COVID-19 in Brazil

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- Updated figures
- Timeline
- The response
Fig. 4. Spread of SARS-CoV-2 in Brazil. (A) Spatiotemporal reconstruction of the spread of Brazilian SARS-CoV-2 clusters containing 3 or more sequences during the first phase (left) and the second epidemic phase (right). Circles represent nodes of the MCC phylogeny and are coloured according to their inferred time of occurrence. Shaded areas represent the 80% high posterior density (HPD) interval and depict the uncertainty of the phylogeographic estimates for each node. Solid curved lines denote the links between sequences and the directionality of movement. Sequences belonging to clusters with less than 3 sequences were also plotted in the map with no lines connecting them. Background population density in 2020 for each municipality was obtained from the Brazilian Institute of Geography (https://www.ibge.gov.br/). Fig. S14 shows a zoomed version of virus spread in the Southeast region. (B) Estimated number of within state and between state virus migrations over time. (C) Average distance travelled by an air passenger per day in Brazil calculated using openly available data from the National Civil Aviation Agency of Brazil (www.anac.gov.br/en). Light grey boxes indicate starting dates of NPIs across Brazil.

Source: Candido DS et al. Evolution and epidemic spread of SARS-CoV-2 in Brazil. medRxiv
DOI: 10.1101/2020.06.11.20128249
Accumulated number of confirmed cases of COVID-19, distribution according to States, and trend curve, Brazil, March to June, 2020

https://painel.covid19br.org/
Number of COVID-19 confirmed cases (logarithmic scale) and forecast for the next five days, Brazil, March – June 2020

https://covid19br.github.io
COVID-19 in Brazil and in other countries
(a) accumulated number of cases; (b) daily number of new cases; (c) daily number of deaths
COVID-19 Rt for the Brazilian States, as of June 22, 2020

https://covid19analytics.com.br/reproducoes/numero-efetivo-de-reproducao-22-de-junho-de-2020/
National serosurvey for SARS-COV-2 antibodies – EPICOVID-19-BR

Sample of 133 municipalities with a population above 100,000. Total population 68.6 million (32.7% of Brazil)

1st survey – May 14 – 21. n = 25,025   Seroprevalence: 1.4% (95% CI: 1.3 – 1.6)

2nd survey – June 4 – 7. n = 31,165      Seroprevalence: 2.8% (95% CI: 2.6 – 3.0)

1st survey – 11 of the 15 municipalities with the highest prevalence located in the Amazon Region.  
2nd survey – 12 of the 15 municipalities with the highest prevalence located in the Amazon Region.

http://epidemio-ufpel.org.br/uploads/downloads/19c528cc30e4e5a90d9f71e56f8808ec.pdf
Social isolation index*, State of São Paulo, Brazil, March – June, 2020

*Proportion of mobile telephones that did not move

https://www.saopaulo.sp.gov.br/coronavirus/isolamento/
March 24
Formal pronouncement of the PR:
“COVID is a little flu, it is a media hysteria”

April 8
2nd pronouncement:
The solution has been discovered: chloroquine
April 15
Supreme court decides that states and municipalities do have the authority to decree quarantine.

March 28
PR attends rally, not respecting the social distancing measures, nor wearing a mask.
April 16
Minster of Health Dr. Mandetta fired

Bolsonaro demite Mandetta
Em meio à pandemia de coronavírus, Bolsonaro demite o ministro da Saúde, Luiz Henrique Mandetta. A decisão ocorre dias depois de o titular da pasta ter dado uma entrevista contrariando a posição do presidente em relação à resposta à pandemia de covid-19. Mandetta defendia o isolamento social. O médico oncológista Nelson Teich foi escolhido para substituir Mandetta. (16/04)

May 15
Dr. Teich, the new health minister, fired

Nelson Teich pede demissão do Ministério da Saúde
May 4
Facemasks made mandatory in public transportation

April 12
Rio de Janeiro, tribute to health professionals
June 7
Ministry of Health announces “changes” in the way COVID-19 data are presented
June 12
PR calls on his supporters to invade hospitals

June 21
Demonstrations against the PR policies
The Brazilian Public Health System (SUS)
The role of the three levels of government

**Covid-19 emergence:**
The majority of states and municipalities declared quarantine by late March.
States and municipalities ill prepared for their “new” role.
Heterogeneous capacity to enforce social distancing measures.
States and municipalities issuing conflicting measures and messages, with frequent and unclear changes.
The Response

✓ Heterogeneous capacity for laboratory diagnosis, intensive care, and public health surveillance.
✓ It seems that the focus of health authorities and the media is not on prevention, but on high complexity care, ICU, drug treatment, etc.
✓ Universities, health professional associations, the media, state and municipal governments joining efforts to respond to the epidemic.