

# Coronavirus 'not yet under control' in Brazil, scientists warn

May 12 2020, by Dr Sabine L. Van Elsland, Stephen Johns

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Centro de São Paulo, Brasil. Ana Paula Hirama/Wikipedia

The coronavirus epidemic in Brazil is not yet under control according to a report from Imperial researchers.

The findings suggest that the rate of transmission, or the R number, is still above 1 in all states.

The team's latest study, [Report 21](#), from the WHO Collaborating Centre

for Infectious Disease Modelling within the MRC Centre for Global Infectious Disease Analysis, the Abdul Latif Jameel Institute for Disease and Emergency Analytics (J-IDEA), Imperial College London in collaboration with Imperial's Department of Mathematics. presents estimates of COVID-19 cases and transmission in Brazil.

The researchers, from the Imperial College COVID-19 Response Team, also estimated that Brazil's R number has dropped substantially by 54 percent following interventions.

## **Infection levels**

Since the first case was reported in Brazil on 25 February, Brazil has become the epicentre for COVID-19 in South America.

In the past 10 days, the number of reported infections more than doubled. The country is now reporting more than 135,000 cases and 9,000 deaths.

Of the 16 states analysed, five states account for 81% of all reported deaths. Brazilian state and [city officials](#) have mandated extensive public health measures (so-called non-pharmaceutical interventions, or NPIs) to reduce the transmission of COVID-19.

The team looked at the five states in Brazil with the highest number of deaths and estimate that the population infection levels range from 3.3% in São Paulo to 10.6% in Amazonas.

## **Government measures**

Following the implementation of NPIs such as school closures and decreases in population mobility, the authors estimate that the

reproduction number has dropped substantially.

However, in all 16 states analysed, the reproduction number remains above one, suggesting that the epidemic is not yet controlled and will continue to grow.

These results suggest that further action is needed to limit spread and prevent health system overload.

## **Virus spread 'not under control'**

Dr. Thomas Mellan, from the School of Public Health, said: "We estimate the reproduction number is greater than one, meaning that the spread of the virus in Brazil is not under control."

Dr. Henrique Helfer Hoeltgebaum, from the Department of Mathematics, said: "Conditional on current mobility patterns in Brazil, we find that the transmission of SARS-CoV-2 is still not under control."

Dr. Swapnil Mishra, from the School of Public Health, said: "Our analysis clearly shows that Brazilian governmental measures have had an effect on the reduction of transmission of SARS-CoV-2. However, at the same time, we see that the epidemic is still not under control in Brazil and is spreading. We hope with more measures in place Brazil can contain the spread of the pandemic."

Since the emergence of the new [coronavirus](#) (COVID-19) in December 2019, the Imperial College COVID-19 Response Team has adopted a policy of immediately sharing research findings on the developing pandemic.

Provided by Imperial College London

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