

## Effect of Covid-19 on India

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**ABSTRACT:** The coronavirus disease (COVID-19) pandemic originated in the Wuhan city of Hubei province in China, quickly spread to various countries, with many cases having been reported worldwide. India, with a population of more than 1.34 billion—the second largest population in the world, faced difficulty in prohibiting the rapid transmission of SARS (severe acute respiratory syndrome) among its population. Multiple strategies were built to handle the outbreak; these include lockdowns, fast track development of life saving drugs and vaccine, online awareness campaign, etc to control the spread of the disease. The Ministry of Health and Family Welfare of India has raised awareness about the outbreak and has taken necessary actions to control the spread of COVID-19. The central and state governments are taking several measures and formulating several wartime protocols to achieve this goal which includes night curfews. Moreover, the Indian government implemented lockdown throughout the country that started on March 25th, 2020, to reduce the transmission of the virus. This outbreak is inextricably linked to the economy of the nation, as it has dramatically impeded industrial sectors because people worldwide are currently cautious about engaging in business in the affected regions. This review article shows the current scenario of COVID-19 in India.

**KEYWORDS:** COVID-19

### I. DISCUSSION:

As of March 4<sup>th</sup> 2021, the total world population affected by Coronavirus disease is 116,216,580. The total recovered cases are 91,884,249 and 2,581,649 deaths have been reported by the World Health Organisation. India has reported a total of 11,156,923 cases till now. The total recovered cases are 10,826,075 and 157,435 deaths have been reported. The active cases as of March 4<sup>th</sup> 2021 is 173,413. The disease emerged in the month of December 2019 in the China and by January 2020 the disease transmission started turning rapidly. The first case of COVID-19 in India was reported on 27<sup>th</sup> January 2020. On January 30th, 2020, the WHO declared COVID-19 a Public Health Emergency of International Concern. On March 25<sup>th</sup> 2020, the government of India imposed a total lockdown throughout the whole country. India handled the situation very gracefully by computational modelling, statistical tools, and quantitative analysis to control the spread as well as the rapid development of a new treatment. But the transmission of the disease was subsequently increasing. The Table i. gives an overview of the number of cases in India, as of March 4<sup>th</sup> 2021.

**Table i : COVID-19 cases overview**

S.N.	State / UT	Active cases	Recovered cases	Deaths	Confirmed cases
1.	Maharashtra	83556	2043349	52280	2179185
2.	Kerala	46288	2043349	4241	1067044
3.	Karnataka	6076	934143	12346	952565
4.	Andhra Pradesh	826	882219	7170	890215
5.	Tamil Nadu	3990	836473	12504	852967
6.	NCT of Delhi	1584	627423	10914	639921
7.	Uttar Pradesh	2025	593035	8728	603788
8.	West Bengal	3245	562195	10272	575712
9.	Odisha	764	334767	1917	337446
10.	Rajasthan	1470	316515	2787	320772
11.	Chhattisgarh	2961	306490	3848	313299

12.	Telangana	1948	295821	1637	299406
13.	Haryana	1470	266843	3053	271365
14.	Gujarat	2638	264195	4412	271365
15.	Madhya Pradesh	3097	255888	3865	262850
16.	Bihar	349	260737	1542	262628
17.	Assam	1621	214879	1093	217593
18.	Punjab	5593	172845	5872	184310
19.	Jammu and Kashmir	875	123860	1958	126693
20.	Jharkhand	473	118505	1090	120066
21.	Himachal Pradesh	495	57386	996	58877
22.	Goa	610	53737	796	55143
23.	Puducherry	168	38940	669	39777
24.	Tripura	33	32998	391	33422
25.	Manipur	32	28878	373	29283
26.	Chandigarh	503	21104	355	21962
27.	Arunachal Pradesh	2	16780	56	16838
28.	Meghalaya	14	13804	148	13966
29.	Nagaland	12	12102	91	12205
30.	Ladakh	42	9649	130	9821
31.	Sikkim	29	5986	135	6150
32.	Andaman and Nicobar	8	4952	62	5022
33.	Mizoram	19	4398	10	4427
34.	Dadra Nagar Haveli and Daman - Diu	6	3400	2	3408
35.	Lakshadweep	128	285	1	414

To protect against the deadly virus, the Indian government have taken necessary and strict measures, including establishing health check posts between the state and national borders to test whether people entering the states / country have the virus. The lesson learned from the SARS outbreak was first that the lack of clarity and information about SARS. The outbreak of SARS was catastrophic and has led to changes in health care and medical systems. Compared with the other countries in world, the ability of India to counter a pandemic seemed to be more efficient. India, with such a large population faced difficulty treating severe COVID-19 cases due to only 49,000 ventilators, which is a minimal amount. If the number of COVID-19 cases increased in the nation, it was challenging. The identification of sources of infection and those who come in contact with them was very efficiently tracked. With such a vast population, India's medical system played a vital role in treating the patients. The reason behind the lockdown was to avoid virus exposure. Necessary preventive measures, such as wearing a

mask, regular hand washing, and avoiding direct contact with infected persons were compulsorily practiced. The Ministry of Health and Family Welfare (MOHFW), India, has raised awareness about the recent outbreak and taken necessary action to control COVID-19. Besides, the MOHFW has created a 24 h/7 day-a-week disease alert helpline (+91-11-23978046 and 1800-180-1104) and policy guidelines on surveillance, clinical management, infection prevention and control, sample collection, transportation, and discharging suspected or confirmed cases.

India has experienced low fatalities since the outbreak of pandemic. States started assessing the availability of medical services including testing, quarantine and measures needed scale them up to meet all possible contingencies. The disease was primarily reported in individuals with travel history to the affected countries or close contacts of positive cases, no community transmission was reported. For proper testing ICMR proposed a set of criteria as their testing strategy.

1. Caution:

- All asymptomatic individuals who were undertaken international travel were home quarantined for 14 days and tested only if they become symptomatic (fever, cough, difficulty in breathing).

- The family members living with a confirmed case were home quarantined

2. Whom to test:

- All symptomatic individuals were compulsorily tested

- All symptomatic health care workers, hospitalized patients with Severe Acute Respiratory Illness (fever AND cough and/or shortness of breath) were tested.

- Asymptomatic direct and high-risk contacts of a confirmed case were tested once between day 5 and day 14 of coming in his/her contact.

- The healthcare workers who examined a confirmed case without adequate protection as per WHO recommendations.

3. Sample collection: oropharyngeal and/or nasopharyngeal swabs Impact of Covid-19 has been multiple and not only limited to society at large. From the perspective of the economy both rural and urban have been impacted adversely. The migrant workers who solely depends on daily earnings were out of money to spend during any emergency. Those who didn't have many resources left with them started moving to their villages because of the unavailability of jobs and money in the cities. Walking thousands of miles barefoot with their child and pregnant wife, migrant workers faced most difficulties during the pandemic. Apart from them the cab drivers, auto drivers, delivery workers, street vendors, small scale industry workers, etc faced a lot of trouble to earn their livelihood.

Moving from the economy, the impact of Covid-19 on education has been brutal. The repercussions will be seen in the upcoming future. There school closures will leave a lifelong impact on the productivity of this generation of students. Students being out of schools and colleges for about eight months forged their ability towards practical knowledge and have affected their learning capacity. Due to absence of physical activity, their world confined to the screen of devices from learning to examinations. This has adversely affected the mental conditions of the student which led to anxiety, depression and many other upset mental conditions. Not only migrant workers, gig workers or students faced the problem of psychological trauma but the same issue was seen in the each and every citizen. The lockdown

has proved that "Man is a social being" because continuous lockdown for months had impacted people psychologically and the burden has been faced by women and children in the form of domestic violence. In the lockdown period, multiple calls have been received on the helpline number made for the people going through violence.

Also, there has been significant changes in some factors which we needed to imply way before. The country of 1.3 billion people was at halt in the lockdown which also provided a temporary remedy to another pressing health issue: suffocating pollution levels. The data from the Central Pollution Control Board (CPCB), part of India's Environment Ministry states that Nitrogen dioxide went from 52 per cubic metre to 15 in the same period and also a 71% fall was observed. Mumbai, Chennai, Kolkata and Bangalore have also recorded a fall in these air pollutants. Figure i. shows pollution during normal days vs during lockdown. The world's largest lockdown was imposed where all factories, markets, shops, and places of worship were closed, most public transport was suspended and construction work was halted. Also, citizens were asked to stay home and practice social distancing.



**Figure i : Pollution in normal days vs during lockdown**

The period of the lockdown was efficiently utilized to ramp up health system capacity and infrastructure in the country, WHO supported the assessment. The pharmaceutical industry experienced the highest spike by rapid development of life saving drugs and vaccines. The pandemic had facilitated India's health infrastructure by propelling the government and private sector to incur unplanned expenditure on COVID-related services. While the Centre spent more than ₹300 crore only on hospital equipment, private hospitals invested in large volumes of essential medical occupancies and hospital infrastructure to create isolation and quarantine facilities. All the hospitals underwent

infrastructural changes as per treatment requirements, including social distancing, isolation and quarantine facilities. Besides, all central government-run hospitals across 17 states have become dedicated COVID-19 hospitals, having adopted major changes. Ventilator facilities were intensified for handling more patients in future. Separate areas for treating COVID-19 patients with sanitization facilities. The private sector came on the front line for donations for the hospitals in procuring large volumes of essential medical supplies, including personal protection equipment and respirators. The hospital infrastructure was restructured to create isolation and quarantine facilities as well as fever clinics even before the government did. Massive investments for new equipment, air conditioning and introduction of Hepa (high-efficiency particulate air) filters were done. Government Funds were spent for civil costs related to fever clinics, sanitization tunnels, negative isolation zones and operation theatres with dedicated air-handling units, and specialized RT-PCR testing equipment for laboratory, etc. Before the outbreak the medical infrastructures of India were not upgraded. During the pandemic the need of upgraded medical equipment and establishments forced the centre to invest in more in it for future.

One of the major challenges in the war against COVID is also the production of Protective Personal Equipment for the frontline health-care workers. Till 1st March, India had a negligible amount of PPE kits production. There were only 50 companies that were certified for safety gear products and even the types of equipment produced were not viable enough for the COVID-19 treatment. However, within two months, there has been a hike in production. By May 2020, the country was producing about 2.06 lakhs of PPE suits a day. Within two weeks, the production was doubled to about 4.5 lakhs of PPE kits. There has been an increase in the certifications for companies as well. More than 600 companies are now involved in production across the nation. PPE producing industry had been a tiny industry in India before COVID, with all the raw materials being imported from other countries. However, due to the pandemic, there was a considerable disruption in the supply chain. Hence, a domestic supply chain had to be created on a priority basis. Today, all the raw materials are available in India

and so companies are producing a considerable number of PPEs following the PMO's 'Atmanirbhar Bharat' and promoting "Vocal for Local" by building up its own supply chain. There is an immense progress observed in the recovery of the coronavirus cases. As of now, Covishield and Covaxin vaccine roll out has started and around 16,616,048 vaccine doses are administered. 2,876,927 people are fully vaccinated. The monitoring of the pandemic and vaccination drive was monitored by the Prime Minister himself. Virtual meetings with video conferencing were conducted for the updates with all the higher-level authorities.

## II. CONCLUSION:

- The government of India by imposing lockdown at the initial stage did a commendable effort against COVID-19, which was applauded by WHO.
- From social distancing till sanitization, proper approach was followed to reduce to exposure of the virus.
- The drugs used during the pandemic were proved to be lifesaving which led to the least fatality rate in India across the world. The fast-track vaccine development made one of the leading players in pharmaceutical industry in world.
- The pollution rate immensely dropped during the lockdown as the transportation was at halt.
- The industries progressed a lot while the pandemic, when the overseas import chain disrupted the country developed the small-scale industries and made its own supply chain.
- With the vast recovery rate and minimum fatality rate, India is showing signs of overcoming the pandemic soon.

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