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CHAPTER

COVID-19 pandemic in India

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India, officially the Republic of India is a country in South Asia. It is the second-most populous country, the seventh-largest country by land area, and the most populous democracy in the world.

Presently, India is ranking fourth in total coronavirus disease 2019 (COVID-19) patients so far detected in the world. Present mortality rate for India is around 3%.[1] We have trillion minds to tackle problem, but in case of COVID-19 pandemic where all developed countries had given up, we needed a tailor-made approach by keeping in mind our issues about the infrastructure in India (see Table 1). The tragedy is immediate, real, epic, and unfolding before our eyes. The COVID-19 tragedy is described as the wreckage of a train that has been careening down the track for years. European countries were already burning in this pandemic. To add to this, public health expenditure in India is just above 1% of gross domestic product (GDP) (4.8% of GDP if private health sector is considered).[2,3]

The warning signs of pandemic arrival in India were knocking our health-care system since the first few cases surfaced in Kerala (January 30, 2020).[4] All cases in Kerala had a history of travel to Wuhan. Screening at all airports of all the international passengers started on March 6. Indian Council of Medical Research didn't-test people with COVID-19 symptoms without a recent travel history and a known contact that might have transmitted them the virus, up until March 20. The government's official line for the public as late as March 13 was that the coronavirus was not a health emergency.

Early signs of community spread were seen on March 10, 2020. On March 13 and 14, sequence of Covid-19-related events in India depicted in Table 2. India banned the entry of international travelers, visas were suspended for travel to India. All international travelers entering India were asked to self-quarantine for 14 days. India was one of the first countries to ban flights and ban travelers from China. Till March 15, 2020, Reverse transcription polymerase chain reaction tests were limited only to those who are symptomatic and those who gave abroad traveling history. Social distancing as a method of keeping the virus at bay was first officially flagged by the Prime Minister Narendra Modi when he spoke to the nation on March 19 in order to call for a 1-day "Janata Curfew" on March 22. The first national containment measure in the form of a nationwide lockdown was only introduced on March 25,

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Table 1 Issues in India.

Population	1.3 billion
Literacy level	The overall literacy rate in Urban India is 79.5%
Public health expenditure	1% of GDP
Global Health Security Index rank	57 out of 195 countries in 2019
Health-care access rank	149
Health-care infrastructure adequacy rank	124
Funds allocated to the defense sector	Five times the fund allocated to health
Respiratory systems	40,000
Isolation bed	1 per 84,000 people
Doctors	1 per 11,600 patients
Hospital bed	1 per 1826 Indians

Table 2 Timeline of COVID-19 pandemic in India.

December 31, 2019	Hubei province China SARS-COVID-19
January 30	First confirmed case in India in Kerala
February 27	Final airlift from Wuhan, China (total of 759 Indians and 43 foreign nationals) and airlift from Japan (119 Indians and 5 foreign nationals)
March 6	International passenger screenings at airports
March 10 and 11	Airlift of Indians from Iran and Italy
March 12	First death secondary to COVID-19
March 13	Suspension of nonessential traveler visas
March 15	100 confirmed cases
March 22	A 1-day Janata Curfew and passenger air travel suspended till further notice
March 25	Nationwide lockdown till April 14
March 28–31	Confirmed 1 lakh cases, recovered 1 thousand cases, Cluster cases: Tablighi Jamaat
April 5	Lighted diyas
April 14	Nationwide lockdown extended till May 3
May 3	Nationwide lockdown further extended till May 31
June 1	Slow unlocking

3 months after the first COVID-19 case was reported and 2 months after the World Health Organization declared the outbreak a public health emergency of international concern. The Epidemic Disease Act[5] was implemented in entire country which allowed officials to quarantine suspected cases and close down public places. An intensive campaign was initiated, and guidelines were developed for personal hygiene, surveillance, contact tracing, quarantine, diagnosis, laboratory tests, and the management of COVID-19. All health-care facilities were asked to stop regular

outpatient and inpatient services and to continue with only emergency services. Doctors were encouraged to use telemedicine services. The Aarogya Setu app was also launched to connect essential health services with people of India to fight against COVID-19.[6] This app will inform the users of the risk, best practice, and relevant advisories pertaining to the containment of COVID-19. "Lockdown phase" was utilized by individual states to covert amenities like hotels, colleges, railway train coaches, etc. into quarantine facilities and large public places like stadiums/trade centers were converted into isolation wards to handle an anticipated increased number of cases. Some of the states converted existing hospitals to exclusively handle COVID-19 patients. Personal protective equipment such as ventilators, face shields, and face masks production was put on priority. "Atmanirbhar program" encouraged the local experts to increase the production of necessary amenities. Time had come to prove our indigenous talent. A control room was set up at the headquarters of the General Director of Health Service to address the COVID-19 related queries. The countries of the South Asian Association for Regional Cooperation (SAARC) were invited to tackle this pandemic, and 10 million US dollars were allocated for SAARC countries.

Lockdown was extended up to May 3 and further up to May 17 and then up to May 31. Thus it was the longest lockdown (75 days) that any country has imposed in the world. Cases continue to rise even in lockdown phase, thus making us realize about community spread and the third stage of pandemic. See Fig. 1.

Definitely, lockdown has given Indians a greater chance of being alive than citizens of United Kingdom, Italy, Spain, or United States. Indian death rate in covid is 3% as compared to 5%–10% in the above-mentioned[7] countries. It gave us time for preparedness and identify the weakness and strength of this virus. The peak of pandemic in India was postponed from March–April to June, and this has enabled us to save thousands of lives.

Other measures

(1) Task force was created both at the state level and the city level. The task force updated their guidelines frequently as per recent development in treatment and local problems.

(2) Lockdown period was used to screen and identify as many cases as we can; isolate them, contact tracing, and quarantine them.

(3) Screening high-risk areas with the help of Anganwadi Sevikas or primary health workers. Without enough test kits, the 1.3-billion-person country used a gigantic surveillance network to trace and quarantine infected people.

(4) Increase the capacity of rapid testing to identify cases and isolate them. Home service of COVID-19 India's test positivity rate was 2.2% on March 22 it reached 4.7% on April 14.[8]

(5) Concentrating on production and thus increasing availability of drugs: hydroxychloroquine, tocilizumab, ivermectin, and remdesivir.

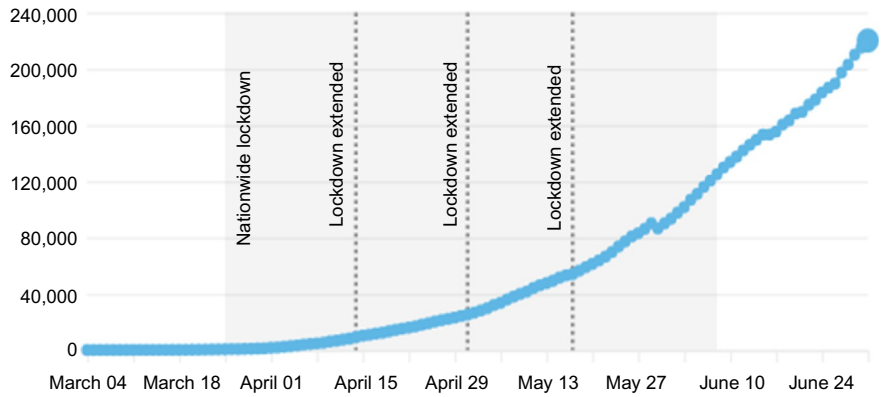

FIG. 1

Lockdown and COVID-19 active cases in India up to June 24.

Mass prophylaxis was also done for health-care workers and high-risk areas.

(6) Local classification of zone was done to segregate high-risk areas thereby preventing the spread of infection.

(7) Develop corona care facilities—COVID care center, Dedicated COVID Health Center, and Dedicated COVID Hospital.

(8) In view of increasing load of cases, home quarantine guidelines were drafted and approved by the task force.

(9) Free distribution of food grains to needy or daily wage workers. Encouraging local associations to supply food packages.

Pitfalls of our approach

This lockdown announcement was not preceded by any official planning, leading to the large-scale movement of the urban poor as they headed for their homes in rural areas. Migrants probably knew that they could be carrying the virus with them and infect their dear ones, but they desperately needed a shred of familiarity, shelter and dignity, as well as food. Some described our official strategy was an example of "too little, too late" as hidden infections were already spreading in all parts of the country, followed then by "too much, too soon" and not enough planning.

Long lockdown might be more devastating in India as it could result in economic deflection, increase hunger and poverty, and reduce public resilience to handle infection. A possibility of another peak of COVID-19 cases may occur once lockdown is lifted. A staggered unlocking of lockdown should be planned.

Future plan

Forecasting future COVID-19 pandemic is likely to take several months; social distancing and the use of masks have become important public habit. Increasing testing capacity and precautionary self-isolation of contacts is critical in reducing number of cases. Unlocking of lockdown should be done slow. Improving health-care facilities and pandemic laws to tackle future pandemic.[9] Improving telemedicine facilities, which play vital role in home quarantine facilities.[9,10] To carry fast-track research on vaccines and antibody testing for herd immunity. In any post-pandemic world, whether it is US-centric or China-centric, there is no scenario in which India, a universe in itself, and home to one-sixth of humanity, will not occupy a place. It is up to citizens: Will we emerge as part of the problem or as part of the solution? Will we emerge weaker or stronger as a nation? The pandemic has brought us to an inflection point. How we deal with it will determine our place in the future world order.

Conclusion

Pandemics have forced humans to break with the past and imagine their world anew. COVID-19 pandemic is portal, a gateway between one world and the next. We can only hope that the dark cloud of the virus sails away with the present implementation of laws and restrictions on the public. The health-care system and future proof pandemic laws ought to be given priority and must be streamlined to ensure the availability of immediate assistance even in the remotest corners of the country. Ultimately, the individual need to strive to extricate our country from this situation as advised by Krishna, "Uddharet Atmanatmanam—a person has to lift himself up; a man is his own best friend as also enemy." We as individuals should like Arjuna proclaimed "Nashto Moha—my illusion is gone." And we should stand together, do our duties, and win this "pandemic of COVID-19"

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