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## Commentary

# Political neglect of COVID-19 and the public health consequences in Brazil: The high costs of science denial

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Brazil represents a tragic example of how lack of appropriate policies and pandemic denial impact public health. The country of 212 million inhabitants (3% of the world population) recorded around 1/3 of all daily COVID-19 deaths worldwide in late March 2021 [1]. Brazil's brutal surge in COVID-19 deaths in the first months of 2021 has been climbing steadily, reaching over 4000 fatalities/day in early April, as a consequence of the widespread of the new variants overwhelming hospitals. In spite of the alarming scenario, the federal government is not yet adopting evidence-based and reliable public health measures, such as use of masks and social distancing.

Brazil's public health system provides healthcare for 78% of the population. Its free, publicly funded national vaccination program has an excellent track record: 96% of the population is vaccinated against TB, diphtheria, polio and hepatitis [2]. However the country is struggling with a slow COVID-19 vaccine rollout, pushing the country's healthcare system to the brink. The lack of federal government leadership is leading state governors to negotiate and purchase COVID-19 vaccines within a consortium of governors, facing several delays and difficulties.

Brazil's president, Jair Bolsonaro, first downplayed the thread of COVID-19 and later embraced herd immunity as an effective strategy. The country never adopted a national lockdown, even in hardest hit cities such as Manaus [3]. Brazil's capital declared a 24-hour lockdown in February 2021, while larger cities such as Sao Paulo and Rio de Janeiro adopted nightly curfews and nonessential business

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closures around March 2021. However, after a 10-day lock down adopted by Araraquara, a middle-sized city in Southeast region, COVID-19 cases reduced by 43%.[4].

The legacy of Brazil's failed approach to tackle the pandemic has led to soaring COVID-19 incidence and mortality rates, mostly driven by the highly contagious P.1 variant [5]. If Brazil continues to allow SARS-CoV2 to circulate freely, it could create the ideal breeding ground for new and even more deadly variants [6].

Over 17 million Brazilians live in slums (favelas), highly density areas lacking adequate access to clean water and sanitation, where social distancing is impossible and pre-existing conditions are highly prevalent. However, the population had extremely low access to COVID-19 testing and there has been no intervention to address their increased risks [7].

Even with cases and deaths skyrocketing, Mr. Bolsonaro considered the lockdown proposals absurd and unnecessary. According to Brazil's president, the population should "recognize that death is inevitability" and Brazilians should stop being "sissies" [8]. Mr. Bolsonaro even threatened to cut off federal emergency pandemic budget to states adopting partial lockdowns.

During the pandemic, President Bolsonaro appointed four health ministers [9] - another clear example of the turmoil faced by the country. The first two health ministers were fired due to disagreements with the president about strategies to control the pandemic, including the president's support for anti-malarial drugs as a 'preventive kit' to avoid COVID-19 infection and decrees allowing non-essential services to remain open. The third health minister, Mr. Pazuello was an active-duty army general without medical or public health training. Mr. Pazuello followed president Bolsonaro support to amplify the use of anti-malarial drugs, down-played the need of social distancing and failed to respond calls from states running out of oxygen, doing the bare minimum to procure COVID-19 vaccines. In October 2020, Mr. Pazuello announced the purchase of 46 million doses of COVID-19 vaccine produced by Chinese pharmaceutical company Sinovac, but president Bolsonaro rejected the decision. The country's immunization program has been widely criticized for being late and chaotic.

More recently, several private companies started offering 'early COVID treatment' to their employees including hydroxychloroquine, ivermectin, azithromycin, vitamin D, and vitamin C (among others), referred to as the "COVID-kit". Many companies are requiring employees to adopt those "prophylactic treatments", despite evidence of the effectiveness of such drugs and the potential for their misuse to contribute to antimicrobial resistance. Employees who take the "COVID-kit" frequently report a sense of 'invincibility' and being 'immune', aspects that might influence the adoption of unsafe habits such as inadequate social distancing and inconsistent mask use [10].

The burgeoning COVID-19 epidemic in Brazil was an avoidable tragedy. A national task force involving the federal government, states and municipalities is of paramount importance to enhance physical measures and scale-up vaccination to mitigate the impact of COVID-19 in Brazil and mitigate the spread of variants of concern to other countries.

### **Author's contributions**

MM drafted the original comment and coordinated subsequent edits and revisions. MVV,CMFPS, ABS and SAS participated in drafting the comment and its finalization. All authors have read and approved the final comment.

### **Declaration of Competing Interest**

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