

## **COVID-19 and lockdown policy: Insights on the Indian situation**

**Name of Author:** Kanchan Mukherjee

**Affiliation:** Centre for Health Policy, Planning and Management  
School of Health Systems Studies  
Tata Institute of Social Sciences  
Mumbai  
India

**Email:** kanch@tiss.edu

**ORCID:** 0000-0002-3291-9172

**Disclaimers:**

**Source(s) of support/funding:** Nil

**Word count:** 1508

**Disclosure of relationships and activities** (ie, conflict of interests):

Dr. Mukherjee has nothing to disclose.

**Ethical issues:** Not Applicable

**Acknowledgements:** Not Applicable

**Authors' contributions:** Single author responsible for conceptualizing, data mining and triangulation, analysis and interpretation of findings. The same author has written and edited the manuscript.

## **Abstract**

India reported its first severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) case on January 30, 2020 but took almost two months to decide on a national lockdown to implement social distancing. The Indian lockdown was perhaps the largest natural social experiment attempt in the world to slow the chain of transmission for COVID-19. Given the large population size and density, socio-economic and cultural diversity of India, implementation of this lockdown was a huge challenge. It was an experiment on community participation in a national policy to implement a public health strategy. However, two months after the lockdown, the data shows that the lockdown helped improve testing rates but has not been able to curb the spread of the virus. Also, there is evidence to suggest that the virus had spread in the population even before the lockdown started. While population testing rates need to be improved, the more concerning fact is that India consistently detected a much higher number of cases than any other country for a similar population testing rate. This does not reflect well for the future. Delayed policy response in spite of evidence along with technical, administrative, social and behavioral factors have all contributed to this situation. It is important that the lessons learnt so far be used constructively to plan and implement the next steps. A policy entrepreneurship process utilizing contingencies with effective use of evidence and stakeholder engagement is essential to respond effectively to the COVID-19 situation in India.

## **Introduction**

As the novel coronavirus disease (COVID-19) pandemic continues globally, resulting in loss of lives and livelihoods, it has integrated epidemiology and economics unfortunately in a macabre manner. While the loss of lives is a direct result of the virus, the loss to economy through lock down interventions is ironically a result of the policy measure to control the spread of the virus. India reported its first confirmed case of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) on January 30, 2020<sup>1</sup>. However, it was 55 days later on March 25, that India announced its national lockdown policy<sup>2</sup>. This was perhaps the largest natural social experiment attempt in the world to break/slow the chain of transmission for COVID-19 within a country. The ‘lock down’ intervention was announced to operationalize the public health strategy called ‘social distancing’ which is the only proven preventive measure as of now, against this virus. The Centre for Disease Control and Prevention (CDC) defines social distancing as it applies to COVID-19 as remaining out of congregate settings, avoiding mass gatherings, and maintaining distance (approximately six feet or two meters) from others when possible.<sup>3</sup> However, implementing a lockdown policy is a very challenging task in India, considering its huge population, high population density, socio-economic diversity and democratic federalism involving 27 states and eight union territories. Nevertheless, this policy experiment could be viewed as a massive exercise of making community participate in a government policy not only as stakeholder’s but also as implementer’s.

## **Methods**

Data mining was done from official data sources of various countries regarding lockdown policy, testing rates and cases detected. An event history analysis was performed since the first case was detected in India along with analyzing data on testing and cases to understand the trends and current situation. Data triangulation method was used to provide a comparative analysis with other countries and provide insights into the COVID-19 situation in India.

## **Results**

The national lockdown policy in India was announced almost two months after the first case was reported. Among countries which initiated a national lockdown, this was among the most delayed response in the world (Figure 1). Countries in the African and Asian region had acted

earlier and India's response time to lockdown policy is similar to the European region response time which is badly hit by this pandemic.

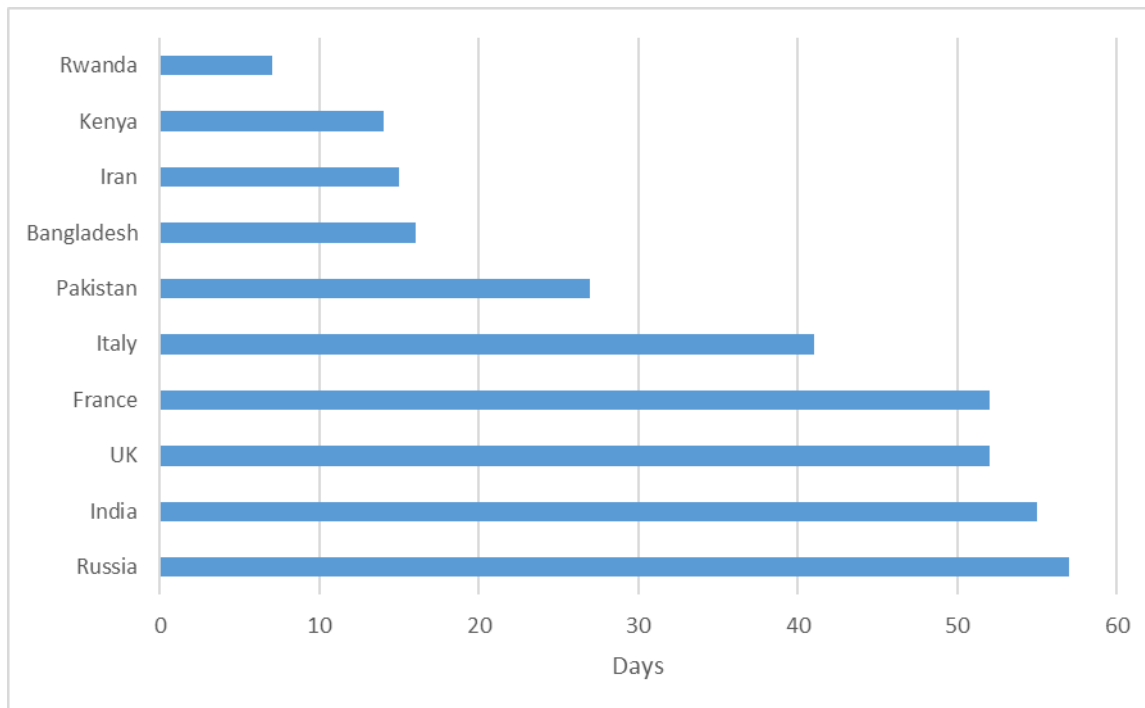


Figure 1: Country wise lockdown policy response time since first case detection

When India began the lockdown, the country reported 581 SARS-CoV-2 cases<sup>4</sup> with a population testing rate of 18 tests/million. This testing rate in India was lower than its South Asian neighboring countries of Nepal (24 tests/million) and Pakistan (29/million) although both these countries have a lower GDP/capita than India. After over two months of the lockdown (and four months after the first case was reported), on May 31, 2020, India reported 182143 cases<sup>5</sup> at a population testing rate of 2711/million population. So, while the population testing rate increased 150 times, the cases detected increased 313 times. The lockdown helped increase testing and India was reporting the highest number of samples tested for a country in Asia by end of May, but it ranked very low when population testing rates were compared. This is because of the huge population in India, which is proving to be a very big challenge given the limited resources and testing capacity in the country. The more concerning fact is that India has detected a much higher number of cases than any other country for a similar population testing rate. The trend analysis in testing rates and cases (Fig 2) shows that increase in cases and tests are seen after the lockdown

began and both trends follows a similar trajectory indicating that the increase in cases is a reflection of the increased testing rates. The testing rate was extremely poor in the critical initial two-month period after the first case was detected (Fig 2).

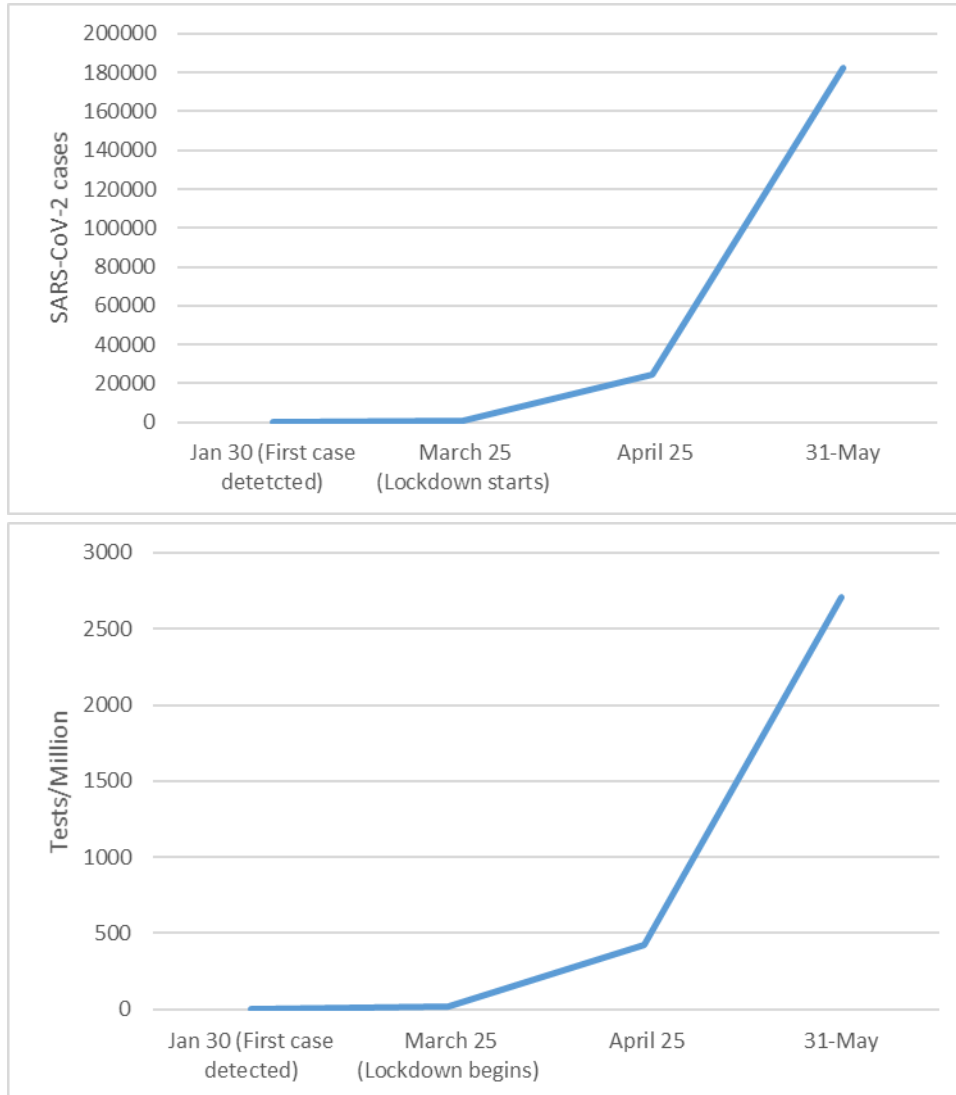


Figure 2: Comparison of trend of SARS-CoV-2 testing rates and cases in India

### Discussion

Testing rates and cases analysis within India across its states and union territories showed a skewed distribution. The testing rates were in the range of 561.3/million to 12219.9/million and SARS-CoV-2 cases ranged from one to over 65000. Five cities alone have contributed to 60% of all cases in India. Apart from population density in these cities, a large contributor to this

situation was the social and living conditions in slum areas within these cities. With community latrines, crowded rooms and negligible boundaries between neighbors the concept of physical and social distancing is practically impossible to implement.<sup>6</sup> In addition, analysis of events during the lockdown, revealed lockdown violations for social, religious and political gatherings in some states, reflecting a poor sense of individual and community responsibility in this pandemic. Interstate and centre-state coordination among many states has been weak which has also affected lock down implementation.

Analysis of factors contributing to the slow testing rates in the critical early phase of the pandemic in India revealed a combination of technical and administrative issues like limited testing labs and availability of testing kits, quality issues of kits, poor coordination, limited involvement of the private sector in the testing process and procedural delays. However, once these issues were resolved and testing increased (April onwards) the cases started getting detected much faster and have been increasing ever since suggesting that the virus is ahead of the testing curve in India. Since, this period of increased case detection was post lock down (March 25), with closure of airports and restrictions in travel, it suggests that the cases had already entered the Indian population before the lockdown began. Mumbai, India's financial hub with the busiest airport in the country and contributing to over 20% of all cases in India also showed community spread of virus before the lock down began<sup>6</sup>.

This entry of cases into India before the lockdown could be explained by the delayed policy response of lockdown and poor use of evidence. Unlike countries in Africa (Rwanda) and East Asia (South Korea, Taiwan, Vietnam, Hong Kong), which acted swiftly and decisively based on evidence and used their resources effectively through community centered approaches<sup>7,8</sup>, the federal government in India did not take decisive and effective action early and neither did the community respond adequately. The only exception to this was the state of Kerala (which reported the first case in India), where in actions of the state government were swift and efficient through social mobilization.<sup>9</sup>

While there was scientific evidence available early into the pandemic that person-person<sup>10</sup> and asymptomatic transmission was occurring<sup>11</sup>, this evidence did not guide the testing or the lockdown policy in India. Only symptomatic screening and testing was being done and

international flights were operational. By the time all international flights were stopped in India on March 22, (52 days after the first case was detected), and lock down imposed (March 25), it is possible that a significant amount of asymptomatic SARS-CoV-2 positive individuals had entered the country and these cases would already be spreading the virus in the community. India lost a golden window of opportunity between January and March, 2020 to act decisively based on evidence and is paying a heavy price today in terms of its effect on the health of the people as well as the economy. The World Health Organization (WHO)<sup>12</sup> has stressed the importance for countries to test, isolate and trace new cases to suppress the spread of virus. In addition, COVID-19 surveillance will play a critical role in informing changes in lockdown policies.<sup>13</sup> In such a situation, India needs to ensure that it uses the lessons learnt so far constructively and ramp up its testing rate significantly.

## **Conclusion**

The lockdown policy experiment in India has not resulted in slowing the spread of the virus and this situation is a result of delayed policy decision and poor implementation of the lockdown decision. Delay in initiating social distancing measures, travel restrictions and an extremely poor testing rate in the critical eight weeks in the beginning of the pandemic in India shows a lack of evidence based approach to the problem. Implementation was affected by technical, administrative social and behavioral factors. Although the increase in cases is currently linear (and not exponential), and cases concentrated in some states and cities, testing is skewed in favor of these ‘hot spots’ and a large population is left un-tested. Since, India has the highest positivity rate per population testing rate, this study suggests that India will face a huge burden of SARS-CoV-2 as testing rates increase, unless very decisive and effective actions are taken. In times of such crisis, leadership skills are put to test. Given its economic impact, a lock down policy decision is not easy to make for a leader nor is it the only way to manage the crisis. The uncertainty and crisis created by COVID-19 provides a unique opportunity for leaders and policy makers to become ‘policy entrepreneurs’ with the focus shifting on controllable aspects of an unpredictable future, decision making criteria based on affordable loss or acceptable risks and utilizing contingencies with effective use of evidence through cooperative strategies and alliances.

## References

1. Ministry of Health and Family Welfare. Press Information Bureau (PIB). Government of India. Update on Novel Coronavirus: one positive case reported in Kerala. (Jan 30, 2020). <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1601095>. Accessed June 6, 2020.
2. United Nations News. COVID-19: Lockdown across India, in line with WHO guidance (March 24, 2020). <https://news.un.org/en/story/2020/03/1060132>. Accessed on June 6, 2020.
3. The Centre for Disease Control and Prevention (CDC). Social Distancing. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html> Accessed on June 6, 2020.
4. Indian Council of Medical Research (ICMR). Ministry of Health and Family Welfare. Govt. of India. [https://github.com/datameet/covid19/blob/master/downloads/icmr-backup/ICMR\\_website\\_update\\_25March\\_8PM\\_IST.pdf](https://github.com/datameet/covid19/blob/master/downloads/icmr-backup/ICMR_website_update_25March_8PM_IST.pdf) . Accessed on June 7, 2020.
5. Ministry of Health and Family Welfare. Press Information Bureau (PIB). Government of India. PIB's daily bulletin on COVID-19 (May 31, 2020). <https://pib.gov.in/PressReleasePage.aspx?PRID=1628163>. Accessed on June 7, 2020.
6. Mukherjee K. COVID-19 and lockdown: Insights from Mumbai. *Indian J Public Health* 2020; 64: S168-71. doi: 10.4103/ijph.IJPH\_508\_20
7. Binagwaho A. We need compassionate leadership management based on evidence to defeat COVID-19. *Int J Health Policy Manag*. 2020;x(x):x-x. doi:10.34172/ijhpm.2020.73
8. Shokoohi M, Osooli M, Stranges S. COVID-19 pandemic: what can the West learn from the East? *Int J Health Policy Manag*. 2020; x(x):x-x. doi:10.34172/ijhpm.2020.85
9. Sadanandan R. Kerala's response to COVID-19. *Indian J Public Health* 2020;64: S99-101. doi: 10.4103/ijph.IJPH\_459\_20.
10. Chan JF, Yuan S, Kok KH, To KK, Chu H, Yang J, et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *Lancet*. 2020 Feb 15;395(10223):514-523. doi:10.1016/S0140-6736(20)30154-9.



11. Rothe C, Shunck M, Sothmann P, et al. Transmission of 2019-nCoV infection from an asymptomatic contact in Germany. *N Engl J Med* 2020; 382: 970-971. doi: 10.1056/NEJMc2001468
12. World Health Organization (WHO). Emergencies Press Conference on corona virus disease outbreak.(March18,2020).[https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-18mar2020b4d4018fc1904605831b6a08d31e0cbc.pdf?sfvrsn=1f444736\\_8](https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-18mar2020b4d4018fc1904605831b6a08d31e0cbc.pdf?sfvrsn=1f444736_8). Accessed June 5, 2020.
13. Grassly NC, Pons-Salort M, Parker EPK, White PJ et.al. Role of testing in COIVD-19 control. Imperial College London (April 23, 2020). doi: <https://doi.org/10.25561/78439>.