Sir,

India contributes nearly a quarter of the global tuberculosis burden.\(^{[1]}\) Currently, this silent epidemic has been overshadowed by the ongoing coronavirus 2019 disease (COVID-19) pandemic. Once tuberculosis dropped off the radar of public health and political priority, several gaps have emerged that have caused a huge setback to our National Tuberculosis Elimination Program (NTEP). In particular, reduced and delayed notification of newly detected cases has remained a problem.

In India, all tuberculosis notifications are electronically communicated through the NIKSHAY platform maintained by the Government of India. We queried...
The NIKSHAY database for monthly case notifications across India from 2018 onward, to ascertain the impact of COVID-19 on tuberculosis notification rates.\textsuperscript{1,2} We built a forecast model for 2020 and 2021 from the information obtained for 2018 and 2019, using Winters additive time series modeling. This forecast model provided anticipated monthly notification figures, along with a 95\% confidence range, had our NTEP continued to perform as previously without being hindered by the COVID-19 pandemic. We compared the actual monthly notification data from 2020 onward against this predicted “target” for each month, and correlated it with the fluctuations in daily national caseload of new COVID-19 patients.

The monthly tuberculosis notification showed a gradual upslope over time, which was reflected in the forecast model as well [Figure 1]. In general, the notification rates had hovered around 200,000 patients every month in 2019, and started deviating from the forecasted rates in March 2020 due to social and travel restrictions. In view of the continued detection of fresh COVID-19 patients, India enforced a strict nationwide lockdown from March 25, 2020, onward. By April 2020, monthly tuberculosis notification rates plummeted to below 84,000 [Figure 1]. These improved marginally over the next few months, but remained much lower than usual numbers during previous years. This suggested a large number of patients were being “missed” by the NTEP, due to widespread disruptions in general and tuberculosis-related health services, but were still able to spread tuberculosis in the community.\textsuperscript{3} As a mitigation measure, the NTEP proposed and implemented a rapid response plan to augment tuberculosis services in September 2020.\textsuperscript{4}

This further improved case notification, and monthly tuberculosis notification had touched pre-COVID-19 levels by March 2021, though it was still slightly below forecasted targets [Figure 1]. Unfortunately, India experienced a much more devastating second COVID wave between April and June 2021. Strict lockdowns and restrictions were once again imposed, and simultaneously tuberculosis notification declined to just over 92,000 cases during May 2021 [Figure 1]. There has been some recovery as the COVID-19 restrictions were eased out, but notifications still remain less than targeted.

Tuberculosis notification in other high-burden countries has also been adversely affected by disruptions due to COVID-19 pandemic. Globally, tuberculosis notifications fell by 21\% in 2020 compared to 2019 data.\textsuperscript{5} The reduction in detection of new cases can lead to long-term increase in tuberculosis incidence and mortality. However, these negative effects can be mitigated with rapid restoration of tuberculosis services, and implementation of focused interventions guided by notification targets, immediately after lifting restrictions.\textsuperscript{6} We need to further improve case detection and notification to avoid major setbacks to the gains made by NTEP in recent years.

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**Conflicts of interest**

There are no conflicts of interest.

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