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## **IDFC Institute: COVID-19 Karnataka Study Press Release**

### **Statewide testing in Karnataka shows high levels of COVID-19 exposure and growing epidemic in rural areas**

India has reported the second highest number of confirmed cases of COVID-19 worldwide, but those numbers are likely to be significant underestimates because of testing policies that focused on symptomatic cases and large numbers of asymptomatic cases in that population. Findings from a new study released by IDFC Institute (Mumbai) suggest that 44.1% of the population in rural areas and 53.8% in urban areas in Karnataka tested positive for antibodies to COVID-19.

The study, funded by ACT Grants (India) and carried out by IDFC Institute, was led by Prof. Manoj Mohanan (Duke University; IDFC Institute), Prof. Anup Malani (University of Chicago; IDFC Institute), Ms. Anu Acharya (Mapmygenome; IDFC Institute) and Kaushik Krishnan (Center for Monitoring Indian Economy).

The findings, based on data collected from a representative sample of households in 20 districts in the state from mid-June through August 2020, suggest that Karnataka alone had approximately 31.5 million cases of COVID-19 by then, relative to 8 million reported nationally in India until now.

“What makes this study unusual is that we were able to partner with the largest panel data survey in India conducted by the Center for Monitoring Indian Economy, the Consumer Pyramids Household Survey, which has been following these households for over five years,” Mohanan said. “All seroprevalence studies globally have had difficulty in getting consent – but our partnership helps us understand the factors that drive selection in such studies and also allows us to have better estimates of population prevalence.”

The study collected data on antibodies for recent/past COVID infection using a test that targets the RBD spike protein and thus better identifies exposure to the SARS-CoV-2 virus rather than other coronaviruses. A unique feature of the study is that it also tested the same individuals for current infections using the RT-PCR test. This pairing allows the study to both report current levels of immunity and forecast future immunity because most of today’s infected population will, in a few weeks, join tomorrow’s immune population.

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“Our data show evidence of high levels of active infections and transmission, especially in urban areas of Mysore and coastal districts during our study period – where 9.7 to 10.5% of individuals tested positive for current infection,” Malani said.

The study also demonstrated the feasibility, in resource-constrained settings, of conducting pooled sample RT-PCR testing where multiple samples are tested simultaneously and individual samples are further tested if a ‘pool’ tests positive. “Our study also demonstrates that pooled RT-PCR tests are feasible in India. But if active infection rates are very high, too many pools might test positive and the strategy becomes less cost effective,” added Acharya, a leading expert on genetic testing in India.

Link to Paper: [medrxiv paper](#)

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