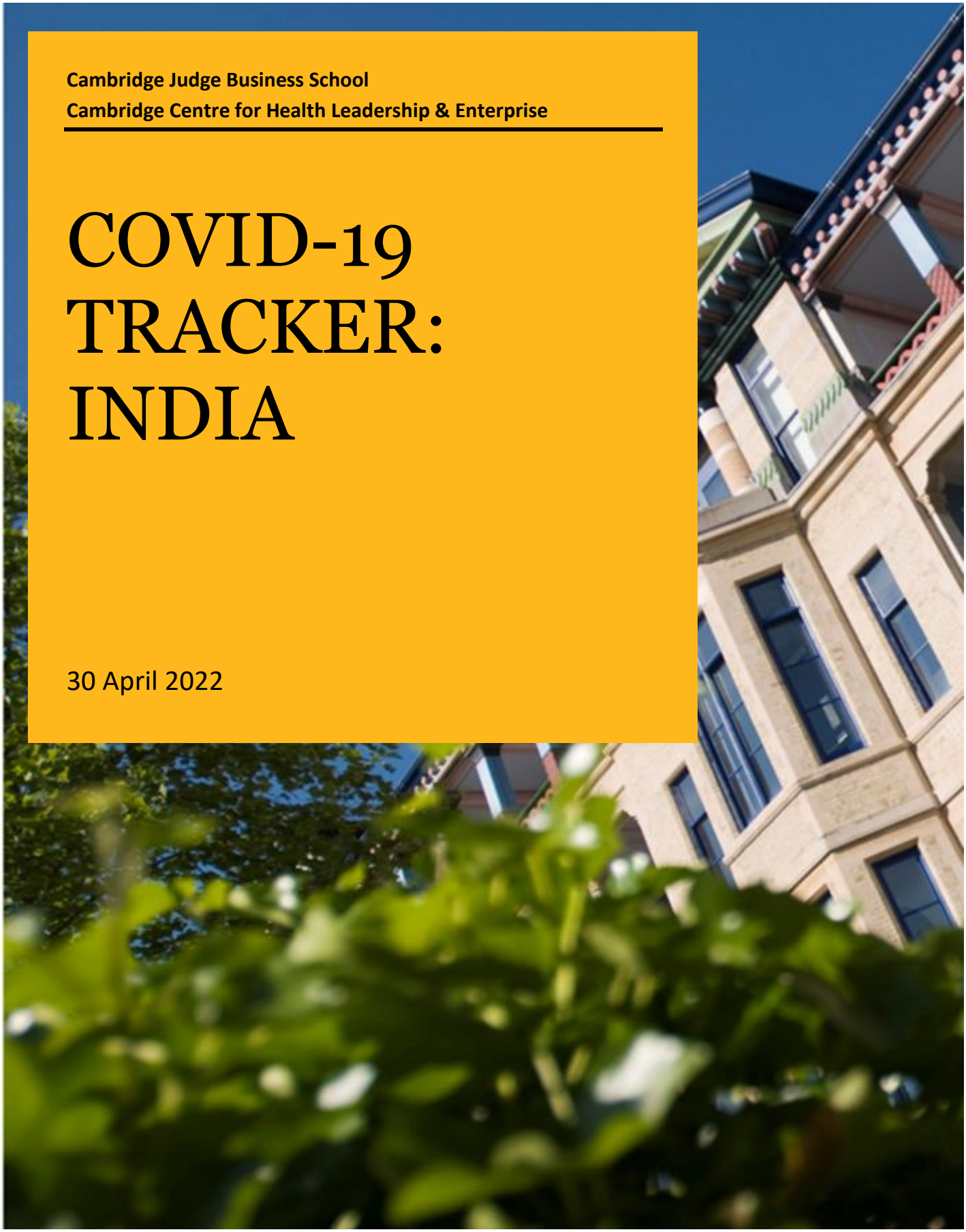


Cambridge Judge Business School
Cambridge Centre for Health Leadership & Enterprise

COVID-19 TRACKER: INDIA

30 April 2022

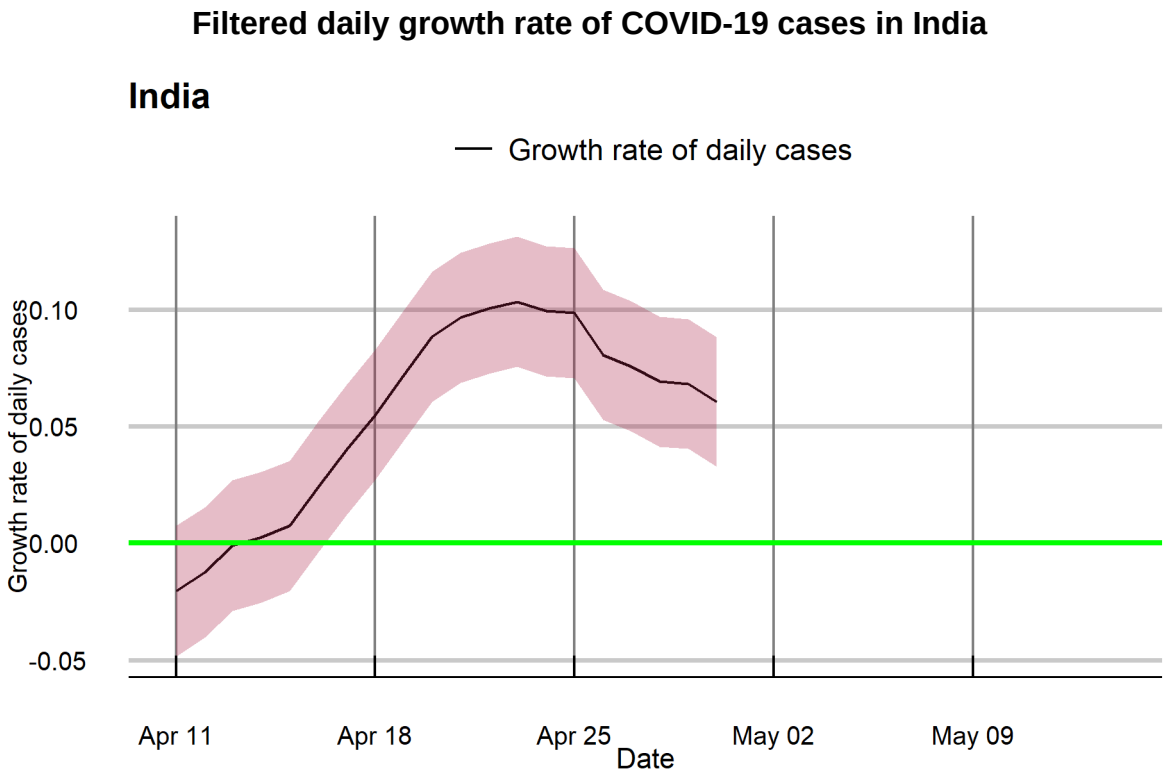
Centre for Health Leadership & Enterprise
UNIVERSITY OF CAMBRIDGE Judge Business School
HSTP Health Systems Transformation Platform
National Institute of Economic and Social Research

The filtered daily growth rate of new cases in India declined to 6% as on 30 April (from 9.5% a week ago). Correspondingly the reproduction number declined to 1.2 (from 1.33 a week ago).

Delhi and Haryana have seen significant declines in their daily growth rates, to 6% and 6.8% respectively as on 30 April. Cases are likely to peak in both regions imminently.

Infection continues to grow at concerning rates in Uttar Pradesh, Karnataka, and West Bengal. Rajasthan and Madhya Pradesh have newly entered the list of states of concern with growth rates of 17% and 14% (reproduction numbers of 1.69 and 1.53) respectively.

Daily Covid-19 cases in India: Forecast

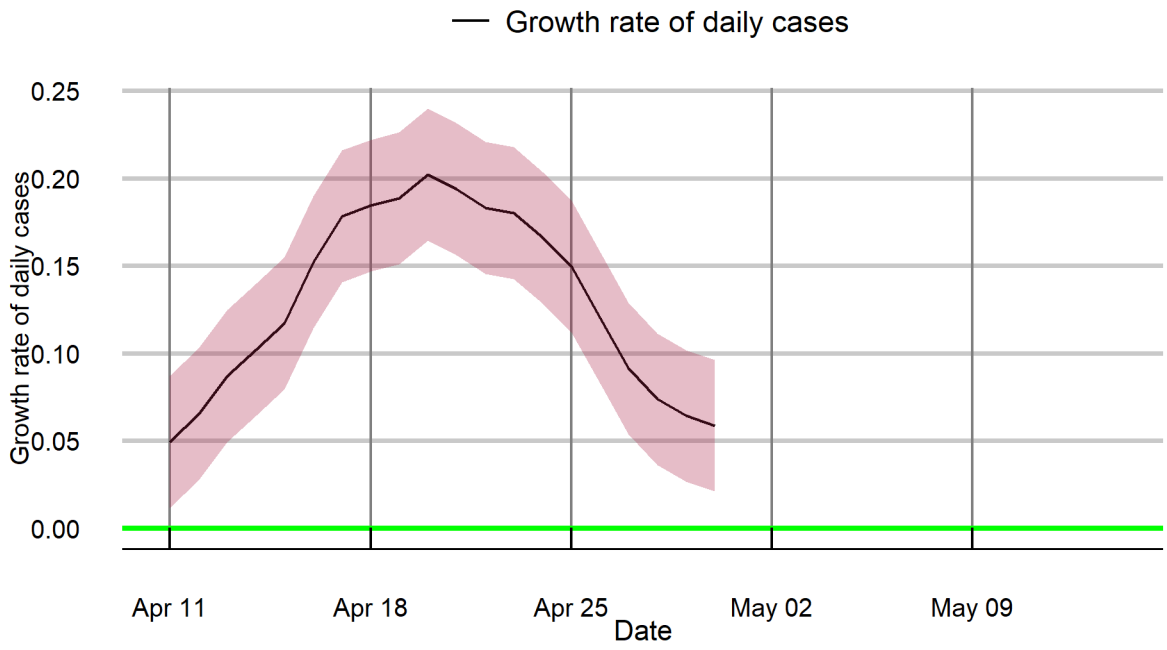


CJBS COVID-19 Tracker for India can be accessed at: www.jbs.cam.ac.uk/covid-india.

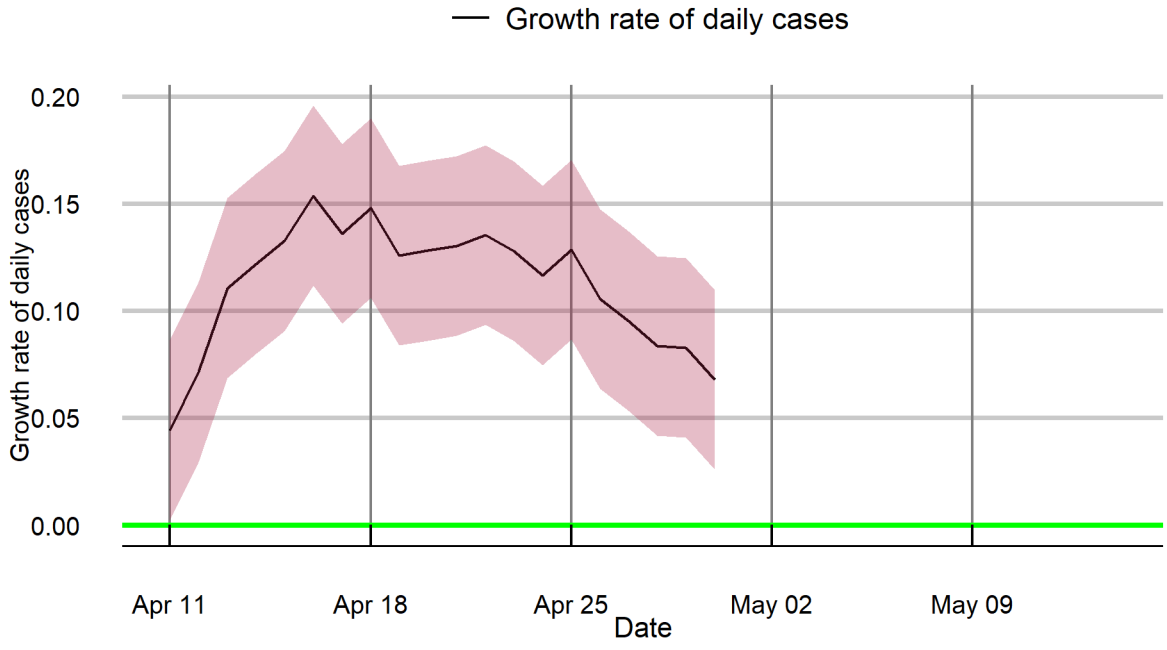
Contact: Paul Kattuman

Filtered daily growth rate of COVID-19 cases
States and Union territories

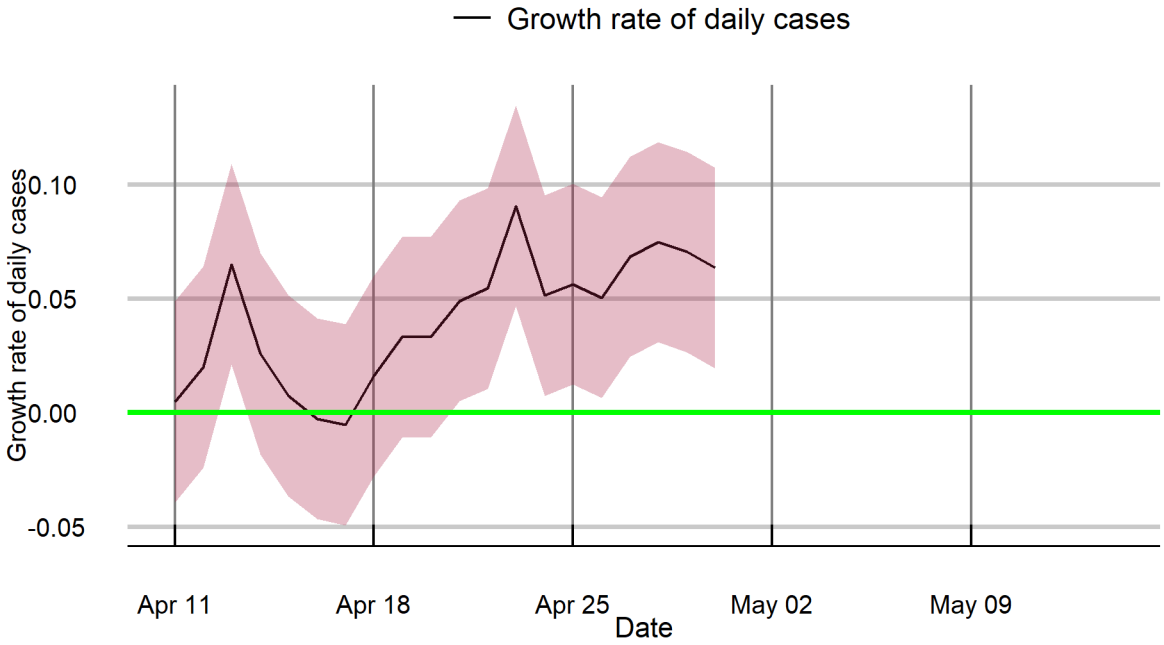
Delhi



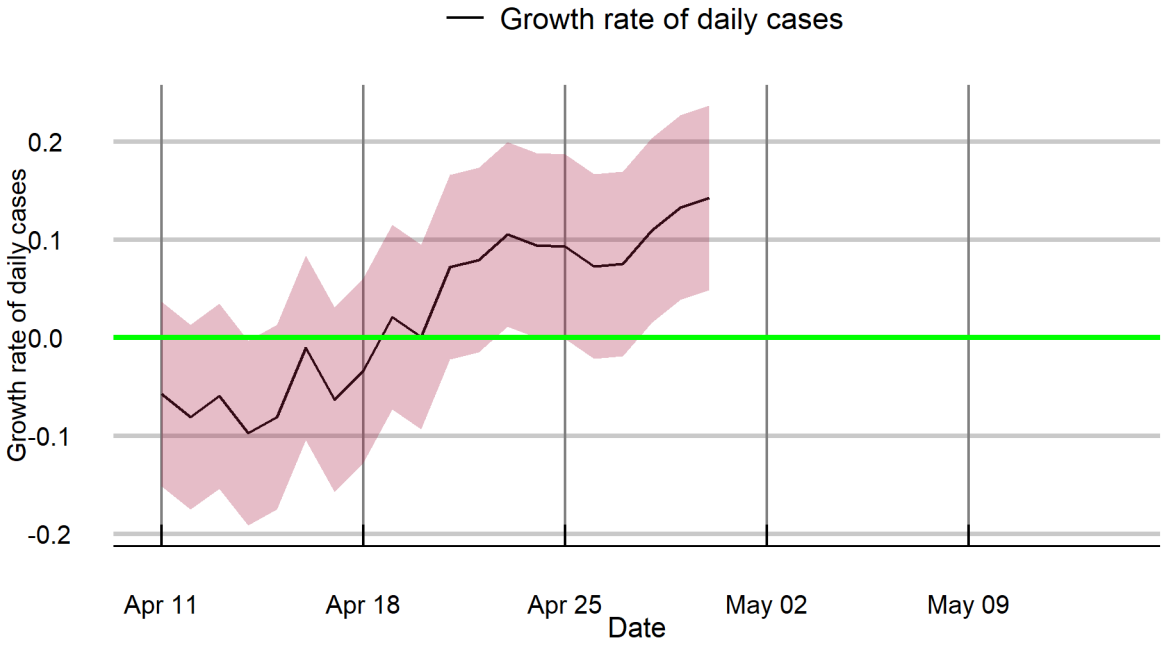
Haryana



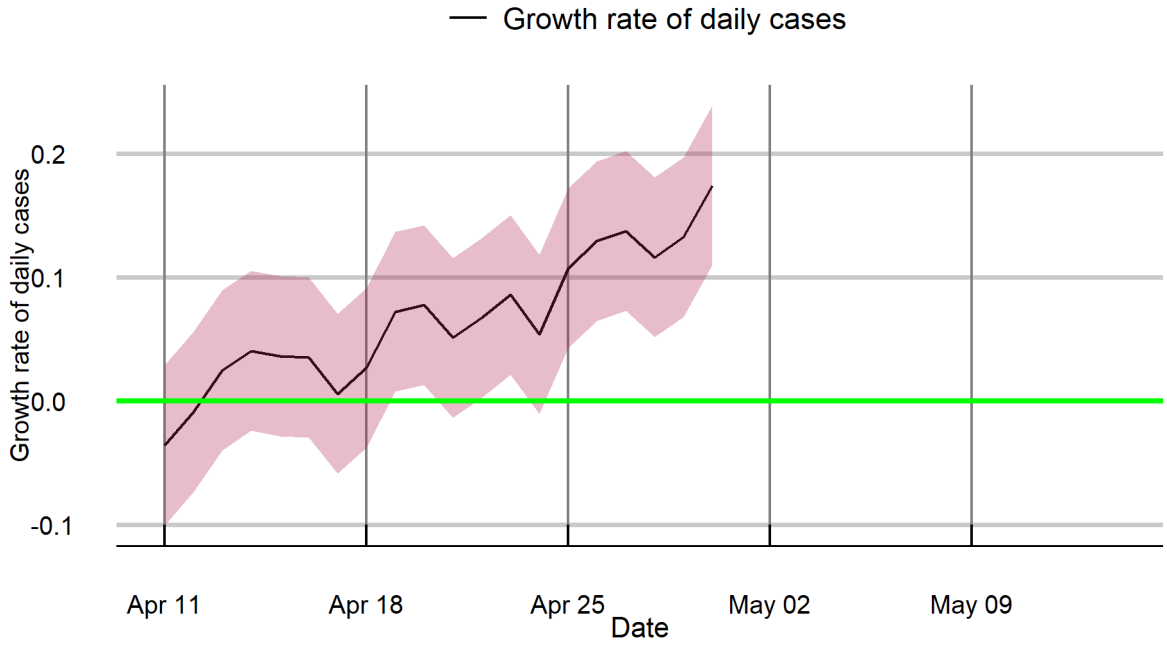
Karnataka



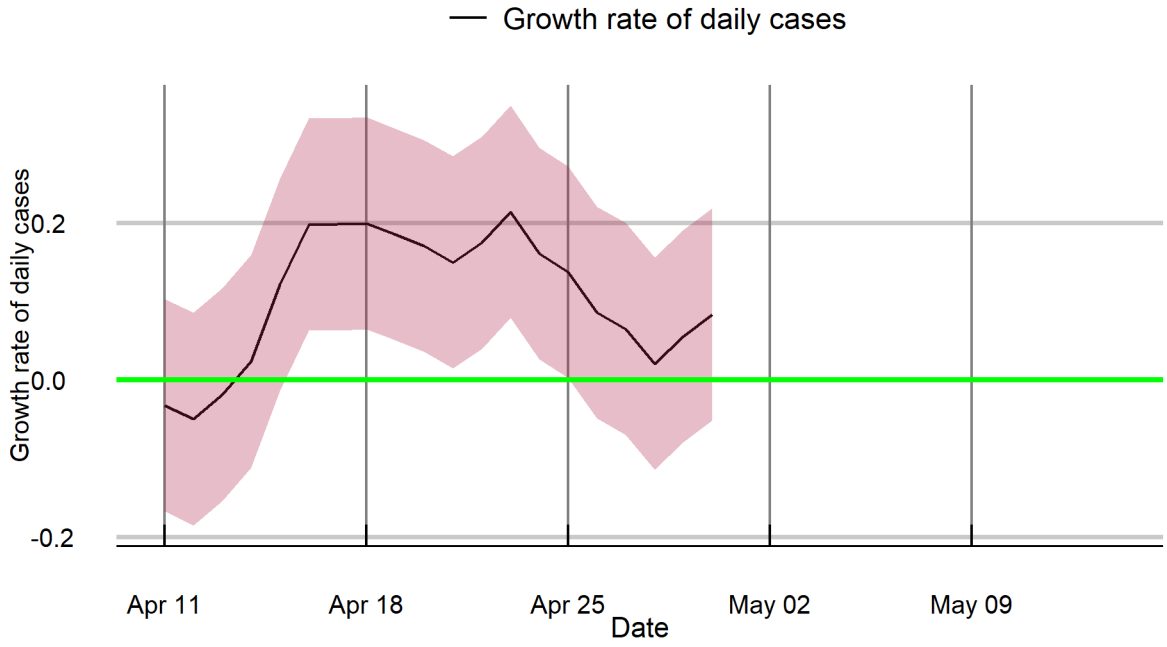
Madhya Pradesh

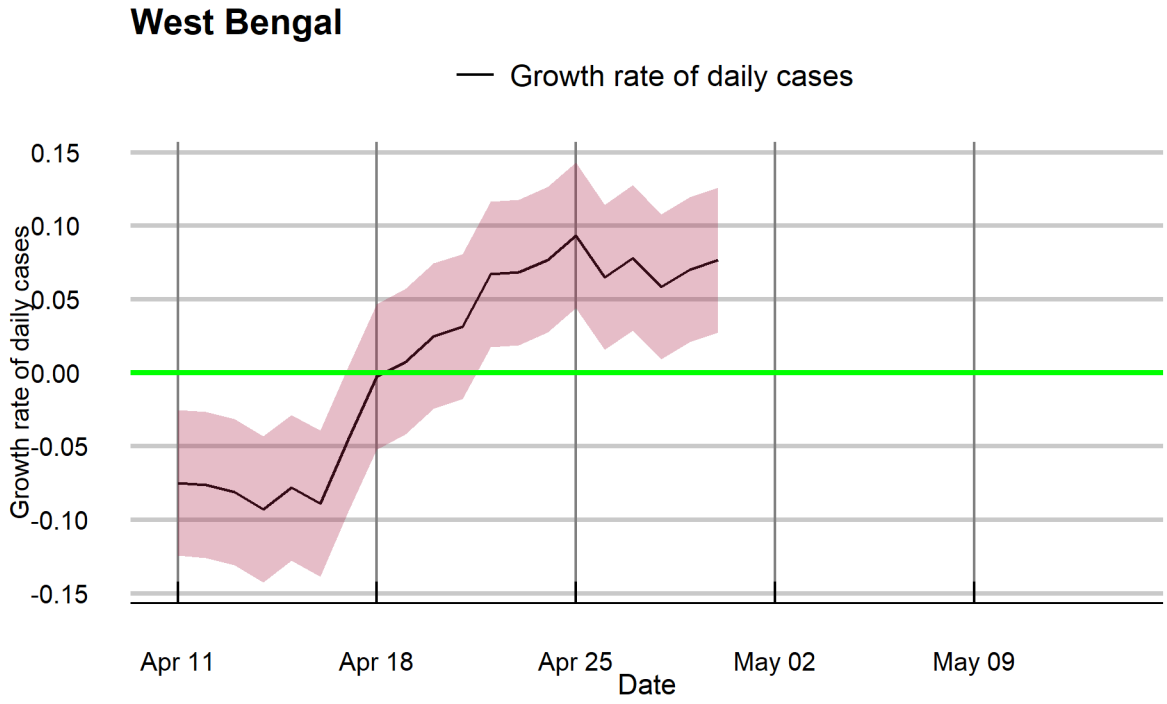


Rajasthan



Uttar Pradesh




West Bengal
Growth rate of daily cases
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
Growth rate of daily cases
Apr 11
Apr 18
Apr 25
May 02
May 09
Date

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.

Andrew Harvey[*], Paul Kattuman[*], Rajeev Sadanandan[#], Stefan Scholtes[*], Craig Thamotheram[+]

[*]University of Cambridge.
[#]Health Systems Transformation Platform.
[+]National Institute of Economic and Social Research

Cambridge Centre for Health Leadership & Enterprise
Cambridge Judge Business School
University of Cambridge
Trumpington Street
Cambridge
CB2 1AG
United Kingdom

T +44(0)1223 339700
health@jbs.cam.ac.uk
www.jbs.cam.ac.uk/health