

## SARS-CoV-2 Testing in India: Please Mind the Gaps

This letter shares insights into the pandemic data situation in India based on a longitudinal study of SARS-CoV-2 testing rates and policy. In the initial phase of the pandemic (which included a 68-day national lockdown period), the testing policy was entirely based on reverse transcriptase–polymerase chain reaction (RT–PCR) (gold standard). However, during the unlock phase, on June 23, 2020, a rapid antigen test (RAT) with a moderate field sensitivity (50%–60%) was approved for testing. The lockdown period curtailed all non-essential movement of people, whereas subsequent unlock phases allowed movement based on the local situation. However, the virus had already spread before the lockdown started<sup>[1]</sup> and hence fast, effective testing was critical for the test-isolate-track/treat strategy for infection prevention. Analysis of the testing speed over 1 year shows a 287 times increase in testing rate in the initial 90 days after lockdown was initiated, followed by a steep and steady decline over time after the introduction of RAT in the unlock phase [Figure 1].

Given the moderate sensitivity of RAT, the testing protocol<sup>[2]</sup> mandated an RT–PCR test for all symptomatic negative RAT cases to avoid false negatives. Since, the RAT is faster and requires fewer resources, numerous states and union territories have switched to this mode of testing. However, compliance with conducting RT–PCR to rule out false negatives has been low, with six densely populated states reporting less than 50% use of RT–PCR.

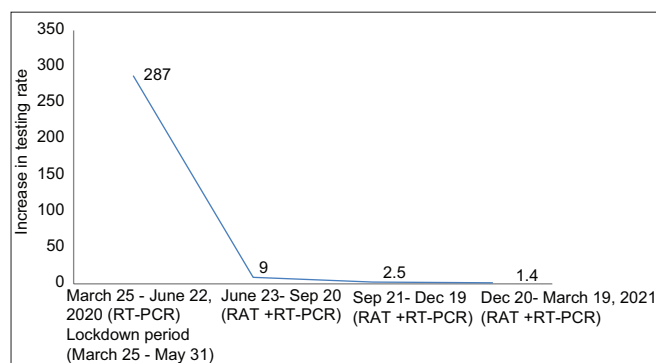


Figure 1: Testing speed in equal blocks of time (90 days)

Hence, virus-infected false negative RAT individuals are being excluded from the case management protocol and are contributing to the spread of COVID-19. These implications are confirmed by the second national serosurveillance study which reports the spread of virus to rural areas and estimates 26–32 infections for every COVID-19 case reported in India.<sup>[3]</sup>

The slow testing speed and improper implementation of testing protocol using inaccurate RAT are critical gaps in India's response to the pandemic, which need to be urgently addressed. There are solutions available such as locally innovated, fast, accurate, and cost-effective diagnostic tests,<sup>[4]</sup> but the testing policy to date has not incorporated these scientific developments and evidences. These gaps between science, policy, and its implementation are affecting the accuracy of SARS-CoV-2 data in India, which has implications for national and global surveillance, international travel policies, and management of this pandemic. Hence, there is an urgent need to address these gaps in the interest of ensuring global health security.

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### Conflicts of interest

There are no conflicts of interest.

### Kanchan Mukherjee

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

#### Address for correspondence:

Prof. Kanchan Mukherjee,  
V. N. Purav Marg, Deonar, Mumbai-400088 India.  
E-mail: [kanch@tiss.edu](mailto:kanch@tiss.edu)

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