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Editorial

Swift action: scrutinizing emergency measures from the COVID-19 pandemic

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This manuscript evaluates India's emergency measures during the COVID-19 pandemic. Key actions including a nationwide lockdown to curb virus spread and strengthen healthcare infrastructure are thoroughly studied and its effects analysed. Healthcare responses included scaling up testing, medical supplies, and using the "Aarogya Setu" app for contact tracing are briefly looked at to assess effectiveness of the policies implemented by the government. The largest vaccination drive in the world which covered the vast population was no mean feat and worth applauding. Challenges included supply chain disruptions, healthcare disparities, and socio-economic inequalities. Comparisons with global practices highlighted areas for improvement. The evaluation underscores the importance of swift, adaptable, and inclusive policy measures, offering valuable lessons for future pandemic preparedness. The article aims to outline the various measures undertaken by the government and determine the effectiveness of them in controlling the outbreak of COVID-19 in the country.

The COVID-19 pandemic was an experience for people across the globe. Very few people, if any, had trained or planned for such an event to occur at such a global scale. This article aims to enlist the various measures undertaken by the policy makers in the country and to judge the effectiveness of the various policies in managing the seriousness of the outbreak.

It was on the 31 December 2019 that China informed the World Health Organization (WHO) about cases of pneumonia with unknown aetiology detected in the Wuhan city, Hubei province of China.[1] By 30 January 2020, the WHO declared COVID-19 as a Public Health Emergency of International Concern (PHIEC).[1] As of 17 February 2020, 25 other countries apart from China had been affected with the COVID-19 outbreak.[2]

India's first COVID-19 case was detected in the southern state of Kerala on the 27 January 2020.[1] However, it was only in March 2020 that the WHO declared COVID-19 as a global pandemic when there had been close to 100,000 confirmed cases of the virus across the world.

As one of the most populated countries began to come to terms with the virus engulfing the world, there were several swift decisions implemented by the government to control the pandemic and manage the patients affected by the virus. Some of the emergency measures are included in the following sub-sections.

NATIONWIDE LOCKDOWNS

India decided to implement a nation-wide lockdown of non-essential services and personnel in order to prevent the spread of the virus. Under instructions from the Prime minister, the nation entered into a fourteen-hour voluntary curfew on the 22 March to study the effects that such a socio-economic breakdown would occur to the citizens.

On the evening of 24 March 2020, the Government of India ordered a nationwide lockdown for 21 days, limiting the movement close to 1.4 billion citizens to prevent the spread of the disease. This was announced when the confirmed cases in the country were close to 500.[3] Observers stated that this lockdown slowed the growth rate of COVID-19 cases by 06 April to a rate of doubling every six days and by 18 April, to a rate of doubling every eight days.[4,5]

After the end of the first lockdown, the Prime Minister, upon recommendations by various state Governors and Chief Ministers extended the nationwide lockdown by two weeks initially and then again by two weeks which eventually extended it till the 17 May and then again extended till the 31 May. By this time, the nation was divided into green, red and orange zones based on the severity of spread seen in particular regions and lockdown relaxations were implemented accordingly.

Eventually the lockdown was gradually lifted in the designated green zones but was extended for another month in the so called containment zones where there was evidence of widespread transmission of the virus.

In 2021, due to the largest wave of infection seen in the country, several state governments announced state wide lockdowns until April, 2021 to contain the spread of the virus.

During the initial phases of the lockdown, there was fear among the citizens about the economic effects that a nationwide lockdown would have, especially among the poor and marginalized sections of the society. Upon the announcement of the first lockdown in March of 2020, a mass movement of people across the country was described as the largest since the partition of India in 1947.[6] This was because all migrant workers rushed to return to their hometowns and villages due to the shutdown of factories and services. With no work or money, thousands of migrant workers were seen walking or bicycling hundreds of kilometres to go back to their native villages.[7] Many were arrested for violating the lockdown and some died of exhaustion or in accidents on the roads.[8]

People from across the country were encouraged to practice social distancing when in public and even in their homes. They were urged to maintain at least 2.5 meters' distance between each other whenever possible. This was observed as a non-pharmaceutical intervention to slow down the spread of infectious diseases in the communities.[9]

EMERGENCY HEALTHCARE MEASURES

The pandemic brought upon an unprecedented need for healthcare facilities in the country of India. The rapid outbreak of the virus meant most of the country was unprepared for dealing with the management of cases, or even isolation or quarantine of suspected cases and people who have been in contact with confirmed cases. The dearth of resources was obvious but it was soon overcome by the sheer hard work of the healthcare professionals and the brilliance of the healthcare management systems in place. The government from the national to sub-district level swung into action activating the existing systems, developing new systems, absorbing the rapidly changing international guidelines, tapping existing networks and resources.

Emergency hospitals were set up in concert halls and auditoriums to make up for the shortage of beds in regular hospitals. Example, the Nesco ground in Goregaon, Mumbai which is usually known for conducting large exhibitions and concerts, was modified into an 1100 bed emergency care centre with facilities for oxygen supplementation and COVID-19 testing facilities.

For the isolation of asymptomatic patients, the government took over various hotels and guest houses and converted them into temporary medical centres complete with on-call doctors and health care professionals along with emergency medical equipment in case some patient develops symptoms while being isolated.

Certain government schools and buildings were converted into quarantine facilities for close contacts of confirmed cases that could not be quarantined at their homes either due to over-crowding or due to the presence of people with comorbidities that happen to be at a higher risk of developing a severe infection.

Romp up of the production and distribution of personal protective equipment (PPE) to make sure all health care professionals can adequately provide care to the patients. India, who before the lockdown almost completely relied on international imports for PPE, managed to become a PPE giant owing to "Operation PPE Coverall" launched by Ministry of Textiles (MoT) in association with the Ministry of Health and Family Welfare (MoHFW). The concerted efforts ensured that any gaps in the supply chain were plugged and health care providers would not suffer from a dearth of resources.[10]

The Municipal Corporation of Greater Mumbai (MCGM) decentralised its central war room structure and created 24 peripheral control rooms in all the 24 wards for localised COVID-19 response. Patient admissions were mandated only through the war rooms, which enabled equitable access to hospital beds as per the availability in civic hospitals, dedicated COVID health centres (DCHCs), and private hospitals. This prevented overwhelming of the health facilities and optimised utilisation of critical medical supplies.[11] These war rooms were staffed with medical students who, through a systematically designed dashboard of health facilities across the city were able to help patients navigate through the healthcare system with ease.

Contact tracing to identify people at risk of contracting the COVID-19 virus was made very efficient with the government introducing the Aarogya Setu App. It is a tracking app which uses the smartphone's GPS and Bluetooth features to track COVID-19 cases. With Bluetooth, it tries to determine the risk if one has been near (within six feet of) a COVID-19-infected person, by scanning through a database of known cases across India. Using location information, it determines whether the location one is in belongs to one of the areas of localized viral spread based on the data available.[12]

Eventually, when the lockdown measures were relaxed, the Aarogya setu mobile app was mandatory to gain entry into public places like malls and theatres which help prevent the spread of the virus and also ensured that quarantine and isolation measures were being followed.

The Indian government rolled out the world's largest Covid-10 vaccination drive which began in the month of January, 2021. There were close to 3000 vaccination centres set up across all states of the country. Among the first to receive the vaccine were close to the ten million health care workers who were at high risk of infection due to continuous exposure.

Vaccination was carried out on the basis of an appointment that needed to be secured on another mobile application called the COWIN app. This application also issued certificates for each dose of the vaccine and these certificates eventually were made mandatory for admission into public places like malls, theatres and parks. India administered the Oxford-AstraZeneca vaccine manufactured locally by Serum Institute of India under the name Covishield and another vaccine produced locally by Bharat Biotech under the brand name Covaxin.

As of March 2022, India had administered close to 2.2 billion vaccine doses overall including a first dose, second dose and another precautionary booster dose.[13,14]

ECONOMIC RELIEF MEASURES

To provide relief from the pandemic and the sanctions imposed as a result of it, the government announced a $22.5 billion stimulus package aiming to provide food security measure to poor households through direct cash transfers, free cereal, and cooking gas for three months.[15] There was also a central health insurance scheme announced for all health professionals.

The Indian Railways ran special services to transport essential goods and even converted some of its coaches into isolation wards for patients with COVID-19.[16,17]

The Reserve Bank of India, in order to ease the impact of COVID-19 on the citizens, announced a plethora of measures including: repo rate reduced by 75 bps or 0.75% to 4.4 from the earlier 5.15; loan moratoriums could be given to borrowers of 3 months on term loans, this helped people whose income was affected by either the pandemic or the sanctions imposed as a result of the pandemic; and lenders were allowed lending to recalculate drawing power by reducing margins and/or by reassuring the working capital cycle for the borrowers.[18]

Social support initiatives

A large number for Non-Governmental Organizations (NGOs) came forward to provide relief to the marginalized sections of society. Their efforts ranged from providing food packages, grocery and cooking gas for the poor to arranging ambulance services for patients when there was an acute shortage of established ambulances. There have been recorded instances when people drove absolute strangers to hospitals or COVID-19 establishments in their personal vehicles. The Delhi government commissioned auto rickshaws (3-wheeler public vehicles) into ferrying COVID-19 patients.[19]

Technology began to play an important role in the daily lives of citizens of the country as we witnessed a shift in the medium of instruction in schools and colleges from the usually acceptable physical medium to a much widely accessible online medium. Lectures were held online and telemedicine became came to the forefront. India's response to the COVID-19 pandemic demonstrated the critical importance of swift and decisive action in the face of a global health crisis. The nationwide lockdown, healthcare infrastructure enhancement, extensive testing, and vaccination drives were pivotal in managing the initial spread of the virus. Despite significant challenges such as economic hardship, supply chain disruptions, and healthcare disparities, the measures taken highlighted the resilience and adaptability of India's public health and governance systems.

The direct outcomes of the various lockdown phases were that the mortality rate of COVID-19 and its cases were significantly controlled. However, there have been various indirect effects of these phases as such lockdowns on the mass level have not been implemented in the world for a long time. Apart from medical research, various scientists around the world have also focused on finding the environmental effects of COVID-19 lockdowns and inferred that all the studies had reported a trend of decrease in the level of concentrations of PM10, PM2.5, CO, NO, NO2, NH3, NOx, SO2 during the lockdown period.[20]

The economic constraints of the lockdown forced a staggered lockdown exit strategy, resulting in a spike in COVID-19 cases. This factor, coupled with low spending on health as a percentage of gross domestic product (GDP), created mayhem because of inadequate numbers of hospital beds and ventilators and a lack of medical personnel, especially in the public health sector. Nevertheless, technological advances, supported by a strong research base, helped contain the damage resulting from the pandemic.[21]

Multi-pronged strategies such as the decentralisation of the response, efficient resource management, leveraging of technology for rapid information dissemination and real-time monitoring enabled the city administration to stem the surge. This prevented the abuse of resources and ensured equitable distribution of health systems to patients across all sections of society.

CONCLUSION

The pandemic imparted critical lessons about the importance of global preparedness and swift, decisive

action along with the need of resilient healthcare systems. We have learned that early detection, widespread testing and clear public communication are vital in managing such crises. The pandemic also highlighted significant gaps in healthcare access and the socio-economic disparities that exacerbate public health challenges. As new viruses and structural variants emerge, it is important to find solutions to streamline medical care in hospitals, which includes the expansion of digital network medicine (i.e., telemedicine and mobile health apps) for patients to continue to receive appropriate care without risking exposure to contagions. Moving forward, it is essential to invest in robust healthcare infrastructure, develop comprehensive pandemic preparedness plans, and ensure equitable access to medical resources. Strengthening international cooperation and fostering innovation in healthcare technology will be crucial to better managing future pandemics. By learning from the past and committing to these improvements, we can build a more resilient and prepared global community.

REFERENCES

1. Andrews MA, Areekal B, Rajesh KR, Krishnan J, Suryakala R, Krishnan B, et al. First confirmed case of COVID-19 infection in India: A case report. Indian J Med Res. 2020;151(5):490-2.
2. Moore S. History of COVID-19. Available at: https://www.news-medical.net/health/History-of-COVID-19.aspx. Accessed on 12 May 2024.
3. Gettleman J, Schultz K. Modi Orders 3-Week Total Lockdown for All 1.3 Billion Indians. The New York Times. 2020. Available at: https://www.nytimes.com/2020/03/24/world/asia/india-coronavirus-lockdown.html. Accessed on 12 May 2024.
4. Ramesh S, Basu M. R0 data shows India's coronavirus infection rate has slowed gives lockdown a thumbs up. The Print. 2020. Available at: https://theprint.in/science/r0-data-shows-indias-coronavirus-infection-rate-has-slowed-gives-lockdown-a-thumbs-up/399734/. Accessed on 12 May 2024.
5. Gupta S. Covid hasn't gone viral in India yet, but some in the world & at home can't accept the truth. The Print. 2020. Available at: https://theprint.in/national-interest/covid-hasnt-gone-viral-in-india-yet-but-some-in-the-world-at-home-cant-accept-the-truth/404178/. Accessed on 12 May 2024.
6. The Guardian. India racked by greatest exodus since partition due to coronavirus. The Guardian. 2020. Available at: https://www.theguardian.com/world/2020/mar/22/india-observes-a-peoples-curfew-to-halt-spread-of-coronavirus. Accessed on 12 May 2024.
7. Abi-Habib M, Yasir S. India's Coronavirus Lockdown Leaves Vast Numbers Stranded and Hungry. The New York Times. 2020. Available at: https://www.nytimes.com/2020/03/29/world/asia/coronavirus-india-migrants.html. Accessed on 12 May 2024.
8. Warsi Z. 42 Migrant Workers Died in Road Accidents While Trying to Return Home during Lockdown: Report. News18. 2020. Available at: https://www.nytimes.com/2020/03/29/world/asia/coronavirus-india-migrants.html. Accessed on 12 May 2024.
9. Mishra M, Majumdar P. Social Distancing During COVID_19: Will it Change the Indian Society? J Health Management. 2022;2.
10. Economic Times Online. How India, which did not manufacture personal protective equipment, became a PPE giant. 2021. Available at: https://economictimes.indiatimes.com/industry/miscellaneous/how-india-which-did-not-manufacture-personal-protective-equipment-became-a-ppe-giant/ppe-manufacturing/slideshow/81257297.cms?from=mdr. Accessed on 12 May 2024.
11. World Health Organization. Decentralisation and planning helped Mumbai fight the second COVID-19 surge. 2021. Available at: https://www.who.int/india/news/feature-stories/detail/decentralisation-and-planning-helped-mumbai-fight-the-second-covid-19-surge. Accessed on 12 May 2024.
12. Govt launches 'Aarogya Setu', a coronavirus tracker app: All you need to know. Livemint. 2020. Available at: https://www.livemint.com/technology/apps/govt-launches-aarogya-setu-a-coronavirus-tracker-app-all-you-need-to-know-11585821224138.html. Accessed on 12 May 2024.
13. Ministry of Health and Family Welfare. Vaccination state wise. 2020. Available at: https://mohfw.gov. in/. Accessed on 12 May 2024.
14. Vaccinate India. Vaccination Statistics. 2022. Available at: https://vaccinate-india.in/blog/6. Accessed on 12 May 2024.
15. Choudhury SR. India announces $22.5 billion stimulus package to help those affected by the lockdown. CNBC. 2020. Available at: https://www.cnbc.com/2020/03/26/coronavirus-india-needs-a-support-package-larger-than-20-billion-dollars.html. Accessed on 12 May 2024.
16. Nandi S. Covid-19: Railways resumes parcel trains to transport essential goods. Livemint. 2020. Available at: https://www.livemint.com/news/india/ covid-19-railways-resumes-parcel-trains-to-transport-essential-goods-11585504148683.html. Accessed on 12 May 2024.
17. Firstpost. Coronavirus Outbreak: Indian Railways converts non-AC train coach into isolation ward on trial basis. 2020. Available at: https://www.firstpost.com/india/coronavirus-outbreak-indian-railways-converts-non-ac-train-coach-into-isolation-ward-on-trial-basis-8201221.html. Accessed on 12 May 2024.
18. Covid-19 Regulatory Package. Reserve Bank of India. 2020. Available at: https://rbi.org.in/Scripts/NotificationUser.aspx?Id=11902. Accessed on 12 May 2024.

19. Gill P. In India, three-wheelers called 'autos' are becoming ambulances as the health infrastructure crumbles. Business Insider. Available at: https://www.businessinsider.in/india/news/indias-ambulance-shortage-has-led-to-three-wheelers-transporting-covid-19-patients-for-free/slidelist/82430121.cms. Accessed on 12 May 2024.
20. Soni P. Effects of COVID-19 lockdown phases in India: an atmospheric perspective. Environ Dev Sustain. 2021;23(8):12044-55.
21. Goel I, Sharma S, Kashiramka S. Effects of the COVID-19 pandemic in India: An analysis of policy and technological interventions. Health Policy Technol. 2021;10(1):151-64.
22. Filip R, Gheorghita Puscaselu R, Anchidin-Norocel L, Dimian M, Savage WK. Global Challenges to Public Health Care Systems during the COVID-19 Pandemic: A Review of Pandemic Measures and Problems. J Pers Med. 2022;12(8):1295.

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