Cambridge Judge Business School Cambridge Centre for Health Leadership & Enterprise

COVID-19 TRACKER: INDIA

10 April 2022

Centre for Health Leadership & Enterprise







The **filtered** <u>daily</u> **growth rate** of new COVID-19 cases reported in India, while still negative, has been edging steadily up towards the positive range since 4th April. The growth rate in cases is likely to turn positive, and COVID cases begin to increase in a few days, breaking a 11 week long spell of declining cases. Current indications are that the surge in cases will be mild and not overly concerning.

The national pattern is driven by a few states. In particular, in **Haryana** and **Delhi**, the filtered daily growth rates of new COVID-19 cases turned positive on 5 April, after increasing steadily over the past seven days. Case numbers remain small in these states.

Kerala, which currently has slightly larger case numbers, shares the pattern of increase in daily growth rates over time. Though the daily growth rate remains negative at present, Kerala is also likely to see it turn positive and infection start to grow in a few days.

Filtered daily growth rate of COVID-19 cases in India



CJBS COVID-19 Tracker for India can be accessed at: <u>www.jbs.cam.ac.uk/covid-india.</u> Contact: <u>Paul Kattuman</u>



Filtered daily growth rates of COVID-19 cas





Notes

This tracker was developed by researchers at Cambridge Judge Business School and National Institute of Economic and Social Research, working with Health Systems Transformation Platform in India, as part of a pandemic monitoring series devoted to India and its states and union territories. It provides short term forecasts of the trajectory of the pandemic, identifying states and union territories that are at risk of increases in infection incidence.

Data: COVID-19 confirmed cases and deaths data are sourced from Johns Hopkins University (JHU), Center for Systems Science and Engineering (CSSE).

New cases: growth rate. The filtered trends presented for daily growth rates of cases are estimated using the Kalman filter, applied to the observed series. The method filters out day of the week effects and random noise to reveal the underlying signal. Unlike methods such as the moving average, this method adapts the trend to changes in real time and characterises underlying patterns of surges or attenuations that are hidden in the volatile series. See: Harvey, A. and P. Kattuman (2020). Time series models based on growth curves with applications to forecasting coronavirus. *Harvard Data Science Review*, Special issue 1 - COVID -19. https://hdsr.mitpress.mit.edu/pub/ozgjx0yn/release/2

Note: Accuracy relies on the quality of the published data. Further, changes in government pandemic policies including testing, and changes in transmission relevant social behaviour may lead to actual outcomes that differ from the current projections.

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