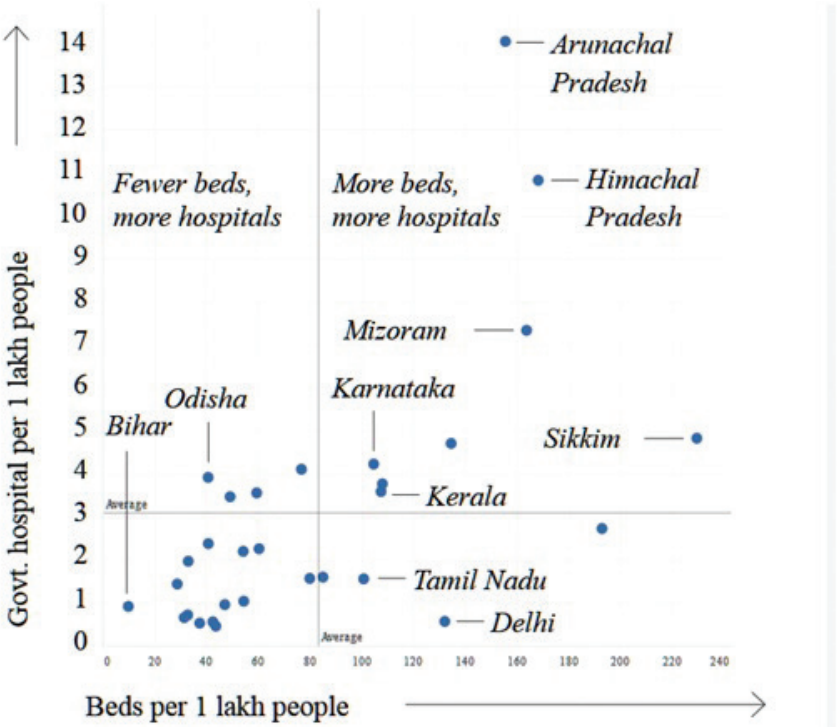
Poor quality of life in rural areas and the lucrative service conditions available in the urban areas distort the distribution of the medical staff to the extent that the urban-rural density ratio of all the health workers is 3.8 which limits the access of the rural population to these services (Anand & Fan, 2016). Lack of the adequate number of healthcare personnel affects the qualitative and quantitative aspects of the services delivered since the available staff is expected to cater to more patients than the ideal number. This becomes more worrisome during coronavirus outbreak as the treatment of patients would require much more number of doctors to give adequate attention to all of them.

The low number of available beds in the country is another major issue. The *Bhore Committee* in 1946 itself had recommended that the country should have an "irreducible minimum" of 1.03 beds per 1000 people (Bajpai, 2014, p. 2). But, even after seven decades of independence, we have managed to make available only 0.55 beds per 1000 population (CBHI). This is a major source of worry as treatment of coronavirus patients requires a large number of isolation beds. It further becomes problematic as out of the total beds available in the country, only 39 percent are in rural areas where more than 70 percent of the population lives (CBHI).

There are approximately 19 lakh hospital beds, 94 thousand hospital beds and 48,000 ventilators available in the country (Kapoor et al., 2020). The number of Government

hospitals and beds per 1 lakh population varies greatly across the states. Though Bihar has the lowest bed to population ratio, many larger and better-developed states too do not fare better on this scale as visible in the graph below (Sen, 2020).

Figure 1: State-wise distribution of public healthcare infrastructure in India



Source: *The Hindu*

Even with respect to the available facilities, their conditions usually paint an abysmal picture. They are poorly equipped with facilities like electricity, water supply and sanitation and are poorly managed which undermines their functioning. Shortages of medicines and consumables, health equipment, ambulances are the things in common in these hospitals (Bajpai, 2014).

India's unimaginably low government expenditure on health at 1.6 percent of the GDP (FY 2020) is one of the reasons for the poor performance of state-run hospitals (Pilla, 2020). The per capita expenditure by the government has been increasing but is still low standing at Rs. 1,946 (Mehra, 2020). The overall spending on healthcare in India is 3.6 percent of the GDP much lower than that of countries like the United States of

America (USA-16.9 percent), Russia (5.3 percent), China (5 percent) and the average for the OECD countries (8.8 percent in 2018) (Mehra, 2020).

Low public expenditure translates into high out-of-pocket expenditure on healthcare which averaged out at 69 percent of the total healthcare expenditures from 2000 to 2015 (World Health Organization: Regional Office for South-East Asia). These payments (exorbitant for the poor) push, on an average, 7 percent of the people below the poverty line annually (Reuters, 2018). The private sector provides better quality of services but their concentration in the urban areas and higher healthcare costs ensure that the services remain out of the reach of the poor masses ("Average medical expenditure at private hospitals seven-times higher than government ones: NSO Survey," 2019).

The shortcomings discussed above point towards the incapability of the system. Many states of India are not equipped well to handle the COVID-19 pandemic. While states like Maharashtra, Tamil Nadu, Kerala, etc. are relatively better prepared and have more testing centres, states like Bihar, Odisha, etc. are in a worrisome situation (Sen, 2020). The disease has highlighted the critical role of a sound and fundamentally strong public healthcare system in guarding the health of people in such unprecedented situations. However, a strong public healthcare system itself cannot help a nation tide over the coronavirus outbreak. As the example of coronavirus outbreak in Italy, USA and South Korea shows (discussed in a later section), weak or indecisive approach by the government can undo the benefits of strong public health infrastructure whereas timely intervention and good governance can help the countries to make up for the poor healthcare infrastructure.

Good governance is expected to provide an organised and holistic response by using the limited available resources in a timely and innovative manner when augmenting the fundamentals of a system is not an option in short-run. It involves swift decision making, showing able leadership and communicating with the people. Using all the resources efficiently and innovatively with the help of technology to ensure that even the last person standing in the line is protected becomes the need of the hour. The local government have to take the frontline approach as they are closest to the people and can understand the issues and problems of the people better (Kapur, 2020). Thus, it relies on the activation of all agencies, with active cooperation and coordination among all of them, to employ all the available resources to fight this pandemic off.

As seen above, the existing public health system of India is not robust enough necessitating the good governance and leadership to effectively utilise the available resources and use innovation and out of the box thinking to generate new resources too. The next part will analyse the various methods used by the Indian government to deal with coronavirus pandemic.

India's Multipronged Strategy

India's response can be called as comprehensive and robust. The country has put a tough front against the disease by taking a multitude of actions such as restrictive measures, medical interventions, using digital technology, economic stimulus and putting the available resources to effective use. India reported its first case on January 30 in Kerala (Ghosh et al., 2020). The country has reported 90,927 cases and 2,872 associated deaths as of May 17, 2020 (WHO, 2020). Unlike some countries, the leadership and healthcare officials showed no delay in decision making. Taking lessons from the experience of dealing with Ebola in 2014 and Nipah in 2018 (Charlton, 2020) and other countries, the government has taken things very seriously and implemented a slew of measures. The following part discusses these various measures.

Lockdown

To protect the people from the disease, 75 districts were locked down initially. Public places and institutions like educational institutions, museums, social and cultural centres were closed. Restrictions were placed on the movement of people. On March 24, 2020, the Hon'ble Prime Minister Narendra Modi announced a nation-wide lockdown which has been in place ever since. Everything except the essential services like medical services has been shut to slow down the rate and extent of disease transmission. Social distancing is being emphasized upon. Districts have been categorised into green, orange and red zones based on risk profiling ("Lockdown: List of what's allowed, what's not in green, red, orange zones," 2020). Since the lockdown cannot eliminate the virus on its own but helps in delaying the community transmission, it is also important that we build up defences, ramp up health infrastructure, and prepare for the worst-case scenario. This exercise is already on.

Medical Interventions and Treatment Measures

Huge efforts are being made towards containing the spread, including strengthening surveillance, laboratory capacity, contact tracing and isolation. COVID-19 testing and treatment have been made available free-of-cost at government-designated testing centres and public hospitals for all. People who fall under the ambit of Ayushman Bharat scheme and Economically Weaker Sections (EWS) category can avail the testing facility from private laboratories for free as per the Supreme Court's direction of April 13, 2020 (Shashank Deo Sudhi vs. Union of India Ors 2020). A total of 472 labs (343 governments and 129 private) have been approved for testing (as of May 9, 2020) which are allowing us to conduct more than 20,000 tests per day (PIB Kolkata, 2020, Indian council of

Medical Research, 2020). According to the released data, more than 700 hospitals, 2 lakh isolation beds and 15,000 ICU beds have been dedicated to the treatment of COVID-19 patients. To ensure the availability of PPE (Personal Protective Equipment) kits, masks, and medical equipment, domestic production is being geared up apart from the imports (PIB Delhi, 2020b). The officials are confident that the country would be self-sufficient in the production of RT-PCR diagnostic kits and rapid testing kits by the end of May 2020 (PIB Delhi, 2020b).

The network of over 6,000 *Jan Aushadhi Kendras* is providing quality and affordable medicines, ration kits and food on an average to around 10 lakh persons every day (PIB Delhi, 2020c). They are also fulfilling the orders placed through Whatsapp and e-mail by delivering the medicines (PIB Delhi, 2020d). At the grass-root level, Primary healthcare centres, ASHA workers have been mobilised. Thousands of teams of these workers have been constituted to collect data and map the potential suspects of the disease. Door-to-door surveys are being conducted for the same. They have also been given the task of spreading awareness among the people about social distancing measures, distributing sanitisation kits to the poor and needy. Private hospitals have also been directed to inform the authorities of any suspicious cases (Ministry of Health and Welfare).

Effective Utilisation of Resources

In the meanwhile, the Indian railways has been converting its rail coaches (5231 coaches as of May 7) into COVID-19 care centres and quarantine facilities to help the states facing shortages (PIB Delhi, 2020f). It will deploy more than 2,500 doctors, 35,000 paramedic staff, and will produce masks and sanitisers (PIB Delhi, 2020f). Starting from the Labour day (May 1, 2020) "*Shramik Trains*" have been running to help the migrants stranded in different parts of the country to reach home. To increase the accessibility to testing, Karnataka has converted the public-owned buses into testing centres (Arakal, 2020). The Ministry of Civil Aviation is also operating "Lifeline Udan" flights to provide the needy states with important medical resources quickly (PIB Delhi, 2020e).

Use of Information and Communication Technology

Digital technology is also being employed in various ways to tackle the disease. A webpage (mygov.in/covid-19) dedicated to COVID-19 on the government site, a multi-lingual COVID-GYAN portal, WhatsApp, telegram, Facebook, TikTok, youtube channels, broadcasting services and helpline numbers are being operated to educate the people about the scientific and factual aspects of the disease. A mobile application – *Aarogya Setu* has been developed which can help the individuals to assess their risk of getting

the virus through the use of Bluetooth, location tracking, and artificial intelligence (PIB Delhi, 2020a).

Economic Stimulus

A 1.70 lakh crore stimulus package under the Pradhan Mantri Garib Kalyan Scheme, and subsequently a 20 lakh crore stimulus package under '*Atma-Nirbhar Bharat Abhiyan*' have been announced by the government to counter the economic effects of the COVID-19 outbreak and to take care of the poor and affected people (Ahmed, 2020. "At 10% of GDP, Modi's *Atma-Nirbhar Bharat Abhiyan* ranks among biggest in the world," 2020). A donation fund – PM Cares has been set up to raise funds from individuals and organisations (Pmcares). Asian Infrastructure Investment Bank has decided to provide an assistance of US$ 500 million to India for the "COVID-19 Emergency Response and Health Systems Preparedness Project" (PIB Delhi, 2020g). Seeing the battered situation of the even capable health systems of the developed European countries and USA, a much worse situation could have been expected in India had it been not for the timely intervention by the government. Not only the central leadership but, the agencies at the local levels have also been activated. The use of ASHA workers, civil defence volunteers provided a local touch with the people which helped build trust. Thus, shows the importance of governance, clarity and leadership in a time of crisis. In the absence of these, the situation can go out of hand in no matter of time. For instance, in the case of the UK, the coronavirus cases including the deaths rose to a very high number because of the lack of clarity in the top leadership over the approach to be adopted. The sources initially hinted on the government intending to go for the 'herd immunity' and the response of the top brass was lacklustre (Kahn & Dunn, 2020). However, with the passing days, the government had to resort to lockdown to contain the spread of the virus (Penna, 2020). The result of this confusion was the high spread of the virus in the population.

Not just the central government, but many states too employed creative strategies to arrest the coronavirus cases. One such state is Kerala. Kerala's plan to deal with coronavirus is now famously called as the 'Kerala Model' and it has got recognition at the international level too. The model focused on rigorous contract tracing and 'route maps' of the people coming from abroad. It involved the community in identifying and isolating the coronavirus cases. It also deployed counsellors to help the people to handle the stress arising out of coronavirus fear (Biswas, 2020). Punjab, on the other hand, came up with the 'COVA App'. This App allows the people to book their groceries, schedule their movements during the lockdown, and post queries to the administration. The App

also gives information about the coronavirus cases in the vicinity so that people are more aware of the coronavirus situation around them (Pahuja, 2020).

Another model of successful containment of coronavirus cases has been presented by the Bhilwara district of Rajasthan. The alarm was raised when the textile city reported 17 confirmed cases of COVID-19 which included the staff of a private hospital and its patients. The authorities ordered a complete lockdown suspending even the essential services in the second phase of lockdown. Subsequently, an extensive screening exercise of the people was undertaken by a troop of more than 3,000 survey teams trained especially for the purpose. The administration made adequate arrangements for contact tracing, quarantining the patients, monitoring the home-quarantine individuals through Geographical Information System (GIS), and even ensured the home-delivery of the essential goods (Mukherjee, 2020). The district's 'ruthless containment' has now become a model approach for the country. The '*Bhilwara Model*' is an example to stress upon the larger point that it is the good governance along with good public health infrastructure that are the key tools in the fight against the pandemic. Even in the absence of a robust public healthcare system, good governance and strategic actions of the government can still save the day. To bring home the above-stated point, the article analyses the case studies of the coronavirus outbreak in South Korea and Italy and the respective responses in both of them. It will also briefly discuss the situation of the USA to back it up.

South Korea — A Success Model

South Korea may not have won the war but it has definitely won the first battle against the disease by 'flattening the curve' of cases. The East Asian nation reported the first coronavirus case on January 20, 2020. The country has reported 11,050 cases and 262 deaths (World Health Organisation, 2020). The growth of new cases gained pace in February and the peak was reached on February 29, 2020, but has been on the decline since. Seoul's efforts for the effective containment of the disease have received international recognition to the extent that other countries are trying to take lessons from it. It has also become the first country to hold national elections under lockdown conditions (Tiwari, 2020).

Random testing has been one of the main pillars of the country's strategy. The government roped in the private sector by asking pharmaceutical companies to develop testing kits. These diagnostic kits were then made available at private clinics, medical centres, health facilities and Centres for Disease Control throughout the country. Testing facilities were also set up at drive-thru and walk-thru facilities like gas stations (Choi et al., 2020, p. 1). This enabled the officials to conduct extensive testing, identify and map

the infected people. According to the data, more than 46,000 tests were conducted by the end of February and 2,70,000 by March 17, 2020. Unlike this, one of the most powerful countries of the world, the USA followed a different approach. Despite increasing numbers, the USA did not ramp up the testing. Resultantly, many cases went off the radar which further spread the disease and left it with a high number of cases (Hasell, 2020).

Another novel feature of South Korea's approach is the innovative use of Information and Communication Technology for tracing and mapping the infected people, collecting and disseminating information and providing telemedicine. The authorities are using Geographic Positioning System (GPS) data, banking transactions records, surveillance cameras, and travel history to trace the past movement of the infected people and create a database consisting of their travel records. This provides information about potential patients. Apart from aggressive surveillance, the government is also taking many steps to disseminate this information to the people. Officials are using websites, applications like 'Corona 100 m', 'Coronavirus 119' and texting service to provide people information about the number of cases in the country and regions, testing status, and telemedicine services (Hur et al., 2020, p. 16).

The trend of new cases saw a drastic decline due to a multitude of actions. South Korea has set an example of governance and leadership in a time of crisis. It showed the world the results of good strategies and thus bring home the central argument of the paper. The case study of South Korea represents a stark contrast to the events in Italy concerning COVID-19 pandemic.

Italy — A Failure

The growing number of COVID-19 cases, rising death toll, collapsing healthcare systems and a nation-wide lockdown – this has been the picture of Italy for the past few months differing strikingly than that of South Korea. Italy has reported 2,24,760 confirmed cases and 31,763 associated deaths. Epidemics like COVID-19 grow in a non-linear fashion – they start slow but take no time to grow to exponential scales. This mandates that preventive measures be taken at the earliest and not when it is too late. It appears that Italy lost the war in the very beginning. The first case was reported on January 31, 2020. The immediate response of the government was to stop all the incoming and outgoing flights with China; which was necessary but not enough to prevent the spread of the virus inside the country's boundaries. In fact, the virus had already spread by then. The situation worsened because of the complacent attitude and reluctance of the policymakers to take strong decisions early when the virus had not taken hold yet. Even when the cases had started emerging

in the southern Lombardy region, the politicians in Milan (also known as the financial capital of Italy) were at the forefront of a social campaign with the message – 'Milan does not stop' (Giugliano, 2020). The failure on the part of the government to warn the people of the gravity of the situation created a false sense of security among the citizens who continued to go around their life as usual. This 'playing down' attitude forced the country to take the most stringent measures in the European region eventually, even though no concrete benefits resulted out of them (Ruiu, 2020).

From then onwards, what the government has been doing can be simply called an act catching-up with the virus. It dealt with the pandemic by taking reactionary decisions, rather than adopting a systematic approach. It continued to issue decrees restricting the movement of the people gradually and only in the areas which reported the high number of cases at the time. This selective approach of applying restrictions proved counter-effective since it only exacerbated the spread of the virus. For instance, when northern Italy was placed under restrictions huge swaths of the population moved to the southern part thus spreading the virus unknowingly. It was only on March 10, 2020, that the whole of the country was declared a red zone and a nationwide lockdown was put in place (Khanna et al., 2020).

A centralised chain of command could also have been helpful. Italy's decentralised approach to fighting the virus led to a situation where some areas were put under stringent restrictions while the others remained unrestricted (Khanna et al., 2020). While Codogno's mayor imposed several restrictions after a few cases were reported, the mayors of neighbouring regions did not take any measures (Pisano et al., 2020). Similarly, the lack of coordination also became visible when the draft of the decree ordering the lockdown of Lombardy region was published in a leading newspaper before it was issued by Prime Minister. The central government should have utilised the 'substitution clause' codified in the article 120 of the Italian Constitution (Constitution of the Italian Republic) through which it could have taken over the control of the administration of the regional and municipal governments and ensured that the central and local governments take the most effective measures through enhanced cooperation. Despite having a good healthcare system, it broke down. All this could have been avoided with better planning and governance.

South Korea and Italy took different approaches to combat the virus and consequently their results are also different. South Korea's success was ensured by a multitude of actions it took simultaneously and in an orderly manner – extensive testing, rigorous contact tracing, community mapping and information dissemination through the use of digital technology, proper implementation of restrictions and effective treatment

of the infected individuals. On the other hand, Italy failed because it did not take the appropriate steps at the appropriate time. The policymakers all over the world should take lessons from both – the former's success and the latter's failure.

COVID-19 is not only affecting our lives in the present but will also have some major implications for the future. The fallouts of the biological disaster are visible in all aspects of human existence be it on the economy, social and cultural sphere, the relation dynamics between the people and the governments, with the health systems bearing the brunt. In the short term the health facilities and workers, which are at the forefront of our defence against the pandemic, have been overstretched to meet the continuously increasing demands. In the long term, India will see some major impacts on the healthcare scenario which have been discussed in the following section.

Future Implications for India

The biological emergency has brought to the forth the shortcomings in our healthcare infrastructure and policy. The healthcare system is in a dire state of disrepair with hospitals lacking basic supplies and medicines, and with unreliable access to clean water, the maintenance of basic sanitation and electrical shortages plaguing the country. The first step should be providing a fiscal stimulus to the health sector in the form of increased government spending as a part of GDP. This should translate into increased per capita public expenditure, reduced Out of Pocket expenditure, better infrastructure and more manpower. On the policy front, the implementation of the guidelines for the management of Biological disasters laid out in the National Disaster Management Plan should receive priority. Inputs can be taken from the first-hand experience of dealing with such a situation which then should be incorporated into the policy framework to make it more practical and effective. This will ensure enough capacity to deal with the emergency situations in the future simultaneously without needing to divert many resources from the usual affairs. As an increasing proportion of the limited resources and energy is being diverted to COVID-19, treatment for other patients has been sidelined which may lead to increase in complications, mortality and burden of diseases in the future. New and innovative ways of providing medical services like telemedicine (use of information technology and related services to provide healthcare services virtually) need to be promoted. Telemedicine can be used as a medium to make healthcare affordable and accessible by catering to more patients and bridging the long physical distances between the doctors and patients. It can be used to conduct training sessions, surgeries and provide other assistance.

On the governance front too, the handling of COVID-19 pandemic gives a lot of lessons to learn. For instance, the migrant labour population issue in India could have been avoided with little more planning. Owing to the lockdown and the unavailability of transport services, many of these workers started their return journey on foot leading to a humanitarian crisis. Apart from starvation, livelihood loss and repression, there have been several reports of the migrants being killed in different accidents (Akhef, 2020). The lack of understanding of the gravity of their problems made them suffer the wrath of the disease disproportionately. Instead of making provisions for their movement weeks after the lockdown, a time-bound plan should have been prepared in advance which could have ensured that these people do not go through the anguish. Shielding the poor, who are one of the most vulnerable sections of the society, is a hallmark of good governance. Anticipating and addressing different concerns of people, including the most marginalised sections of the society, is one of the most important lessons for India to learn from this crisis on the governance front.

The pandemic will also bring behavioural changes by educating the people about social distancing and hygienic practices. Awareness campaigns must be continued with the same zeal so that the behavioural changes become lifestyle changes which will help India in improving the health of its people. Experience of the East Asian nations like Japan, Vietnam, and South Korea can be useful for India in this case. People of these countries have imbibed several lifestyle changes post SARS epidemic of 2003 (Bhushan, 2020). These changes ranging from using face coverings in public, taking precautionary measure by individuals when suffering from cold or cough to better sanitation routines have helped the countries to fight off the coronavirus better.

Developing a strategy to involve the private sector players should be another area of work. Efforts should be made to rope in the private healthcare facilities to develop a collaborative, efficient and coordinated response strategy and healthcare structure. Agra and Bangalore authorities developing teleconsultation facilities for citizens in collaboration with private firms is just the example (Tiwari, 2020). The pandemic has also opened a window of opportunity for India to become the manufacturing hub for the world. India has already made great advances in the production of medical supplies during the crisis. It has gone from complete import of the PPE (Personal Protective Kits) and N-95 masks to the production of more than 2 lakh kits and masks daily (MOHFW, 2020). The ongoing trade war with the USA, increasing labour costs and the pandemic has made the global manufacturers wary of China's suitability for the location of their production facilities (Kannan, 2020). Many Multinational Companies have already hinted at choosing India for the purpose (Ghosh, 2020). Japan has announced an

assistance stimulus package to help its companies to relocate (Kuo, 2020). India should grab this opportunity to become the global hub for the production of goods including pharmaceutical drugs, medical equipments which will also help in making it self-sufficient in terms of the healthcare infrastructure.

The coronavirus outbreak has indeed brought miseries for the world but it is neither the first nor the last to attack the world. We cannot avoid the unavoidable but we can certainly be prepared for it, better every time. It is for us to learn the lessons and seize the various opportunities given by it to move towards the goals of growth and development of all.

Conclusion

The threat of coronavirus to the world is being considered even greater than World War II. But unlike the previous wars, it is not among humans rather it is against them. Though the attackers are just tiny microcosms, the damages that they have inflicted are huge. The stuttering world economy, collapsing healthcare systems, rising unemployment, hunger and deprivations are some of the fallouts of the pandemic. Robust health infrastructure is the first step towards winning the war against coronavirus. It is very crucial to have a developed and affordable public healthcare system which can cater to the needs of people including the marginalised sections. But unfortunately, not every country has this. Further, even if a country has a robust healthcare system, it is not enough unless coupled by strategic actions of the government in the times of crisis. Possessing a weapon is useless unless one knows when and how to use it. Similarly, if the government lacks clarity, decisiveness, foresightedness and strategies, strong public healthcare systems cannot do much. Hence, the importance of governance. On the other hand, though good decision making and governance can make up for gaps in healthcare systems to an extent, it alone too cannot do much. Knowing the technique to use the weapon is useless unless one possesses that weapon too. Hence, the importance of robust healthcare infrastructure.

India does not possess a resourceful public healthcare system. It has tried to make up for its shortcomings through a multi-pronged strategy. But, it is imperative to strengthen our healthcare system for the future. We should continue building our capabilities. What we need is a well-funded health sector built on the adequate number of trained medical staff, professionals, and medical resources, equitably distributed over spatial scales making it affordable and inclusive for all in its nature. This holds not just for India but for the whole world. Coronavirus is indeed a grave threat. But the night is darkest just before the dawn. Both people and the government have to come together. While the

government is doing its work, people must continue to follow the advisories related to social distancing, maintaining hygiene and movement restrictions. If the world stands together, the dawn is not far away.

Acknlowdegements

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Note

1. Scientists are not sure of the reasons behind the low number of coronavirus cases in the Continent. The experts point it to the multiple factors like poor testing, climate, strong immunity of the people, etc.

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