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Tuberculosis in Brazil: the impact of the COVID-19 pandemic

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TO THE EDITOR,

The spread of Severe Acute Respiratory Syndrome - Coronavirus 2 (SARS-CoV-2) continues to progress, causing damage in several countries of the world due to its rapid transmissibility and significant mortality rates,[1,2] despite government measures to contain its transmission, such as movement control, the closing of schools, bans on travel and public gatherings, the mandatory use of masks, and hand hygiene.[1,2,3,4,5,6] The coronavirus disease (COVID-19) has clinical manifestations that are similar to those found in other infections also transmitted through the airways, such as pulmonary tuberculosis (TB).[1,2,3,4,5,6] Although TB is a global health problem, it is a curable disease, with affordable treatment and prevention. Nonetheless, it remains one of the leading causes of death from a single infectious agent worldwide, a situation threatened by COVID-19.[1,2,3,4,5,6,7]

The elimination of COVID-19 has been made a priority in relation to other diseases that can be treated through public healthcare.[7,8] During the COVID-19 pandemic, a major impact on the provision of TB health services was observed in several countries, through measures of relocation of professionals and budgets, and the interruption of services.[3,4,5,6,7,8]. However, we do not know the true extent of this damage; an increase in the number of undiagnosed TB cases is expected worldwide, which may reveal poor treatment results.[3,4,5,6,7,8] The simultaneous presentation of TB and COVID-19 is a matter of concern since the patient may be at a greater risk of poor outcomes and death than patients with COVID-19 alone.[7,8]

In Brazil, TB is a public health problem and one of compulsory notification, and the current situation presents a high burden regarding TB and TB-HIV co-infection.[9,10] The objective of the present study was to compare data from the Unified Health System (SUS) on the number of pulmonary TB cases reported in the 5 Brazilian geographic regions (North, Northeast, Southeast, South, and Midwest) from 2017 to 2019 with the same periods of 2020, the latter representing the period of the pandemic, to verify the real impact of the pandemic on the number of TB cases in Brazil.

The analyzed data were extracted from the Brazilian public database - Ministry of Health (MH) - Primary Care Health Information System (SISAB) https://sisab.saude.gov.br/ - of the SUS, which contains the average number of consultations of pulmonary TB in the Brazilian territory. These data came from consultations in public primary healthcare services carried out by doctors and nurses, whose patients' disease was suggestively classified as pulmonary TB (confirmed and laboratory-unconfirmed cases). Data from the MH - SUS for the past 12 months are subject to changes and updates.

The differences in the average number of pulmonary TB consultations reported by the Brazilian public health system in all geographical regions, in 2017, 2018, and 2019, compared to the same period in 2020, are shown in Figure 1. In this descriptive analysis of data by region, there was a significant increase in the percentage of pulmonary TB consultations in all Brazilian regions during the COVID-19 pandemic. Such increase ranged from 27,492 (156.0%) consultations, on average, in the Southeast region to 1,523 (25.0%) consultations, on average, in the South region. Considering all the Brazilian regions, the total average of consultations went from 48,688 in the period from 2017 to 2019 to 108,269 in 2020, representing a 122.4% increase in average TB consultations during the pandemic period.

Given the relevance of TB, it became necessary to include the data extracted from the Brazilian public database - MH - Notifiable Diseases Information System - SINAN (http://portalsinan.saude.gov.br/tuberculosis) in this study, in which the annual average of confirmed cases of pulmonary TB notified in Brazilian territory was obtained. Figure 1 shows the difference in the annual average of confirmed cases of pulmonary TB reported by the Brazilian public health system in all geographical regions in 2017, 2018, and 2019 compared to the same period of 2020, which represented the period of the pandemic.

Being a seasonal disease, there was a reduction in reported confirmed cases of pulmonary TB in all Brazilian regions, except for the North, during the pandemic period. The Southeast (-8.2%), South (-8.9%), and Northeast (-10.9%) regions presented a percentage decrease above the national average (-7.9%). During the pandemic period, the average number of reported TB cases decreased by 6,501 cases compared to the period from 2017 to 2019. These data reveal the impact of the pandemic on the number of pulmonary TB cases in Brazil. Therefore, there is a concern that the COVID-19 pandemic will hamper TB elimination goals in all Brazilian regions.[9,10]

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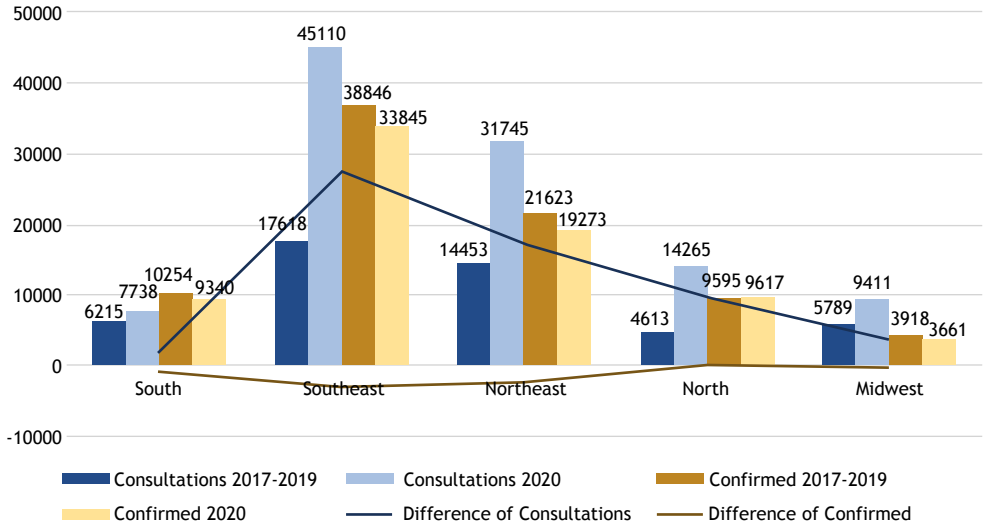

Figure 1. Difference between the annual average of pulmonary tuberculosis consultations and confirmed cases of pulmonary tuberculosis notified by the Brazilian public health system in all geographic regions in 2017, 2018, and 2019 in relation to the same period in 2020.

In 2020, 88,678 cases were confirmed for TB in Brazil, and 4,500 people died due to the disease in 2019.[10] According to the performed analyses, Brazil has experienced different levels of interruption of the health system, which has resulted in a reduction in the total number of notifications of pulmonary TB in the country (Figure 1) due to the measures adopted to contain the spread of SARS-CoV-2.[10] In the pandemic period, essential services for TB were restricted due to decreased resources and inputs, prioritizing the mitigation of COVID-19.[3,5,6] Data presented by the MH revealed an increment in the number of treatment dropouts and an increase in the number of deaths by TB.[10]

Overall, these findings are similar to those reported in other countries.[3,4,7,8] It is believed that the measures adopted for the care of COVID-19 influence the goals established by the WHO to reduce the global burden of TB.[3]

The increase in the number of consultations and the reduction of confirmed TB cases reported in the pandemic period evidenced herein are extremely worrying. Brazil, with its high burden due to TB, needs to guarantee the continuity of services in the control of *Mycobacterium tuberculosis* during the COVID-19 pandemic to achieve its TB elimination goals.

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