

On Issues With Covid19 Data And Why Kerala Stands Out In India

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ON ISSUES WITH COVID19 DATA AND WHY KERALA STANDS OUT IN INDIA

Viraj Mahesh Vibhute and Aparajita Chattopadhyay

Abstract

Quality of data released by Government having high COVID 19 numbers was analyzed. Parameters considered are timeliness of the publication of daily reports, accessibility of reports, sufficiency of the report in terms of all details and language(s) in which reports are released. With the exception of Kerala, all other states were found lacking in one or more parameters. The data from the Ministry also lacks in some parameters, perhaps due to lack of submission from the states. Further, an attempt was made to understand as to why Kerala tested more than other states even though testing criteria followed were the same across the country. It is found that a more rigorous implementation of screening process, going beyond guidelines issued by the Ministry could be the reason behind higher testing levels than other states, especially during initial phase of the pandemic.

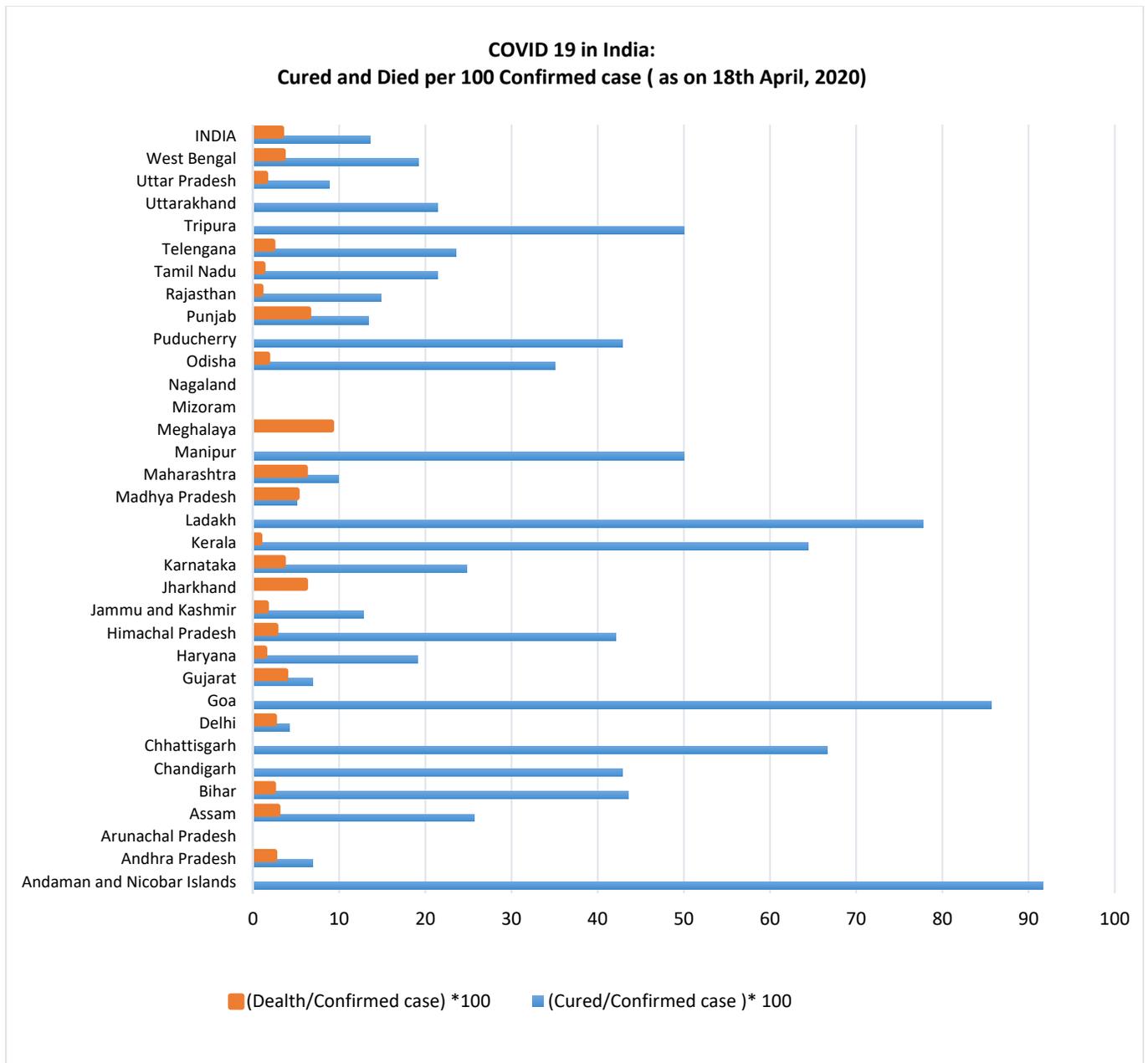
Quality of Data Released

The disease caused by a corona virus called SARS-CoV-2, will have only mild illness for majority of the population, as many medical experts opine. This means, mild COVID-19 cases can recover fully without serious medical interventions. Some basic rates related to Covid 19 for India, as released by the MoHFW as on 18th May, is given in the graph below.

The available data is provided only on confirmed cases and therefore may not count people who are asymptomatic or untested for COVID-19. Experts also don't have information about the outcome of every infection.

Data on numbers tested on COVID 19 is of utmost importance to understand the nature of the pandemic. More complex information on state-wise and district-wise daily status on numbers quarantined, availability of hospital beds, Ventilators, PPEs etc. is far from being in public domain. As the data are not provided on a regular basis, it becomes difficult to analyze them in all respects.

The Medical Education and Drug Department of Maharashtra noted on their twitter handle that they understand "ambiguity can lead to panic" and hence for the purpose of clarity they were releasing the State's first Report of Covid-19 cases. This was on 27th March. The State saw its first Covid positive case almost 20 days earlier on 9th March.



However, the reports are not easily available for many states or at the all India level particularly on the issue of testing. Even though the data has improved in many dimensions, they are found lacking on many dimensions. Some are not easily accessible. The state level variations in the availability, accessibility and comprehensiveness of the data released are striking.

Delhi for example released reports from the day the city reported its first case on 4th March. However, data on number of Tests done, a critical number in the fight against Covid, was not given in daily reports till 28th March onwards.

West Bengal began reporting the number of tests done from 4th February, long before they saw their 1st case on 17th March. However suddenly from 4th April the data reporting became hazy. Numbers of samples sent for testing are reported but reporting on status of the sample, i.e. whether positive or negative, has been stopped. This has made the data difficult to judge and compare.

Rajasthan saw its first case on 14th March. Detailed reporting began from 16th March. However, the reports are not made available on an official website and instead one has to scourge Twitter accounts of journalists to get them.

Maharashtra, after starting its reporting very late, gave detailed reports with the details on the numbers tested. Though only the latest report is kept available at the State's website.

Madhya Pradesh, understandably, has begun releasing reports giving testing numbers only from 30th March onwards. They form part of Media Bulletins which are posted on one of State's official twitter handles, which makes accessing them a difficult exercise. The State Health Department's website gives only limited information on any aspects of the pandemic and the "Corona Testing" page on its Dashboard is still under construction.

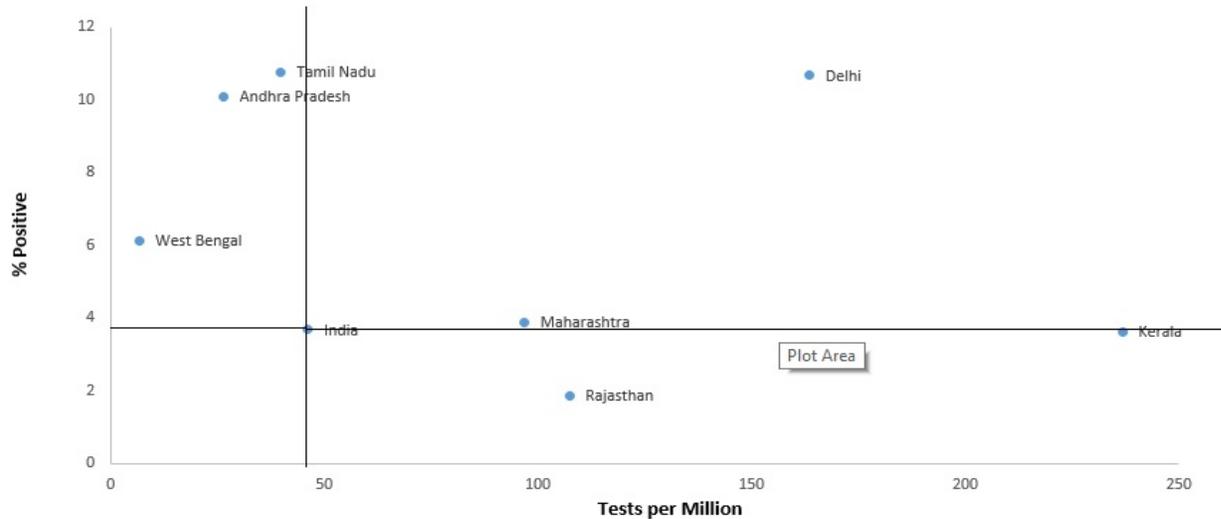
State	Reporting started early	Reports sufficiently detailed	Reports easily accessible	Bilingual Reporting
Kerala	Yes	Yes	Yes	Yes
Delhi	Yes	No	Yes	No
Tamil Nadu	Yes	Yes	Yes	No
Rajasthan	Yes	Yes	No	No
Maharashtra	No	Yes	No	Yes
West Bengal	Yes	No	Yes	No
Madhya Pradesh	No	Yes	No	No

In fact, except for Kerala and Tamil Nadu, no other major states affected by Covid 19 have released regular reports from the beginning providing comprehensive data which can be easily accessible through the website.

Reporting for all India data at the Ministry level started only from 6th March. The data on tests has been inconsistent. Earlier reports gave both the number of tests done and number of individuals tested. The difference between tests done and individual tested remained constant at 890 for several days for some unexplained reason. To avoid confusion, ICMR stopped reporting number of individuals tested, only to resume it again a week later. More importantly, only the latest report is kept available on ICMR website. Data on state wise numbers of Tests done has never been released.

Another issue is that of language. Gujarat and Madhya Pradesh only provide reports in their State’s official language: Gujarati and Hindi respectively. Maharashtra’s reports are erratic; sometimes they are posted in both Marathi and English and sometimes in either one of the two languages. Tamil Nadu, West Bengal, Delhi, Rajasthan and the Ministry give reports in English only. Kerala stands out again, giving reports in both Malayalam and English always.

Kerala’s lead in testing rates from the beginning



Source: State Covid Bulletins/Press notes as on 2nd April

As can be seen above, as of 2nd April, Kerala was far ahead of any other Indian state in Tests per Million while having lower than mean percentage of positive. At one point Kerala, Maharashtra and Tamil Nadu had comparable number of cases: between 300 and 400. If the entire country was following the same rules on who should be tested (i.e. Testing Criteria), Kerala’s testing numbers would not have been so much better than other states by now. In fact, Kerala took the lead in testing from the very beginning and has fallen a bit behind only now after its curve has begun to flatten while cases have continued to flare up in other parts of the country.

India saw its first Covid positive case on 30th of January in Kerala. This first case was a student from Wuhan. She was identified because earlier in the second week and third weeks of January Central Government issued notifications to begin screening passengers coming in from China and Hong Kong. This list of selected countries continued to grow throughout January, February and March. At this point there was no official “Testing Criteria”, i.e. rules on whom and when to test. Till 6th March, when first version of Testing Criteria was released, there is no clarity on the criteria that individual state Governments applied. However, the data gives a hint. As of 6th March, India had tested 3404 individuals, including testing of entire group of 800 individuals evacuated from Wuhan. Of these, 582 individuals were tested by

Kerala alone. Thus, roughly 1 in 5 individuals were tested by Kerala. Kerala is a big emigration hub but not big enough to take a 20% share. Clearly Kerala tested more because it was more proactive.

Testing Criteria released on 6th March stated that symptomatic individuals with travel history will be tested as well as their close contacts. There are two ways in which individuals fitting the criteria can be found out and tested: 1. screening of passengers coming at International Airports and 2. Passengers with travel history and realization of being symptomatic voluntarily come forward. However, at this point not all passengers were being screened at International Airports. There was a list of countries notified by the Central Government from which inbound passengers were to be screened for symptoms. On 6th March, the day testing criteria was declared for the first time, Hardeep Puri, Union Minister for Civil aviation tweeted that Universal Screening had started at all International Airports. However, travel advisories issued after this date continued to list specific countries from which passengers were to be screened/ advised self-quarantine. Several news reports have also noted that India did not begin universal screening till 17th March. Nevertheless, on the same day, i.e. 6th March, Kerala also declared that it will universally screen all international passengers and newspaper reports indicating that this was implemented at Kerala's 4 International Airports. On 10th March Kerala declared that they will screen all domestic passengers coming in at the airports in the state. On 15th March Kerala began screening all railways and buses coming from outside the state and putting people with symptoms in quarantine. No other state Government appears to have taken all these measures so proactively, as it is above and beyond what was recommended by the Central Government.

However, on 20th March updated testing criteria allowed for testing of people with severe symptoms. Kerala, which by now had identified a large number of people with symptoms through its proactive screening measures, was in a position to aggressively implement this updated testing criterion and their tests done per day zoomed from an average of around 170 for 10-day period before 20th March to 400 tests per day for 10-day period after 20th March. An increase in testing is noticeable for all the major states for which data is available for this period as well. Yet, other than Rajasthan, no other state matches Kerala's jump. Kerala had already been testing aggressively for a long time and changing of testing criteria only increased its lead on other states in tests done per million populations.

Why is Kerala doing so well compared to other large states? The answers are simple: they spend highest amount per capita on public health among all the major states in India since ages (leading to better health coverage of population), proactive screening and testing since the very beginning of the Pandemic, better economic and educational status of the state population, transparency in governance and revealing timely data for strategic decision making.

We hope that India will follow epidemiological traits as observed in other countries. Needless to state, early lockdown, gradual and steady measures on identification, isolation and testing, enhancement of infrastructure on health and research, younger age structure,

(climatic factors or vaccination) may help India avoid huge fatality as is observed in western countries. Health in India, being under state directives, may thus observe state differentials in handling COVID19 pandemic. Haziness in data release, coverage and quality of data itself prove such differentials. The pandemic peaks will be lowered over time and thus, we need continuous flow of real time state and national surveillance data for better research and understanding.

Table 2: Selected Statistics on State Expenditure on health, poverty, Fatality and Covid19 tests

States/ UTs	Per Capita Expenditure on Public Health	% Population below poverty line	Dead as a percentage of total infected*	Tests per Million**
Kerala	2060	7.05	0.77	540
Delhi	3516	9.91	36.84	1275
Tamil Nadu	1383	11.28	3.95	411
Rajasthan	1432	14.71	9.41	625
Maharashtra	1088	17.35	38.93	495
West Bengal	868	19.98	17.91	46
Madhya Pradesh	1110	31.65	49.64	279
	<i>source: data.gov.in. Values for 2018-19</i>	<i>Source: RBI. Values for 2011-12</i>	<i>Source: State Bulletins/Press Notes/MoHFW data</i>	

*as on 18th April**as on 17th April

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Views expressed are personal.

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