

# Predicting the present

Correcting the reporting delays in COVID-19 surveillance

Iwona Hawryluk  
Imperial College London

8th May, SPP 2021

 @iwonahaw

## Brazil's coronavirus death toll passes 4,000 a day for first time

Covid crisis 'out of control', says expert as p continues to resist lockdown

- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)



▲ A patient being taken by ambulance to a dedicated coronavirus ward in Manaus, Brazil. The country's death toll has climbed to almost 337,000. Photograph: F

## India's Covid death toll at record high, but true figure likely to be worse

Many patients do not have access to healthcare or do not come forward for tests, doctors have warned

- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)



▲ People waiting to receive a vaccine jab in Nagaon district, in the state of Assam. Photograph: Anuwar Hazarika/Rex/Shutterstock

## Brazil tops 251,000 Covid deaths as daily fatalities also set record

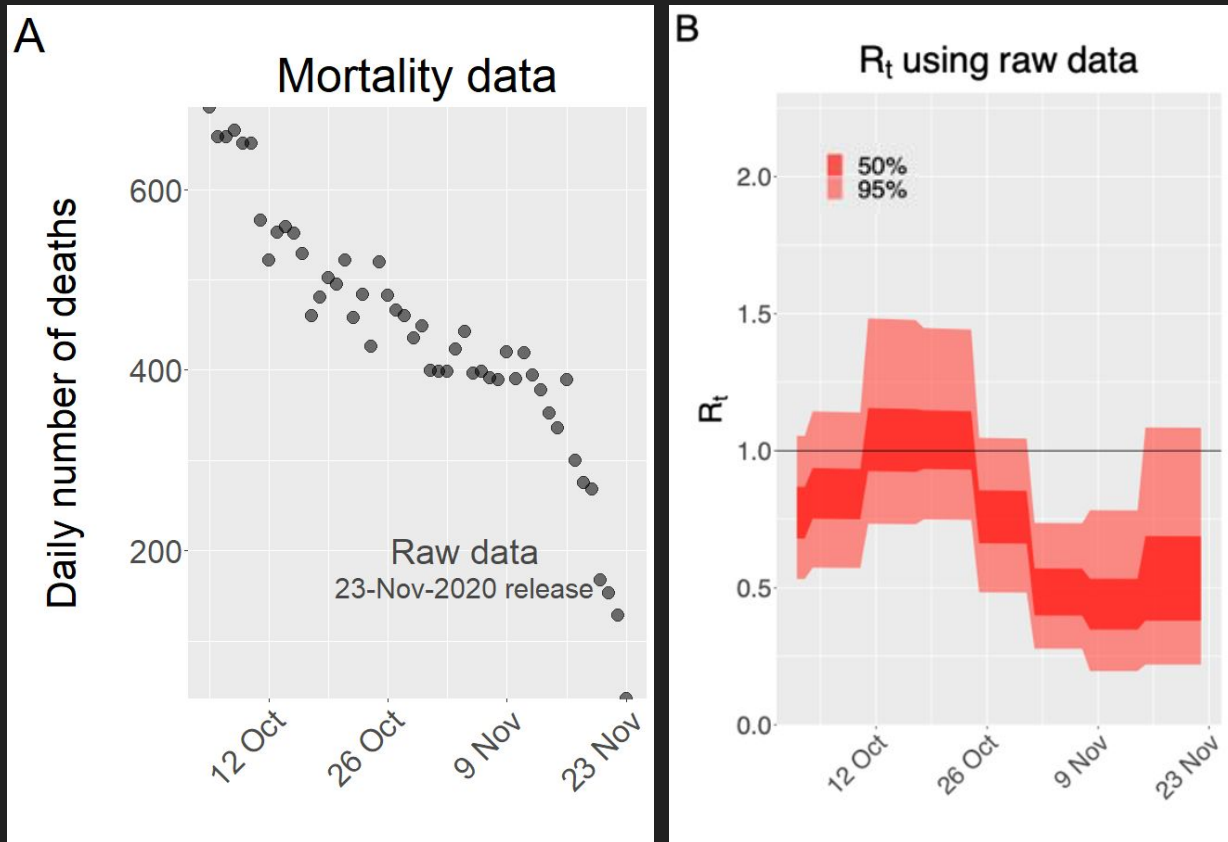
2 Brazilians die in a day amid slow vaccine rollout  
President Jair Bolsonaro again discourages mask use



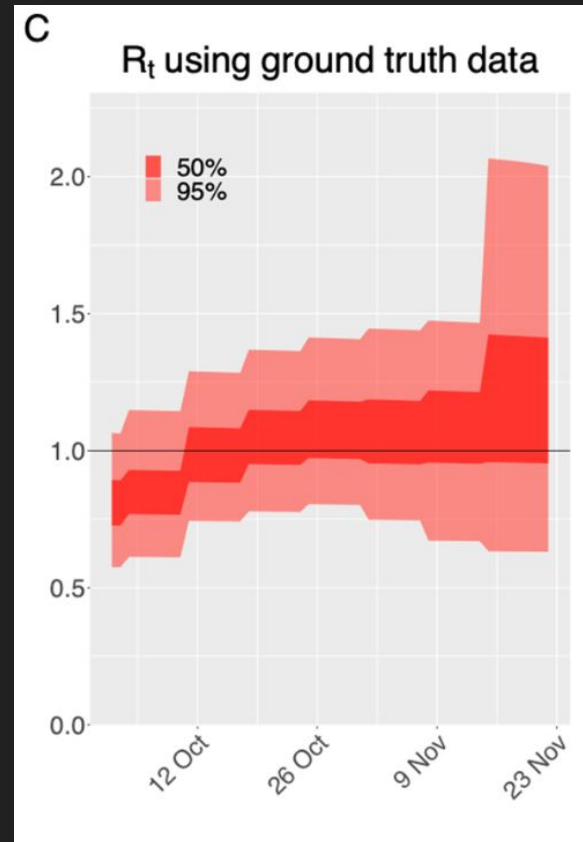
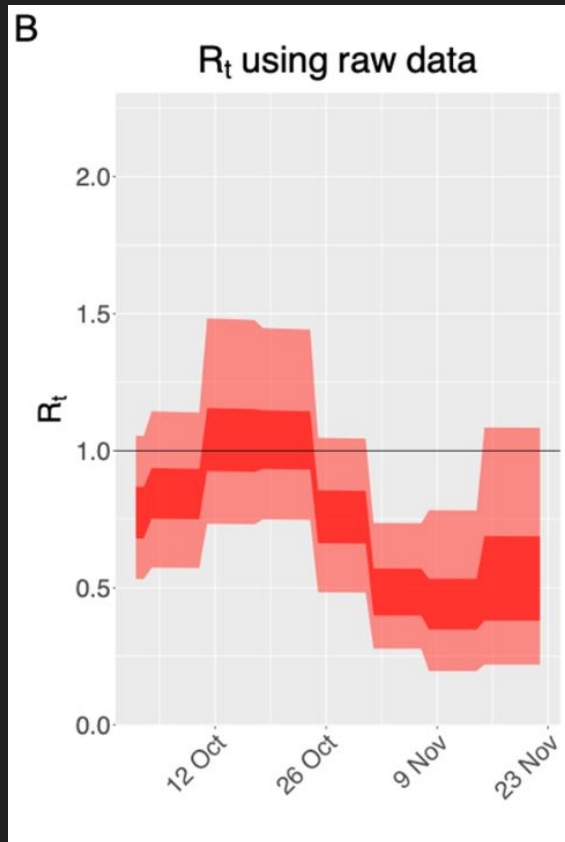
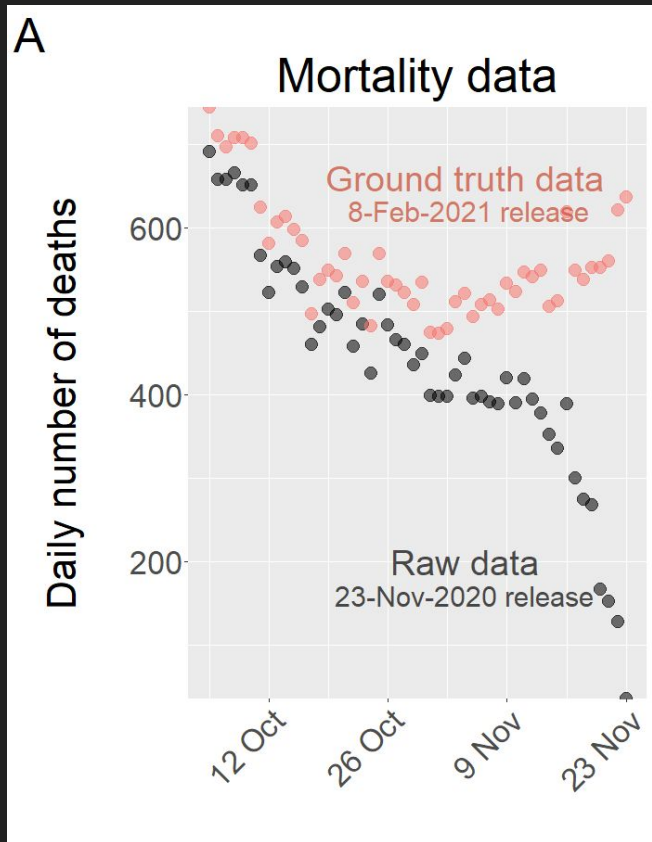
▲ A digger walks at the Parque Taruma cemetery, amid the coronavirus disease outbreak, in Manaus, state, on Thursday. Photograph: Bruno Kelly/Reuters

Koronawirus w Polsce nie odpuszcza. Urzędy wydają akt zgonu za aktem zgonu

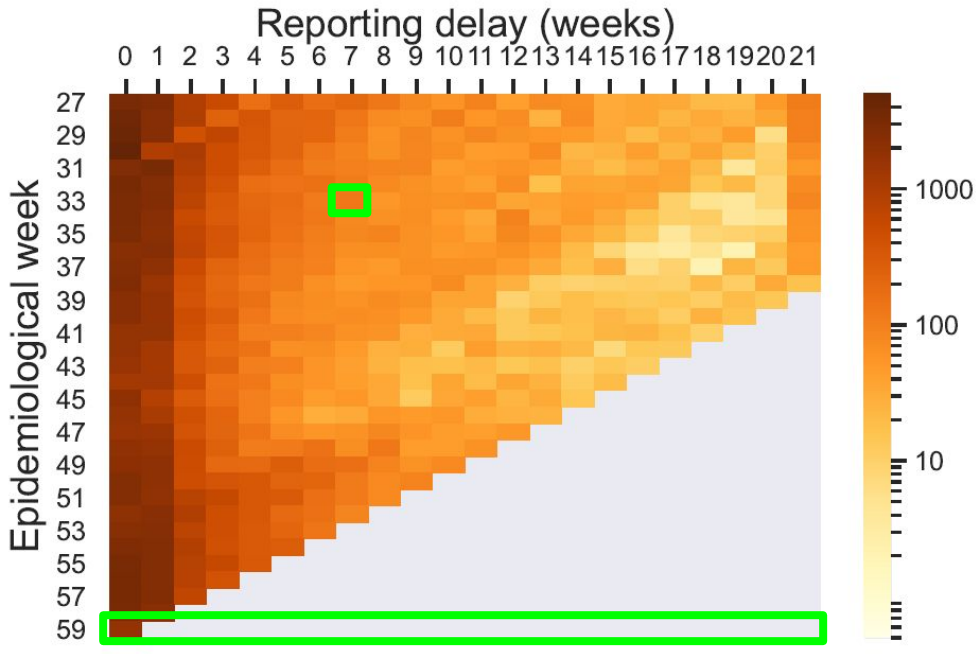
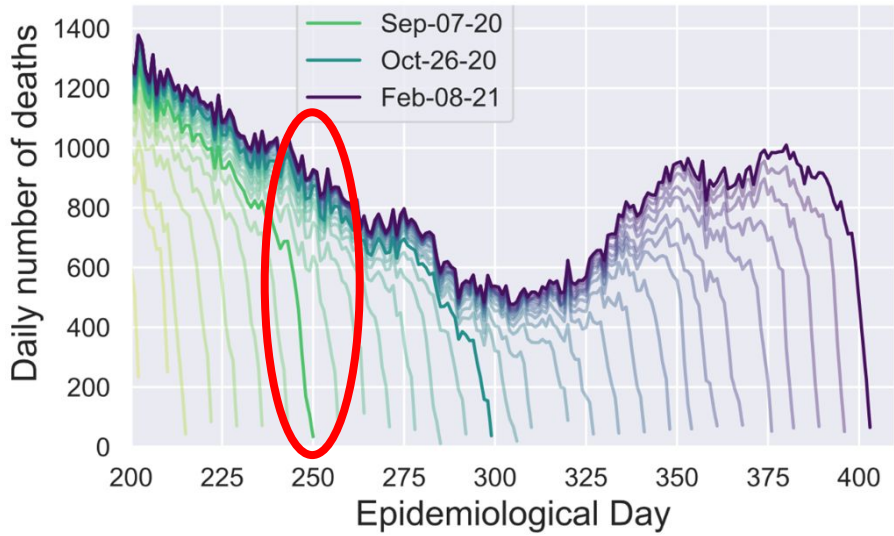
Koronawirus w Polsce: 4 612 nowych zakażeń i 144 zgony [DANE Z 2.05]



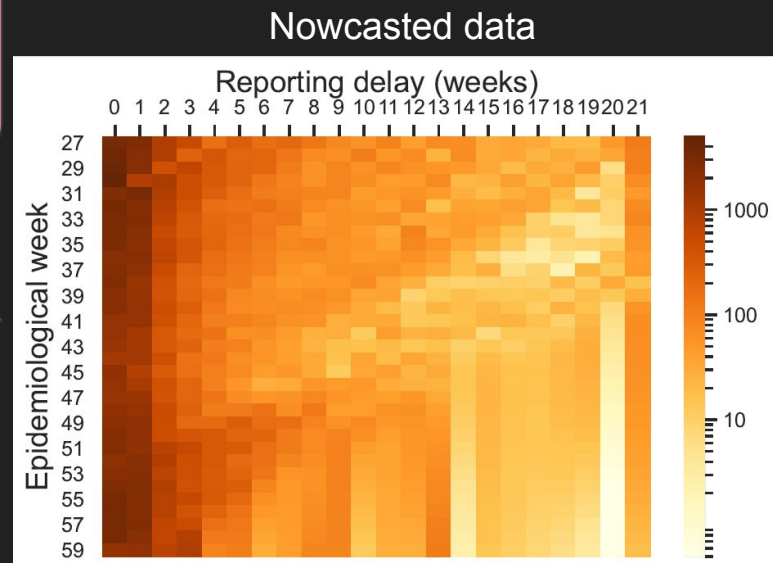
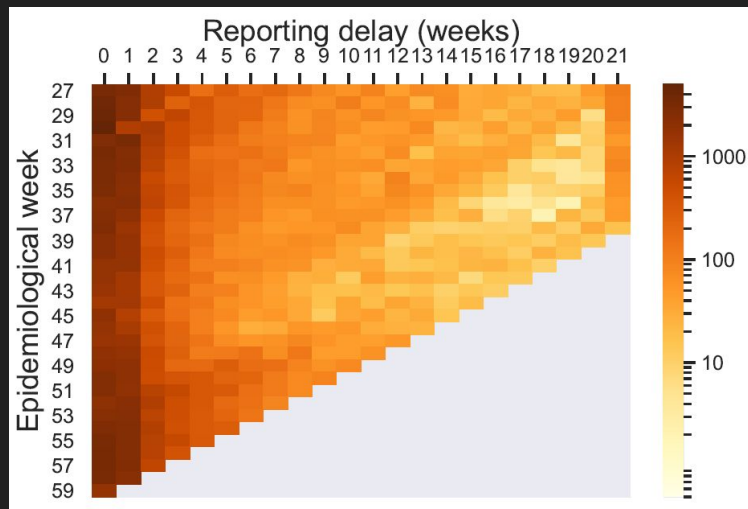
Data: Brazil Ministry of Health,  
<https://opendatasus.saude.gov.br/>

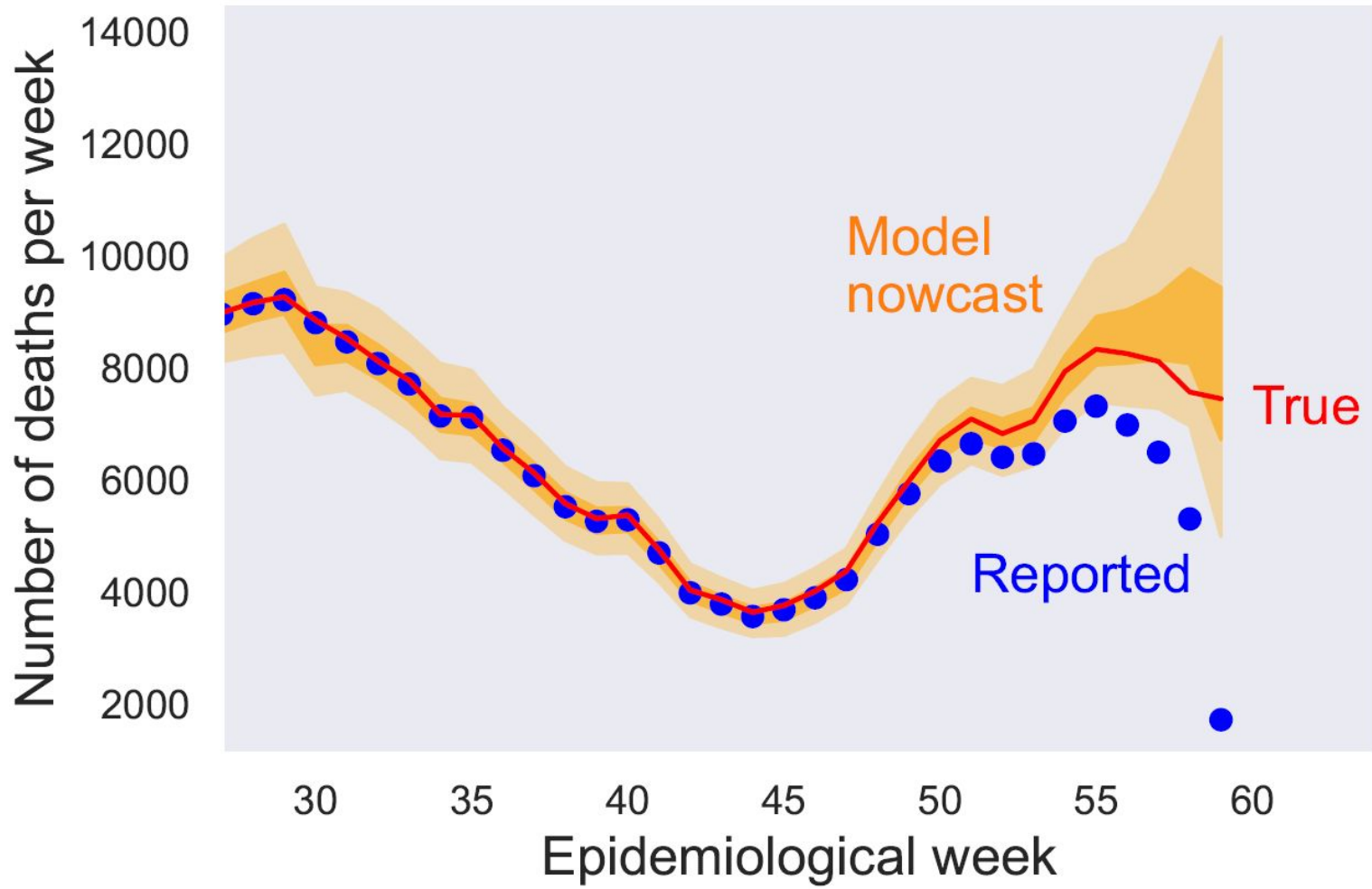


Data: Brazil Ministry of Health,  
<https://opendatasus.saude.gov.br/>



Data: Brazil Ministry of Health,  
<https://opendatasus.saude.gov.br/>



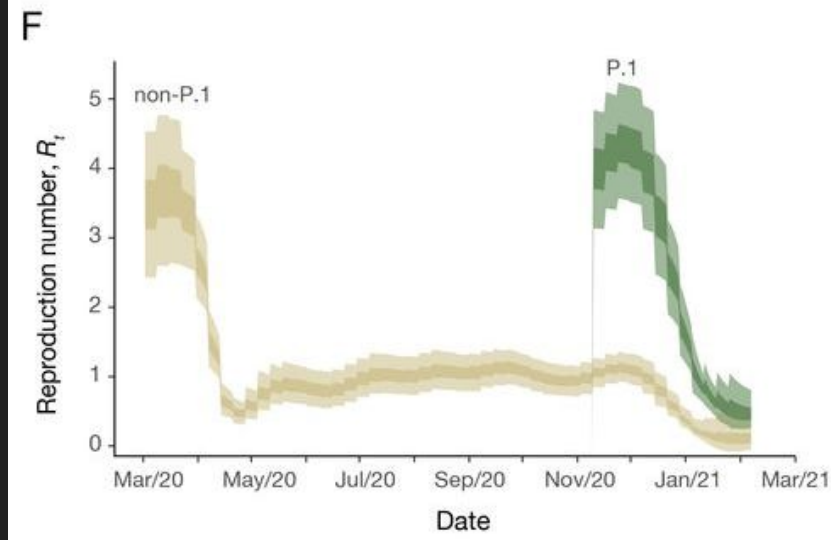


## Brazil's 'rapid and violent' Covid variant devastates Latin America

Expert says global leaders must not ignore Brazil, which is 'brewing variants left, right and centre'



▲ Relatives pray during the funeral of a 57-year-old Covid victim at a cemetery in Manaus, Brazil. The P.1 variant originated in or near the city. Photograph: Michael Dantas/AFP/Getty Images



### RESEARCH ARTICLE

## Genomics and epidemiology of the P.1 SARS-CoV-2 lineage in Manaus, Brazil

Nuno R. Faria<sup>1,2,3,\*†</sup>, Thomas A. Mellan<sup>1,†</sup>, Charles Whittaker<sup>1,†</sup>, Ingra M. Claro<sup>2,4,†</sup>, Darlan da S. Candido<sup>2,3,†</sup>, Swapnil Mishr...

+ See all authors and affiliations

Science 14 Apr 2021:  
eabh2644  
DOI: 10.1126/science.abh2644



# Key points

- Don't trust the data if there can be measurement delay involved - use nowcasting!
- Nowcasting gives a reliable picture of the ongoing epidemic
- Other diseases and other applications (disease agnostic, only data-driven)

# Thank you!

 @iwonahaw

i.hawryluk19@imperial.ac.uk

“Gaussian Process Nowcasting: Application to COVID-19 Mortality Reporting”,  
<https://arxiv.org/abs/2102.11249>

Co-authors: Samir Bhatt, Thomas Mellan, Seth Flaxman,  
Swapnil Mishra, Henrique Hoeltgebaum, Xenia Miscouridou,  
Charles Whittaker, Michaela Vollmer, Ricardo Schnekenberg

**Imperial College  
London**

UNIVERSITY OF  
**OXFORD**