

# Socio-economic impact of first 21 days nationwide lockdown- 1 on the spread of SARS-COV-2 in India in relation to health

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## ABSTRACT

On March 11, 2020 World Health Organization (WHO) declared corona virus disease (COVID-19) to be a pandemic disease, which is caused by a novel coronavirus "severe acute respiratory syndrome coronavirus-2 (SARS CoV- 2)" and till now it has affected about 213 countries. A nationwide lockdown was announced by the Honorable Prime Minister of India on 24<sup>th</sup> March 2020 for 21 days to prevent the spread of the COVID-19. Our nation, being a developing nation and emerging market, there was a vast socio-economic consequence of this lockdown. Our health care services were at the war front. Due to this step, there was a reduction in the rate of the spread of COVID- 19. Other health hazards due to pollution, road traffic accidents, crimes including robberies, rapes, murders, thefts, etc., were decreased substantially. People learned good hygiene and family bonding, which was further strengthened. Negatively affected sectors were trading companies, schools, and education, economy, stock markets, ongoing events in sports, politics, entertainment industry, transportation, and activities related to religious places, tourists, and hotels. Due to starvation, poor people were worst affected as they were daily bread earners though, the government tried to provide money and food. Finally, it was the primary care physician, termed "corona warriors," who suffered socially, economically, mentally, and physically. Despite all these hardships, the primary care physician learned the innovative way to help patients and ease their suffering with proper advice and awareness.

**Keywords:** COVID-19, pandemic, primary care physician, WHO

## Introduction

On 11<sup>th</sup> March 2020 World Health Organization (WHO) declared coronavirus disease-19 (COVID-19) to be a pandemic

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disease, which was caused by a novel coronavirus "severe acute respiratory syndrome corona virus-2 (SARS-CoV- 2)."<sup>[1-3]</sup> Before this declaration of the pandemic this infection had caused severe morbidity and mortality in developed countries like China, Italy, Spain, Iran. A large number of the population was affected due to its high infectivity rate. It was very alarming and various nations imposed lockdown to halt the progression of this disease.

Our country being a developing nation as well as the second-largest populous country was at a big threat.<sup>[4]</sup> The first case of COVID-19 in India was reported on 30<sup>th</sup> January 2020,

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which had originated from Wuhan city of Hubei in China. Compared to the developed nations our health care infrastructure is not satisfactory and we rank 145<sup>th</sup> worldwide.<sup>[4,5]</sup> Moreover, here millions of citizens are daily wage earners.<sup>[6]</sup> However, keeping in mind this ominous situation our Honorable Prime Minister imposed 21 days of national lockdown from 25<sup>th</sup> March onwards as it was emphasized to first ensure health then wealth i.e., “Jaan hai to Jahan hai” if one lives then one will be able to earn.<sup>[4,7]</sup> As there was no definitive treatment for COVID-19, prevention was the utmost importance and stress was laid on social distancing and confinement to one’s respective place. The whole nation was brought to a standstill, which had never been witnessed ever in recent past few decades. However, this lockdown definitely had a great socio-economic impact on us and it had several positive and negative consequences upon our health. In this lockdown, however essential services like medical emergencies, the supply of foods, petroleum products, electricity, water, telecommunications, and security were exempted.<sup>[4]</sup> COVID-19 pandemic has also posed a big challenge and mandates family physicians to be abreast of the newer updates, preventive measures, latest epidemiological trends, and current management modalities to prescribe and guide their patients.<sup>[8,9]</sup>

## Meaning of lockdown

An emergency protocol preventing people from leaving an area is called lockdown. Full lockdown signifies that one must stay where they are and should remain indoors. Period of lockdown allows pharmacies, grocery stores, essential supplies, and banks to regularly serve the people, while all nonessential services remained closed for the whole period. This would ensure that people maintained social/physical distancing for time being.

## Impacts of lockdown

### Positive consequences

#### Reduction in spread of corona virus cases

The nationwide lockdown was necessary to contain the transmission of the COVID-19, as per the health experts. Up to March 24<sup>th</sup>, there were a total of 536 positive cases reported in India. As population density in India is very high, experts were worried that the nation’s fragile health system will be unable to tackle the situation if there was a spike of positive cases. Sources, from the Health Ministry, claimed that “before lockdown doubling rate of COVID-19 was 3 days while after lockdown it was 6.2 days. After 21 days of the lockdown, the COVID-19 figure reached 11487, which seemed satisfactory. The government anticipated the health hazards of pandemic and infused funds to strengthen our primary health set up, which was lying neglected.<sup>[4,10]</sup> It was time for practitioners/primary care physicians to gear up and be aware of the spread of disease in our country and also to improve their preparedness to tackle this pandemic.

#### Reduction in crimes

It was reported that there was a large reduction in crimes in India after the lockdown. As per recent data of Delhi Police, there was a drastic reduction in the number of crimes in the capital including

murders, attempts to murder, thefts, chain snatchings, robberies, eve-teasing, dacoity, and so many disputes of families or people. About 50% of crimes were declined during this lockdown period and a few others reported a reduction of up to 80%. In comparison to the previous year (3,416 crimes), crimes declined to 44% in the present scenario (1,890 crimes). Crimes of sexual assault of women have also reduced to 50% from 144 last year to 72 this year within this time duration. Fighting cases declined to 65% because a vast number of people are confined to their homes. Drone surveillance, COVID-19 patrol forces, and such other measures have confirmed that people are staying indoors. This caused a 50% fall in crimes going through residential areas. Reduction in crimes, reduced number of patients in the emergency of hospitals.<sup>[11]</sup>

### The decline in environmental pollution

A decision of 21 days nationwide lockdown had also some scientific consequences especially on the protection of the environment in the country. Data says that the major cities are recording a very low stage of injurious microscopic particulate matter called PM 2.5, and of nitrogen dioxide, released by motors and power plants. Subsequent blue skies after sudden fall in the level of pollutants indicate a major change in air quality in India, which stands at 21 among 30 “most polluted cities of the World” in the sense of the IQ Air Visual’s 2019 World Air Quality Report.

In New Delhi, the capital of India, mean concentration of particulate matter (PM) 2.5 dropped by 71% in a week and it reduces from 91 micrograms per cubic meter on March 20, to 26 on March 27, following the lockdown, as per government data report. Above the level of 25 micrograms per cubic meter is an unsafe zone, laid by the World Health Organization. The pollution data of the Central Pollution Control Board (CPCB), a part of “India’s Ministry of Environment, Forest and Climate Change”, was collected and combined by the Centre for Research on Energy and Clean Air (CREA). The level of nitrogen dioxide falls from 52 per cubic meter to 15 in a week, was also a 71% reduction.<sup>[12,13]</sup> Major cities like Mumbai, Kolkata, Chennai, and Bangalore have also reported a reduction in air pollutants.<sup>[12]</sup> Jyoti Pande Lavakare who is the co-founder of Indian environmental organization Care for Air and author of her upcoming book “Breathing Here is Injurious To Your Health” writes that “I have not seen such blue skies in Delhi for the past 10 years.” “This gain is a silver lining in case of this terrible crisis that we can step outside and breathe.” On March 22 nationwide lockdown in India caused the minimum single-day traffic pollution levels on record along with declined levels of other dangerous pollutants like PM2.5, PM10 being diameter lesser than 10 micrometers, report of CREA told. Patients with respiratory diseases like asthma, chronic obstructive pulmonary diseases (COPD), etc., were reduced in number, and patients were more comfortable in clean air.

### Reduction in road accidents

On Indian roads and highways, there were fewer to no people, as a result of the 21-day lockdown, crimes on the roads, and fatal road accidents have been declined significantly. There is a

24-hour police presence and closed borders have resulted in a reduced rate in burglary and vehicle thefts. Alcohol drinking by the people had declined to nil in response to the lockdown. There was a reduced number of road traffic accident patients in the emergency of hospitals, and it was a great relief and premature fatality could be avoided.<sup>[14]</sup>

### *People learned to maintain good hygiene*

As there is no vaccine to prevent COVID-19,<sup>[15,16]</sup> avoiding from being exposed to this virus could be done by good hygiene practice. Washing hands regularly by soap and water for a minimum of 20 seconds mainly after returning from public places, blowing the nose, coughing, or sneezing. Use of hand sanitizer containing at least 60% alcohol, avoid touching eyes, nose, and mouth with unwashed hands, keeping a distance from others are promoted. Prime Minister Office (PMO) advised every one of wearing a cloth face cover when they go out in public. Cleaning and disinfecting frequently touched surfaces daily.<sup>[14]</sup>

Hence a number of infectious and contagious diseases associated with poor hygiene were controlled.

### *Family tie-up*

Lockdown led many educated and white collared people to work from home and thus, spending more time with their families and partners. It strengthened familial ties, loved ones needed to ease anxiety, this bridged gap between work and family. A loving family is a privilege and this family bonding reduced a vast number of psychological problems. There was a great reduction in alcohol and tobacco consumption, which improved our lifestyle further. As a primary physician, it is our goal to reach this healthy family atmosphere.

### *Restructuring of Industries for production of cost-effective medical equipment*

COVID-19 pandemic crisis produces a chance to restructure, strengthen the nation's health policy, and decrease dependency on imports of medical devices. Most of the public-private partnerships and collaborations are continuously going on. The Defence Research and Development Organization (DRDO) has developed ventilators and producing it up to 10,000 units every month along with the collaboration of the industry. Nocca Robotics, a start-up incubated at the Indian Institute of Technology Kanpur, is working with Bharat Dynamics Ltd. (BDL), which is a public sector undertaking for the large-scale production of ventilators. Start-ups like Marut Dronetech are associating with many states to employ drones to see adherence to social distancing. The Pune-based startup, MyLab Discovery Solutions, has searched an easily affordable testing kit, Pathodetect, which was approved by ICMR and Central Drugs Standard Control Organization (CDSCO).<sup>[17]</sup>

### *Negative Impacts- India's coronavirus lockdown became a humanitarian catastrophe*

India's 21 days complete nationwide lockdown had social and economic effects, even sharper than lockdowns in other

developed countries as here millions of people are poor, and they are especially, the daily wage laborers, interstate migrant workers, and small scale vendors.<sup>[6]</sup>

This lockdown created panic and uncertainty among such populations even after the government's assurance of food and money to be provided during this period. These people tried to return back to their native place in flocks, thus not adhered to social/physical distancing. It caused the transmission of the virus in rural regions. As there was no transport people risked their lives and many casualties occurred.

### *Impact on health care*

The COVID-19 pandemic has affected hospitals across the whole world. Most of the hospitals scaled back or postponed their nonemergency management. This had financial impacts for the hospitals. Millions of surgical procedures were canceled or postponed. Moreover, this pandemic created an additional burden on hospitals as health care workers along with PPE needed quarantine facilities. The dental set up was completely shut and poor doctors were helpless.

### *Impact on trading companies*

After the lockdown, all restaurants and malls were shut down. Other nonessential commodities were not available, which impacted severe inconvenience to consumers and traders both. This all led to huge financial loss. Lockdown drastically reduced the production and selling of drugs, medical equipment, and jobs of pharmaceutical workers were at risk.

### *Effects on schooling and education*

All educational institutions were closed and exams postponed. The postponement of exams caused anxiety among students. Educational institutions opted for an online platform for teaching and training but this proved to be unfriendly as now students had to devote their more time to laptops and smartphones, which itself is a health hazard. CBSE board, State boards, professional exams like medical examinations, etc., were postponed.

### *Financial crisis*

Of overall business in India, about 53% was affected because of the COVID-19 virus.<sup>[18]</sup> Different businesses like hotels and airlines deducted incomes and terminated or temporarily suspended the employees. The estimated loss of the gig economy industry is expected to be Rs 3,000 crore (US\$420 million).<sup>[19]</sup> Lockdown has caused supply chains under stressful conditions. A large count of farmers in villages across the nation, facing uncertainty in growing perishables.<sup>[20]</sup>

To handle the critical condition due to lockdown, the Government of India has launched a different type of rescue measures like food security and essential funds for the upgradation of health infrastructure, to sector-related incentives and tax deadline extensions. Reserve Bank of India announced measures that will make availability of Rs 374,000 crore (US\$52 billion) on 27 March in the nation's financial systems. The government allowed the

movements of essential and nonessential goods during the period of lockdown on 29 March.<sup>[21]</sup>

Loss of jobs and works has reduced earnings, so health care facility in hospitals was now out of reach for most Indians. Not only the patients suffered but also doctors working in such hospitals, their salary was drastically reduced as well as certain incentives were curtailed in public hospitals too.

### Effect on entertainment

Multiplex and theatres, which were a source of mind freshening and entertainment were closed even before the lockdown was imposed. As all shootings of films and television serials halted, this led to a great level of stress and anxiety to actors and the production team even leading to suicidal tendencies. Viewers who were also glued to this performance found it hard to spend their time.

### Impact on events

Most of the public events were either canceled or postponed due to the impact of lockdown. Events canceled were award ceremonies, conventions, conferences and trade shows, religious events, sporting events, marriage ceremonies, etc., Postponed events include award ceremonies, beauty pageants, gaming events, military exercises, music and art events, political rallies, etc.

Wagah Attari (Indo-Pak) border Amritsar, Punjab ceremony (daily military practice) will be performed without any spectators, was declared by Border Security Force since 6<sup>th</sup> March 2020.<sup>[22]</sup> 29 March was scheduled date of 21<sup>st</sup> IIFA awards ceremony in Indore, was now suspended for an indefinite time.<sup>[23]</sup> 11 March the scheduled date of the India Fashion Week was now postponed.<sup>[24]</sup> The Padma Awards ceremony on 3 April was canceled given 21 days lockdown.<sup>[25]</sup> Suspension of all these events negatively impacted all the participants or award deserver.

### Effects on tourism and hotel

Tourist places and historical buildings affect the people psychologically and these are associated with their emotions. Prahlad Patel the Union Tourism Minister of India on 17 March declared closer of all historic buildings till 31 March including the Taj Mahal, Red Fort, and Qutub Minar and all the national monuments and museums under the Archaeological Department of India.<sup>[26]</sup> The Statue of Unity, Ahmedabad was shut to visitors up to 25 March.<sup>[27]</sup> With the declaration of lockdown these monuments were closed till further order.

### Religious effects

Given the corona outbreak and lockdown, most of the worship services were canceled along with the closure of pilgrimages surrounding observance and festivals.<sup>[28]</sup> Most of the mosques, temples, churches, and synagogues have offered worship via live stream.<sup>[29]</sup> However, the religious offering in cash and kind became negligible and hence life became miserable for such religious trusts.

Religious effects here are deep-rooted and are linked with people's faith in God as they get benefitted mentally after visiting such

places or celebrating festivals together in the community. We doctors while prescribing medication write Rx i.e., in the name of God (according to Egyptian mythology)

### Sports

15<sup>th</sup> March 2020 was the declared date of the 2020 International Shooting Sport Federation (ISSF) World Cup and the Indian Open badminton tournament between 24 and 29 April in New Delhi was postponed till the lockdown period.<sup>[30]</sup>

FIFA World Cup qualification match of India with Qatar in Bhubaneswar on 26 March and All India Football Federation's all matches of I-League and I-League 2<sup>nd</sup> Division was also postponed.<sup>[31]</sup> On 14 March, the 2020 Indian Super League Final was played behind closed doors.<sup>[32]</sup> "Indian Premier League 2020" was also postponed to 15 April from 29 March- said by the Board of Control for Cricket in India.<sup>[33]</sup> ODI matches between India and South Africa on 15 and 18 March was canceled.<sup>[34]</sup> Outdoor Sports keep our body fit and healthy and their cancellation not only badly affects health but was also a financial crunch for this sportsperson.

### Transportation Flights

All international and domestic flights were canceled in view of lockdown. On 19<sup>th</sup> March, the Government of India declared a shutdown of landing in India for all starting from 22 March.<sup>[35]</sup> Also on 23 March, the union government ordered the prohibition of all domestic flights from 25 March in the nation.<sup>[36]</sup> India's medical tourism bore the brunt.

### Railways

On 21 March, to prevent transmissions of coronavirus Indian Railways declared nationwide cancellation of 3,700 trains.<sup>[37]</sup> While on 22 March, the Union Government announced the suspension of about 12,500 train services across the nation barring goods trains, and all nonessential passenger transport including interstate transport buses.<sup>[38]</sup>

### Road

Across the nation, all buses along with auto-rickshaws, and tempo services got hampered. Stoppage of transportation severely affected public health services, as emergency patients could not reaching the hospital at times and losing their lives. Transportation of medicines and other medical equipment was hampered.

## Conclusion

This socio-economic impact of 21 days of nationwide lockdown affected the practice of primary care physicians. In ours set up every doctor irrespective of specialty, is a primary care physician that is first contact doctor as we do not have effective referral systems like that of developed countries. They are also front line workers of COVID-19 and were exposed to hazards that put them at risk of infection. This lockdown created distance

between the treating doctor and the patient as everyone was apprehensive of this COVID-19. Fever and flu-like symptoms, which are the bread and butter of the physician became taboo and patients were not seen by them.<sup>[39]</sup> In this COVID times, it was the responsibility of all primary care physicians to get trained for infection prevention control and properly utilize the personal protective equipment (PPE). Routine outpatient departments (OPD) as well as simple surgical procedures were stopped. Doctors had to rely on telemedicine but it doesn't seem satisfactory for both doctor and patient. Doctors irrespective of their postings like at primary centers, community health centers, or at the private sector also suffered financial loss, which was due to decreased number of patients and also their inability to pay. It is to be noted that as this pandemic soared, lockdown got extended but to overcome this socio-economic burden, now our country is undergoing unlock phase. At present hot spot areas are being identified and the restriction is imposed only in these containment zones.

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### Conflicts of interest

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