

COVID-19 AND LOCKDOWN MEASURES IN INDIA

*Kamlesh Garg**, *Aarushi Mathur***
*Surinder Kumar****, *Ruchika*****

ABSTRACT

The coronavirus (COVID-19) pandemic led to an unhealthy situation across the world. In 2020, the Government of India declared a national lockdown while the pandemic was in mild phase, whereas in 2021 COVID-19 was more stringent and decisions were taken by the State Governments. To prevent the pandemic, Governments started to apply bans under several social restrictions, whereas many lockdown policies were implemented by other nations to minimize the spread of this disease and bring it under control. Lockdown included isolation at homes, travel restrictions and termination of public events. These lockdowns were implemented in varying degrees and at different times across India, along with the safety protocols like maintaining social distancing, and use of proper hygiene, use of masks and so forth.

Keywords: Coronavirus, fatality rate, lockdown, pandemic, SARS-CoV-2, WHO.

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is a contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) with an incubation period of 1-14 days. Most of the people suffered with common mild symptoms like fever, cough, fatigue, loss of smell and taste but many others faced breathing difficulties, acute respiratory distress syndrome, multi-organ failure and death. Covid-19 is said to be mainly transmitted by droplet infection.^[1] The benchmark for its diagnosis is real-time reverse transcription polymerase chain reaction (RT-PCR) from a nasopharyngeal swab. Other test for diagnosis is Rapid antigen test (RAT) which is frequently used for mass screening of the disease.^[2] The current treatment includes

* **Kamlesh Garg**, M.D., Department of Pharmacology, Vardhaman Mahavir Medical College and Safdarjung Hospital, New Delhi, Delhi, India

** **Aarushi Mathur**, M.A., Department of Pharmacology, Vardhaman Mahavir Medical College and Safdarjung Hospital, New Delhi, Delhi, India

*** **Surinder Kumar**, M.D., Department of Emergency & Accident services, Vardhaman Mahavir Medical College and Safdarjung Hospital, New Delhi, Delhi, India

**** **Ruchika**, M.D., Department of Pharmacology, Dr. Harvansh Singh Judge institute of dental sciences and hospital, Sector 25, Panjab University, Chandigarh.

general supportive care and symptomatic treatment. Many drugs like Hydroxychloroquine, Azithromycin, Favipiravir, Oseltamivir, steroids have been examined varying from case to case.^[3] The Food and Drug Administration (FDA) approved Remdesivir for the treatment of hospitalized patients, the drug which has been used on trial basis since the beginning of Covid-19 on October 22, 2020.^[4] The suppositions all over the scientific communities started arising, whether India was becoming the global hotspot for COVID-19 cases. The interesting part to note is the disparity in trend in various states of India. The total number of positive cases of COVID-19 in the country were 30 by March 5, 2020. These included three cases from Kerala, nine from Delhi and NCR, with travel history to Italy and Iran and their contacts, one from Telangana with history of travel to Dubai and Singapore contact, 16 Italians and one driver (Indian) who was with the Italian tourist group. By March 11, 2020, the total cases had reached 60. By 31st March, 1251 confirmed cases and 32 deaths had been reported all over India.^[5] Despite having among the most stringent lockdowns, cases in India continued to rise fast and steadily.

GLOBAL STATUS

India currently has the highest number of confirmed cases in Asian continent ^[6] and second-highest in the world, after United States of America. As on 8th August, 2023, total cases and deaths in five top countries are summarised in the Table 1 with minimal case fatality rate among these five countries. ^[7] The underlying data has been retrieved from the World Health Organisation (WHO) Coronavirus Dashboard, which provides official daily counts of Covid-19 cases and deaths. The data is available in form of numerals, graphs, charts, curves which help the individuals to study the latest trends, numbers and statistics at global and regional levels and this type of data is known as secondary data and it is the data that has already been collected through primary sources and made readily available for researchers to use for their own research. According to the latest data released by the Ministry of Health and Family Welfare, India continues to occupy the top global position as the country with the maximum number of recoveries.^[8]

GENERAL MEASURES TAKEN PRIOR TO LOCKDOWN IN INDIA

The Ministry of Health and Family Welfare proclaimed the emergence of COVID-19 pandemic that was spreading across China first reported on January 17, 2020. By March 11, 2020, the World Health Organisation declared COVID-19 as a global pandemic.^[9] In Delhi, consequently on March 8, 2020 with three cases of COVID-19 in the state, the Department of Health and Family Welfare decided to carry out an awareness drive at various crowded places during the festival of Holi. Along with it, the Government also took several other steps to mitigate the spread of COVID-19 in the state.^[10] Maharashtra state Government took measures like preparing hospitals for screening and testing of patients and limit mass gathering given the highly contagious nature of the disease. In Kerala, following the first confirmed case involving a returnee from Wuhan, China, the initial responses by the state were targeted at identifying, and conducting risk-based categorisation of all passenger arrivals from China and others who had come in close contact with these travellers along with two more cases confirmed on February 2 and 3, the State Government declared a health emergency in the state. The Government of Tamil Nadu reported its first confirmed case of COVID-19 on March 7, 2020

and came out with a series of responses between January 19 and February 1, which included readying Rapid Response Teams (RRTs) at state and district levels, setting up of a 24/7 control room, thermal scanning of air travellers from China, creating isolation wards in the General Hospitals of four major cities, and running appropriate awareness campaigns. To prevent the spread of COVID-19, a complete lockdown of Andhra Pradesh (A.P.) till March 31 came into effect which was to facilitate a more aggressive action by the Government in exercise of its powers under Section 234 of Epidemic Diseases Act, 1897. The Government of Karnataka had issued an epidemic diseases Covid-19 regulation, to prevent the spread of the disease.

The Prime Minister asked the country to witness a Janta Curfew from 7 am to 9 pm on 22 March, 2020 which was followed by National lockdown from 25 March, 2020 to April 14, 2020 which later on extended till 3 May, 2020.^[11]

HEALTH MEASURES TAKEN PRIOR TO LOCKDOWN IN INDIA

Various health measures were taken by different State Governments in India. The Government of Delhi had requested the Central Government to surge and strengthen the testing facilities as well as opening of testing laboratories in four of the Government hospitals and other private hospitals. On March 24, 2020 the Government ordered the hospitals and institutions under the Department of Health and Family Welfare to engage up to 25% additional manpower in outsourced services such as sanitation, security, and nursing assistants.^[12] The Government of Maharashtra announced COVID-19 regulations to prevent and contain the spread of COVID-19 in the state which included screening of COVID-19 patients in hospitals, home quarantine for people who have travelled across the affected areas and procedures to be followed in the containment zones.^[13] In Kerala, revised guidelines for the clinical management of COVID-19 patients, covering testing, quarantine, hospital admission, and discharge, were issued.^[14] On March 13, the Governor of Tamil Nadu declared COVID-19 to be a notified disease in the state of Tamil Nadu, under the Tamil Nadu Public Health Act, 1939. The Government ordered the Tamil Nadu COVID-19 Regulations, 2020 which attributed the responsibilities of hospitals and individuals and the powers of officials in relation to the diagnosis, treatment, and containment of COVID-19.^[15] These included creation of isolation wards in hospitals, containment measures in an area once positive cases are detected. The State also initiated setting up of testing camps and conducting disinfection drives in the border districts. In Kerala and Tamil Nadu, foreign travellers, even if asymptomatic, were kept in isolation until their test reports became available. Guidelines for airport safety protocols were also issued for those who were entering and exiting the States. In Karnataka, all the hospitals, both Government and private were ordered to go for screening of the suspected cases of Covid-19 especially if they had history of foreign travel. No private laboratory was allowed to do any Covid-19 test, both the tests were to be done in the laboratory designated by the Department of Health and Family Welfare, Government of Karnataka.

HEALTH MEASURES DURING LOCKDOWN IN 2020 AND 2021

The National lockdown was announced by the Prime Minister of India on 22nd March, 2020. During lockdown, mobility of people for non-essential activities like shopping and outdoor exercises were restricted within the neighbourhood area limits with all necessary

prescribed mandatory precautions of wearing masks, social distancing and personal hygiene. The guidelines for workplaces were issued like work from home, organised workforce in staggered shifts, screening employees and maintaining hygiene at workplace and frequent sanitization at office premises. The Government's approach in dealing with the two waves has been different. The response to the second wave has been limited and driven by the States while in the first wave the country went for a national lockdown. This is attributed to the economic compulsions of the hard-hit Central Government and progressive spread of the virus. The second wave started in the west with Maharashtra, went up north and then peaked in the south of the country. This spread journey made a national lockdown economically suboptimal. During the second wave in 2021, State Executive committees of the above mentioned States issued directions for COVID-19 lockdown and safety protocols. The groceries, vegetable shops, markets, restaurants, cinema halls, theatres, amusement parks and auditoriums and other similar places were either closed or permitted to function with 50 per cent capacity and specified timings across the States in India. In all gatherings and congregations, including marriages, 50 and in funerals 20 participants were allowed to attend and all were directed to comply with covid protocols. Public transport was permitted with 50 per cent occupancy leaving alternate seats vacant and no standing allowed.

Delhi: In 2020, the Government made it compulsory for all people to follow COVID-19 safety precautions. The Government ordered all district magistrates to identify paid quarantine facilities in their respective districts for housing the people who would like to use private facilities on payment basis. The Government directed for the creation of the Corona Foot Warriors and Containment Team at every booth in Delhi. The Department of Health and Family Welfare set up a dedicated 24x7 WhatsApp number for receiving complaints and requests from the people related to COVID-19.

On, 19th April 2021, the Government of Delhi decided that the National Capital Region (NCR) will be under complete lockdown (six days) amidst a resurgence and record rise in coronavirus cases that had sternly stressed the city's resources and health infrastructure. Delhi recorded an increase of over 25,000 Covid-19 cases with a positivity rate of nearly 30 per cent, the highest since the beginning of the pandemic last year, according to a health bulletin from the administration.^[16] This means that almost every third sample being tested in the city turned out positive. The NCR Delhi also saw 161 people succumbing to the disease within only 24 hours, the health bulletin showed, with the chief minister flagging the spike as a major concern. In the year 2020, Delhi was under complete lockdown between March 22 and May 18 and after this, the capital reopened in stages. With such upscaling cases and mortality rates in the NCR, the situation seems to be worse as compared to the previous year. The hospitals were desperately short on beds, forcing the people with battling symptoms of COVID-19 to turn away. Hospitals were struggling to accommodate Covid-positive patients in Delhi and other badly hit cities such as Mumbai, Lucknow and Ahmedabad. Test results were also being delayed because of overwhelming demand which was leading to people not getting diagnosed and treated in time according to the doctors.

Maharashtra: On April 8, 2020 the city administration made it compulsory for all people to wear masks in public places.^[17] Before the extension announced by the Central Government,

the Maharashtra State Government increased the lockdown in the State till April 30. On May 31, the State Government had passed an order to extend the lockdown till June 30 and this lockdown has further been extended till July 31 as the state grappled to control the coronavirus pandemic.^[18]

In 2021, to curb the number of rising COVID-19 cases, the Government of Maharashtra announced stricter lockdown rules from April 5 to April 30, 2021. Eight out of the top 10 worst-affected districts nationwide were in Maharashtra, including Mumbai. The state announced a weekend lockdown as it witnessed an alarming rise in Covid cases over the past few weeks in April, with 63,294 cases being reported on April 11, the highest single day surge. Several cities including Mumbai, Pune and Nagpur has emerged as hotspots. The state executive committee issued directions for lockdown that remained in force throughout the State of Maharashtra from 20th April to 1st May, 2021.

Kerala: On March 26, 2020, Governor of Kerala, issued the Kerala Epidemic Diseases Ordinance, 2020 which empowered the State Government to accept necessary measures and specify regulations to counter the threat of an epidemic disease.^[19] Same day, the Government, on March 26, declared the entire state as COVID-19 affected. On March 24, the Government issued clinical guidelines for the investigation and treatment of COVID-19 cases and a week later, a simplified matrix for quarantine and testing was released. In July 2021, a large local group of cases was identified at the Kumarichantha fish market in Thiruvananthapuram. While in 2020, COVID-19 had mainly affected northern Kerala, this time it was much severe in Thiruvananthapuram district. On April 2, 2020 Tamil Nadu Government released a list of designated COVID-19 hospitals in the state and instructions were issued to refer all COVID-19 positive cases exclusively to these designated hospitals.^[20] However, willing citizens were also permitted to approach private hospitals, at their own cost. Amidst a rise in the number of cases, the Government issued instructions to avoid all kinds of religious gatherings, hospitals to not show religious bias in treating patients, and doctors to coordinate with the Government and check in on the mental health of quarantined patients via video conferencing facilities. The Government issued cluster containment measures to cease the transmission, morbidity, and mortality associated with the further spread of COVID-19.^[21] Various guidelines were issued towards treatment protocol of COVID-19 positive patients, appropriate management of suspect cases of COVID-19 dead body management, criteria for classification of hotspots and protocol for use of Rapid Antibody Tests in hotspot areas.

Tamil Nadu: In 2021, in a bid to curtail the spread of COVID-19, the Government of Tamil Nadu announced a complete lockdown for four cities- Chennai, Coimbatore and Madurai from April 26 to 29 to stop the spread of coronavirus.

Andhra Pradesh: In 2020, the individuals in the State, were requested to maintain a distance of at least two meters and any gathering of more than 10 persons were prohibited. Instructions were issued to set up a 100-bed quarantine facility in each Assembly constituency. Besides, a 200-300 bed tertiary care treatment centre was to be set up in each district headquarters. With a swift rise in COVID-19 cases in 2021, the Andhra Pradesh Government decided to impose a partial lockdown for 14 days across the State starting from 5 May, 2021. Government of Andhra Pradesh has put a lot of emphasis on focused testing, contact tracing,

isolating the contacts, treating the positive and taking up vaccination of all eligible persons to contain the covid-19. Government have reviewed in detail the Covid-19 situation in various districts and the preparedness of the administration to handle the rise in cases.

Karnataka: The Government of Karnataka has increase and testing and treatment facilities in the state. On April 11, 2020 the Government issued a circular advising all citizens and health care officials to download, promote and use Aarogya Setu application on their mobile phones to enhance contact tracing of infected persons. The mobile application is designed to give alerts if an infected person comes within the proximity of the person who has installed the application on their phones using Bluetooth and GPS technology.

As coronavirus cases continued to ascend despite imposing lockdown-like measures across the State, Karnataka Government on April 21, 2021 directed all his cabinet colleagues and ministers to work more proactively in the districts that they are in charge of, to check the spread of the deadly disease. On April 21, the cases in Karnataka reported another biggest single day spike of 23,558 new COVID-19 cases and 116 related fatalities, taking the total caseload to 12.22 lakh and the toll to 13,762, till the aforementioned date.

The first wave of COVID-19 hit the country mildly, and the lockdown measures in 2020 were more stringent and stricter as it was a national lockdown, and many economic activities were banned. Thus, it had a major impact on the economy and the lives of the people. In comparison, in 2021, though the disease was much more in severity but the lockdown measures were taken by the State Governments. It has been two years since the COVID-19 pandemic left huge imprint on human culture and made us realize the power of mother nature. In India, after the first wave, it was thought that situation was under control but the second wave exposed how people required basic necessities such as oxygen and medical supplies.

As on 8th August, 2023, the Government has made 2,20,67,55,904 total vaccination doses number of people vaccinated and it's the ethical and moral duty of citizens of India to take necessary precautions and follow protocols to prevent the COVID-19 transmission so that we enter in a pre-covid era.

Table: Comparison of Different Countries -Total cases, Total deaths and Fatality rate (as on 8th August 2023)

S No.	Name of the country	Total Number of Cases (cumulative)	Total number of Deaths (cumulative)
1	United States of America (USA)	103,436,829	1,127,152
2	India	44,995,665	531,917
3	Brazil	37,717,062	704,659
4	Russia	22,977,274	399,854
5	France	38,997,490	167,985

(Source: WHO Dashboard)

REFERENCES

1. Zodpey S, Negandhi H, Dua A, Vasudevan A, Raja M. Our fight against the rapidly evolving COVID-19 pandemic: A review of India's actions and proposed way forward. *Indian J Community Med* [serial online] 2020 [cited 2021 Oct 11]; **45**:117-24. Available from: <https://www.ijcm.org.in/text.asp?2020/45/2/117/285650>
2. Udugama B, Kadhiresan P, Kozlowski HN, *et al.* Diagnosing COVID-19: The Disease and Tools for Detection. *ACS Nano*. 2020;**14**(4):3822-3835. doi:10.1021/acsnano.0c02624.
3. Wu R, Wang L, Kuo HD, *et al.* An Update on Current Therapeutic Drugs Treating COVID-19 [published online ahead of print, 2020 May 11]. *Curr Pharmacol Rep*. 2020;**1**-15. doi:10.1007/s40495-020-00216-7.
4. U.S Food and Drug Administration (FDA). Coronavirus (COVID-19) Drugs. Dated. 07/02/2021. Available from: <https://www.fda.gov/drugs/emergency-preparedness-drugs/coronavirus-covid-19-drugs>
5. World Health Organisation (WHO). WHO Health Emergency Dashboard. WHO (COVID-19) Homepage. India Situation. Available from: <https://covid19.who.int/region/searo/country/in>
6. WHO Coronavirus Disease (COVID-19) Dashboard. covid19.who.int.Retrieved on 19 June 2020.
7. John Hopkins University & Medicine. Coronavirus Resource Centre. Cases and Mortality by Country. [Last updated on 22nd October, 2021]. Available from: <https://coronavirus.jhu.edu/data/mortality>
8. Ministry of Health and Family Welfare Department. Government of India. COVID-19 Recoveries. Available from: www.mohfw.gov.in.
9. Centre for Disease Control and Prevention. Novel coronavirus outbreak in China. Travel advisory to travellers visiting China. Available from: <https://wwwnc.cdc.gov/travel/notices/covid-1/novel-coronavirus-china>
10. Health.delhigovt.nic.in. Available from: <http://health.delhigovt.nic.in/wps/wcm/connect/73e314804d7b9ae481b7f7982ee7a5c7/order08.pdf?MOD=AJPERES&lmod=-1110173999&CACHEID=73e314804d7b9ae481b7f7982ee7a5c7>
11. Press Information Bureau. Government of India. Posted On: 21 Mar 2020 by PIB Delhi. Available from: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=200578>.
12. Govt. of NCT of Delhi Health & Family Welfare department Available from: <http://health.delhigovt.nic.in/wps/wcm/connect/e0bf2a004daa510c91cff7982ee7a5c7/manpower.pdf?MOD=AJPERES&lmod=204693589&CACHEID=e0bf2a004daa510c91cff7982ee7a5c7>
13. Government of Maharashtra. Department of Revenue and Forest, Disaster Management, Relief and Rehabilitation, No: DMU/2020/CR. 92/DisM-1, Dated: 2nd May 2020. Order. Extension to Lockdown and Revised Guidelines on the measures to be taken for con-

tainment of COVID-19 in the State. Available from: <https://www.maharashtra.gov.in/Site/Upload/Government%20Resolutions/Marathi/202005051315302819.pdf>

14. Directorate of Health Services. Corona Virus Outbreak Control and Prevention State Cell. Health and Family Welfare Department. Government of Kerala. Dated. 12.03.2020. Revised Guidelines for Testing, Quarantine, Hospital admission and Discharge for COVID-19 bases on current risk assessment. Available from: https://dhs.kerala.gov.in/wp-content/uploads/2020/03/reg_12032020.pdf
15. Government of Tamil Nadu. Health and Family Welfare Department. Corona Virus Disease (COVID-19)- Infection Prevention and Control – The Epidemic Diseases Act, 1897 (Central Act No.3 of 1897) – Regulations – Issued. Dated: 15.03.2020. Available from: https://cms.tn.gov.in/sites/default/files/go/hfw_e_97_2020.pdf.
16. Sarkar K. (2021). Delhi reports 25,462 Covid cases in a day for first time, positivity rate at 30%. *Hindustan Times*. April 18, 2021. Available at: <https://www.hindustantimes.com/cities/delhi-news/delhi-reports-25-462-covid-cases-in-a-day-for-first-time-positivity-rate-at-30-101618758638340.html>.
17. Municipal Corporation of Greater Mumbai. No. MGC/A/. Dated. 08.04.2020. Available from: https://prsindia.org/files/covid19/notifications/2323.MH_masks_compulsory_mumbai_apr_8.pdf.
18. Government of Maharashtra (2020). Department of Revenue and Forest, Disaster Management, Relief and Rehabilitation, Mantralaya, Mumbai- 400 032. No. DMU/2020/CR. 92/DisM-1, Dated 13th April 2020. COVID-19 – The Epidemic Diseases Act, 1897 – Extension to revised Lockdown Orders. Available from: https://prsindia.org/files/covid19/notifications/2713.MH_lockdown_extension_Apr_13.pdf
19. The Kerala Epidemic Diseases Ordinance, 2020. Fifteenth Kerala Legislative Assembly Bill No. 1. Kerala Legislature Secretariat 2021 Kerala Niyamasabha Printing Press. Published on 01-06-2021. Available from: http://www.niyamasabha.org/codes/15kla/bills/Bill_pub1_eng.pdf.
20. Government of Tamil Nadu. COVID-19- Health and Family Welfare Department – List of Hospitals in Tamil Nadu designated as Exclusive COVID-19 Hospitals- Approved – Orders- Issued. G.O.(Ms)No. 167. Dated. 02.04.2020. Available from: <https://stopcorona.tn.gov.in/wp-content/uploads/2020/03/Government-Hospital-treating-COVID-19.pdf>.
21. Government of Tamil Nadu. COVID-19- Health and Family Welfare Department – Cluster containment measures to stop transmission, morbidity and mortality to be taken up to ensure no further spread of COVID-19 – Implementation of the Micro-Plan – Orders-Issued. G.O.(Ms). No. 175. Dated. 05.04.2020. Available from: https://cms.tn.gov.in/sites/default/files/go/hfw_e_175_2020.PDF.