Brazil and the COVID-19 Pandemic

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When the World Health Organization announced the emergence of several cases of pneumonia in Wuhan City, Hubei Province, China, health care systems across the globe turned their attention to the new strain of coronavirus, SARS-CoV-2, responsible for causing the highly infectious respiratory illness, coronavirus disease 2019 (COVID-19).1 Currently, more than 172 million cases and 3.7 million deaths have been reported globally. Brazil has surpassed 16 million cases and 470 thousand deaths, the second largest death toll worldwide.2

In humans, COVID-19 manifests primarily as a respiratory illness ranging from absence to mild symptoms. However, depending on risk factors not yet fully understood, acute respiratory distress syndrome may occur resulting in the need for intensive care, ventilatory mechanical support, and acute kidney injury (AKI) often requiring renal replacement therapy, adding significant burden on health care systems.3 In Brazil, the number of patients with end-stage renal disease (ESRD) is increasing faster than the planned infrastructural expansion of dialysis provisions, exceeding the national capacity to manage ESRD.4 Therefore, the addition of patients requiring renal replacement therapy due to the COVID-19 pandemic, either due to an increased rate of AKI in the intensive care units or a resultant increase in number of patients with advanced chronic kidney disease (CKD), had nationwide consequences.

Brazil has a large and complex renal replacement therapy network which currently involves an estimated 145,000 patients on chronic dialysis, mainly provided by the public health care system, Sistema Único de Saúde. Hemodialysis is the nation’s preferred modality. Peritoneal dialysis is the modality of choice for 7% of the ESRD population and is rarely used in the treatment of AKI.5 In absolute numbers, renal transplantation ranks Brazil in second place worldwide. However, the pandemic resulted in the suspension of elective procedures, dramatically impacting renal transplantation provision. In addition, to better understand the Brazilian renal replacement therapy network it is important to consider local differences across states regarding the prevalence of patients with ESRD on hemodialysis.4 In Brazil, a higher prevalence of patients on dialysis is especially observed in the most economically developed Southeast (792 pmp) when in comparison to the North region (282 pmp), for example.5

The Southeast region of Brazil includes the states of Minas Gerais, Espirito Santo, Sao Paulo, and Rio de Janeiro. This region, which is also the most populous region of the country, contributes substantially to Brazil’s economic growth, and at present, is the region counting the highest numbers of COVID-19. Approximately 16% of the urban Brazilian population in this region lives in slums, also known as “favelas.” These poorer communities lack access to decent housing and quality health care services. The context of health care and economic inequities combined with winter (bringing the flu season), are adding to the uncertainty and unpredictability of future impacts of the COVID-19 pandemic in Brazil.

While the COVID-19 pandemic shocked economies and health care systems across the globe, a broad audience worldwide has been closely watching the scientific developments and advancements stimulated by this global crisis. In Brazil, the public observation of rapid scientific advancement has triggered a process of empowerment among citizens. For example, common citizens have become more interested in understanding the scientific method and how the result of pragmatic studies can help us overcome this crisis. Unfortunately, there is also a renewed skepticism leading to an unprecedented spread of both information and misinformation. The digital era has facilitated access to information but has also amplified the magnitude of fake news and
distorted facts. The late consequences are that safe and effective measures such as masks and social distancing are often underestimated or ignored by the public.

Sadly, Brazil has become fertile ground for the infodemic and dubious practices, driving the country into endless debates involving false or unproven assumptions, resulting in late and uncoordinated political actions. As a result, relevant strategies such as the national vaccination plan seem to have been neglected. The development of vaccines is a clear example of rapid scientific advancement which contributed to a dramatically reduced number of cases of COVID-19 with severe complications. In this regard, to immunize its population, as of May 26, 2021, a total of 58 million vaccine doses have been administered. Despite seemingly large numbers, there is still much to be done before a full, two-dose immunization protocol is achieved for the 211 million inhabitants of Brazil. The State of Minas Gerais, population 21 million, recorded 1.5 million confirmed COVID-19 cases and 39,128 deaths. As of recent, only 2.2 million people have been vaccinated with two doses. In Belo Horizonte, the capital of the State of Minas Gerais, those with comorbidities such as advanced CKD and ESRD on dialysis were added to an immunization prioritization plan only on April 30, 2021. Because of the delay in immunization of our vulnerable CKD and ESRD populations, a sharp increase in the number of reported cases among those with advanced CKD on dialysis was observed. For example, in the city of Contagem with a population of 670,000 inhabitants, which represents a large proportion of the metropolitan area of Belo Horizonte, nearly 19% of its population with advanced CKD on dialysis reported signs and symptoms of COVID-19.

With all the above-mentioned factors in action, Brazil has set the stage for its health care system to collapse. Starting in January 2021, the number of COVID-19 reported cases and deaths has been on an exponential increase. International concern has intensified with the emergence of new variants and surge of cases. The escalation of cases spread chaos across the country leading to lines for hospital beds and intensive care unit admission in both the public and private sectors throughout all major cities. Hospitals were often maxed beyond capacity. In the City of Manaus, North of Brazil, in January 2021, fatalities occurred due to a shortage of oxygen supplies in hospitals. During this same period, the number of patients requiring dialysis for AKI within intensive care units increased dramatically. In the city of Contagem, from January to April 2021, the Public Regional Hospital reported a 146% increase in dialysis sessions for incident AKI compared to the same period in 2020.

In conclusion, public health care policies must rely on science and be put into action with judicious precision to be effective. In Brazil, the infodemic and lack of coordinated public policies fostered dubious practices, weakened the adoption of preventive measures and aggravated the COVID-19 crisis. At this point in the pandemic, let’s hope we have understood, as a society, the dangers of bad science and misinformation, the need to respect our environment, and the need to cooperate with different peoples to change the course of events in our country.

DISCLOSURE

The author declared no competing interests.

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