

Brazil has been one of the countries most impacted by COVID-19. Kirsty Howitt, FIA shares her country's challenges. Kirsty is the Head of Actuarial and Modelling, Gallagher Re Latin America, based in Rio de Janeiro, Brazil.

Highlight of Disease Status:

Population as at Mid 2020 ¹	211,755,692
Population Density per Sq km ²	25
First Official Case	26-Feb-20
Lockdown ³	Varies by state and municipality. For example, Rio de Janeiro entered into full lockdown from 11 May 2020 until 1 June 2020. Sao Paulo never entered into full lockdown but had varying quarantine measures.
Number of Days	Varies by state and municipality. 21 days for Rio de Janeiro (counted from the first municipality to enter lockdown).
Did Lockdown reduce New Cases?	Varies by state and municipality.
Sufficient Capacity in Healthcare System	Varies by state and municipality as well as private vs public health system.
Cumulative Cases as at 30 Nov 2020	6,290,272
New Cases in Nov 20	795,896
New Cases Per 000 Population	35.37
Case Fatality Ratio	2.74%

Brazil's Initial Response

As cases of COVID-19 rose in Europe after the initial outbreak in Wuhan, China, Brazil was already on high alert. Despite not yet having any confirmed cases, Brazil declared a national emergency on 4th February 2020. Shortly after, on 9th February, Brazil repatriated 34 Brazilians from Wuhan using the Brazilian air-force.

It was only on the 26th February that Brazil confirmed its first imported case, a 61 year old man returning from Italy.

The first community transmission was confirmed on the 5th March. At that point, there were 8 cases confirmed in Brazil, 6 in Sao Paulo, 1 in Espírito Santo and 1 in Rio de Janeiro. Sao Paulo appeared to be emerging as the epicentre of COVID-19 in Brazil.

During the first half of March, the Ministry of Health announced various steps taken to reinforce health services. On the 17th March the states of Rio de Janeiro and Sao Paulo, followed by Bahia on the 19th March, declared states of emergency and defined temporary measures to prevent the spread of COVID-19 such as suspension of public events and closure of educational institutions as well as restrictions in bars, restaurants and shops.

¹ <https://www.ibge.gov.br/en/indicators.html>

² <https://data.worldbank.org/indicator/AG.LND.TOTL.K2?locations=BR>

³ <https://g1.globo.com/rj/rio-de-janeiro/noticia/2020/05/11/lockdown-comeca-em-niteroi-e-sao-goncalo-as-primeiras-do-rj-a-adotarem-a-medida.ghtml>

In the following days, the Ministry of Health acknowledged community transmission in national territory and advised states to adopt social distancing measures.

Political instability

On the 24th March, the President, Jair Bolsonaro, began a public rhetoric contrary to the Ministry of Health, criticising the order that people stay at home, and that if he contracted the virus himself it would be a “gripezinha”, which translates to a little cold. Despite the president’s opinions, presidential control over the 26 states is limited due to a federal state system, where states to a large extent are self-governing, unlike the UK but similar to Germany and the USA.

Tension grew between the Ministry of Health and the president and on the 16th April the president dismissed the Minister of Health Luiz Henrique Mandetta. The following week the Justice Minister Sergio Moro resigned, claiming Bolsonaro’s inappropriate political interference in the federal police.

The movements in government have had an impact on market confidence in Brazil amid the political uncertainty and the pandemic crisis. The Brazilian Real has devalued by 23% to the dollar during 2020, as at 30th November.⁴

Balancing the economy

The new health minister, Nelson Teich, stated that he was fully aligned with the president and that the health and the economy would not compete with one another, implying that there would be a more holistic approach to measures taken that balanced COVID-19 measures with the economic wellbeing.⁵

COVID-19 hit when Brazil was still recovering from its 2014-2016 recession. With the closure of large parts of the service sector, the largest sector driving GDP (63% in 2019)⁶, the crisis created a steep drop in income and employment⁷, increased the likelihood of families falling into poverty among low-income groups and informal workers – two vulnerable groups that were already overrepresented in Brazil before the COVID-19 pandemic.

The Brazilian government’s initiatives to contain the COVID-19 economic and social crisis include:

- Economic stimulus package of USD 150 billion (target deficit of USD 22 billion is now expected to reach USD 162 billion)
- Monthly emergency aid payments ranging between USD 108 to USD 217 distributed to 67 million individuals.⁸

After less than a month in the role, Nelson Teich resigned from the position on 15th May, reportedly due to differences with the President on the use of the drug Chloroquine and social distancing. General Eduardo Pazuello, an army general with no health credentials, took on the role on an interim basis and was later sworn in as health minister in September.

⁴ <https://www.xe.com/currencyconverter/convert/?Amount=1&From=BRL&To=USD>

⁵ https://www.correiobraziliense.com.br/app/noticia/politica/2020/04/16/interna_politica,845343/em-discurso-teich-afirma-que-saude-e-economia-nao-competem-entre-si.shtml

⁶ <https://www.statista.com/statistics/254407/share-of-economic-sectors-in-the-gdp-in-brazil/>

⁷ <https://www.statista.com/statistics/276943/gross-domestic-product-gdp-growth-in-brazil-by-quarter/>
<https://tradingeconomics.com/brazil/unemployment-rate>

⁸ <https://home.kpmg/xx/en/home/insights/2020/04/brazil-government-and-institution-measures-in-response-to-covid.html>

Risk of Collapse of Brazilian Health System

Brazil's public health system was originally modelled on the UK National Health Service and provides universal coverage for the Brazilian population. It is however largely complemented by private health insurance, mostly for middle- and higher-income residents.

Despite only 23% of Brazilians having private coverage⁹, the private sector hospitals make up more than half of the available intensive care units (53%)¹⁰. This leaves lower income residents more vulnerable to ICU shortages, though there are cases where public hospitals have leased spare private ICUs.

At the beginning of the pandemic in Brazil, on the 3rd May the state of Amazonas was the first to see its health infrastructure collapse, due to lack of sufficient health professionals and ICUs.

On 7th May, 6 more states saw their private hospitals overwhelmed. Rio de Janeiro, Ceara, Pernambuco, Amazonas, Maranhão and Para did not have any more ICUs that could be contracted by the public sector.

On 11th June Bolsonaro publicly contested the statistics on ICU occupation rates and told his followers to try to enter into public hospitals to verify if the ICUs were actually occupied.

Lockdown Imposed

During March and April many states in Brazil entered into lockdown, and the restrictions appeared to show some effects.

In a report released by the Imperial College London on 8th May, the reproduction (R) number in states such as Sao Paulo and Rio de Janeiro, was estimated to have reduced from somewhere between 3 and 4 to approximately 1.5.¹¹

This flattened the curve but did not do enough to contain the virus and cases and deaths continued to rise. Only in August did the COVID-19 cases and deaths begin to show signs of a reducing.

Sao Paulo and Rio de Janeiro started a gradual plan of reopening from the 1st of June, followed by other states. In Rio de Janeiro there were 6 phases of reopening until 1st November followed by a continued "Conservative Period" where some restrictions still apply such as a reduced 2/3 maximum capacity in commercial premises.

Current Situation

As at 30th November, the total confirmed number of cases of COVID-19 is 6,290,272, the third highest in the world after USA and India. The total confirmed deaths is 172,561 deaths, the second highest in the world after USA.¹²

Interventions in Brazil, whilst they have acted to reduce the spread, are much more limited than the widespread and mandatory lockdowns implemented across parts of Asia and Europe. Following the release of restrictions, signs of a second wave have been seen countrywide with ICU occupancy rates

⁹ <https://www.commonwealthfund.org/international-health-policy-center/countries/brazil#:~:text=Nearly%2025%20percent%20of%20Brazilians,circumvent%20bottlenecks%20in%20accessing%20care>.

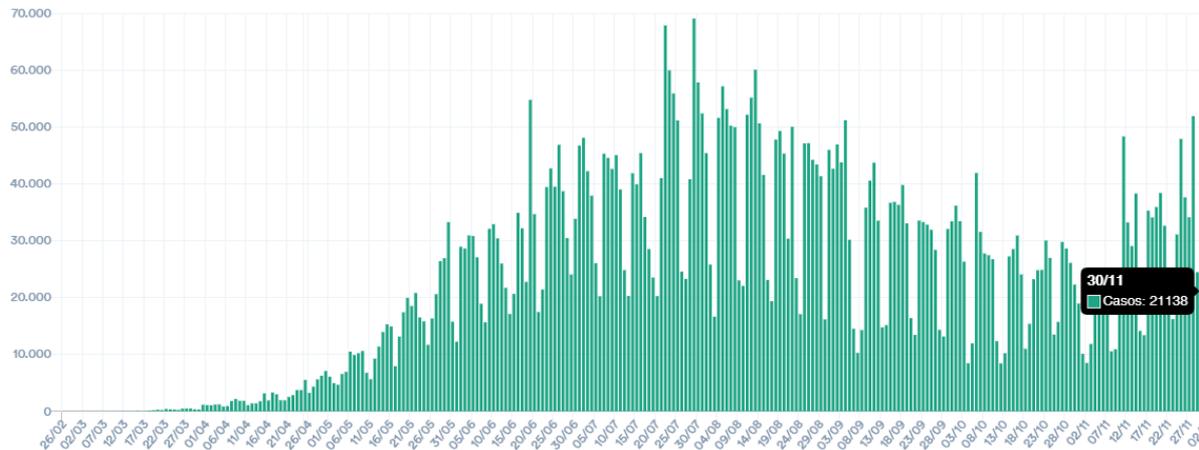
¹⁰ <https://portal.cfm.org.br/images/stories/pdf/leitoe%20de%20uti%20COVID%20junho%202020%20-%20estados.pdf>

¹¹ <https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/2020-05-08-COVID19-Report-21.pdf>

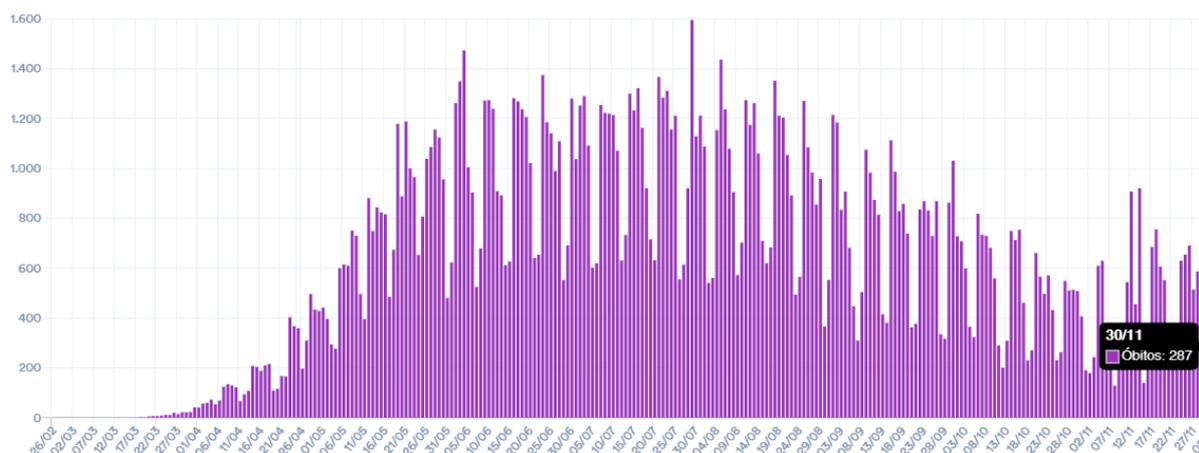
¹² <https://www.worldometers.info/coronavirus/#countries>

reaching maximum levels (Rio de Janeiro reported at 85% as at 25 November¹³). The current estimate of the reproduction number (for the week of 23rd November) increased to 1.3 after a prior period of stabilisation.¹⁴ It is yet to be seen how each state will react and if further restrictions will be implemented. On 25th November the state governor of Rio de Janeiro announces that restrictions will not be returned and that a strategy of mass testing will be adopted as a combat measure.¹⁵

New COVID-19 Cases by notification date, as at 30th November



COVID-19 Deaths by notification date, as at 30th November



Other Sources

<https://www.sanarmed.com/linha-do-tempo-do-coronavirus-no-brasil>

<https://www.bbc.com/portuguese/brasil-51365332>

Source of graphs: <https://COVID.saude.gov.br/>

¹³ <https://agenciabrasil.ebc.com.br/saude/noticia/2020-11/taxa-de-ocupacao-de-leitos-de-uti-no-rj-fica-em-85>

¹⁴ <https://mrc-ide.github.io/COVID19-short-term-forecasts/#projections-and-effective-reproduction-number-estimates>

¹⁵ <https://www.brasildefato.com.br/2020/11/25/casos-de-COVID-19-sobem-no-rio-de-janeiro-mas-governador-descarta-lockdown>