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Xiomara Bernal-Duran, Angel Cubas-Alcántara, Karina Narváez Hidalgo, María Navarro-Castro, Renzo Villanueva-Villegas, and Félix Llanos-Tejada



# IMPACT OF THE COVID-19 PANDEMIC IN A SPECIALIZED TUBERCULOSIS UNIT

IMPACTO DE LA PANDEMIA COVID-19 EN UNA UNIDAD ESPECIALIZADA DE TUBERCULOSIS

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## Mr. Editor

The COVID-19 pandemic has negatively affected other disease prevention and control programs that could cause more deaths than the coronavirus itself<sup>(1)</sup>, and also having substantial consequences for other domains, such as social impact: slowing economic growth and increasing rates of unemployment, poverty, and food insecurity.

The pandemic context generated a particular concern for the regular provision of health services since human and infrastructure resources for medical care were transferred to services related to COVID-19, for this reason, patients with health problems health not related to COVID-19 were abandoned by not having access to health care services<sup>(2)</sup>. Consequently, control measures and epidemiological surveillance of tuberculosis (TB) were affected, which would produce an increase in the number of cases<sup>(3)</sup>.

Peru is one of the countries with the highest incidence of tuberculosis, both sensitive and resistant, in the world. Although the public health measures adopted in the country have improved the care, diagnosis and management of People Affected by TB (PAT), there are still limitations in the control of the disease, especially in multidrug-resistant TB (MDR), People Deprived of Freedom (PDF) and People Living with HIV (PLWHIV), as referred to by Guin et al.<sup>(4)</sup>

According to data from the World Bank, between 40 and 60 million people will have fallen into extreme poverty in 2020 as a result of COVID-19, knowing the close relationship between poverty and TB, an increase in prevalence and incidence is expected to medium and long term<sup>(1)</sup>.

Both COVID-19 and TB affect the respiratory system, primarily the lungs, and have similar symptoms such as cough, fever, and shortness of breath, although the severity and duration of symptoms vary<sup>(1)</sup>. But, COVID-19 has overtaken TB as the infectious disease with the highest death rate per day<sup>(5)</sup>. Comorbidities such as chronic kidney disease, diabetes, lung cancer, and chronic obstructive pulmonary disease (COPD), especially secondary to smoking, have a higher risk of hospitalization and death when related to COVID-19 and/or TB<sup>(6)</sup>. A preventive measure to prevent the spread of SARS-CoV-2 was mandatory social isolation at home, however, this measure could facilitate the transmission of TB, due to prolonged contact at home<sup>(7)</sup>.

During the COVID-19 pandemic (2020-2021), in the Specialized Tuberculosis Unit of the Pulmonology Service at Hospital Nacional Dos de Mayo, a more than double increase in the prevalence of hospitalized patients with Type 2 Diabetes Mellitus (DM2) and TB (Figure 1) compared to the periods prior to the pandemic (2015-2019); which could be explained as a secondary effect of poor control of the disease, late diagnosis and inadequate follow-up of chronic diseases, due to the insufficient functioning of the first level of care<sup>(8)</sup>.

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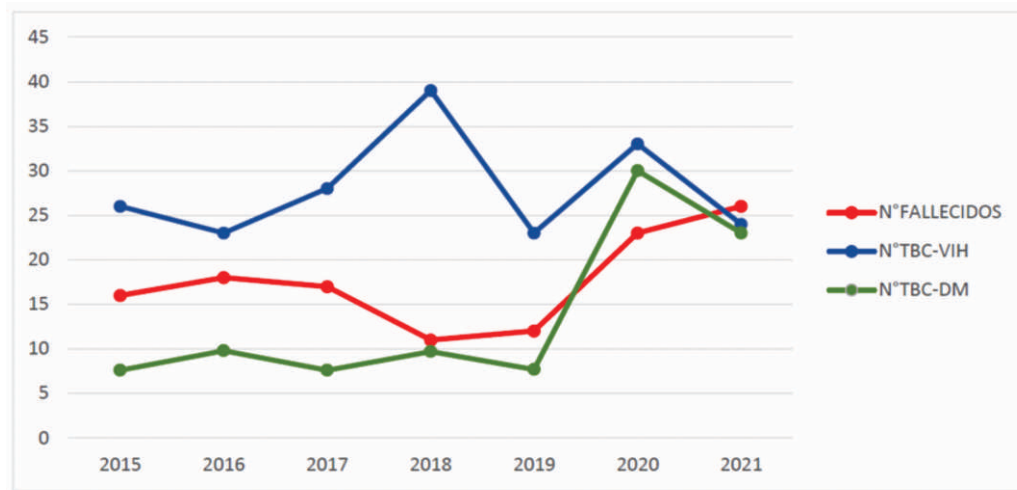
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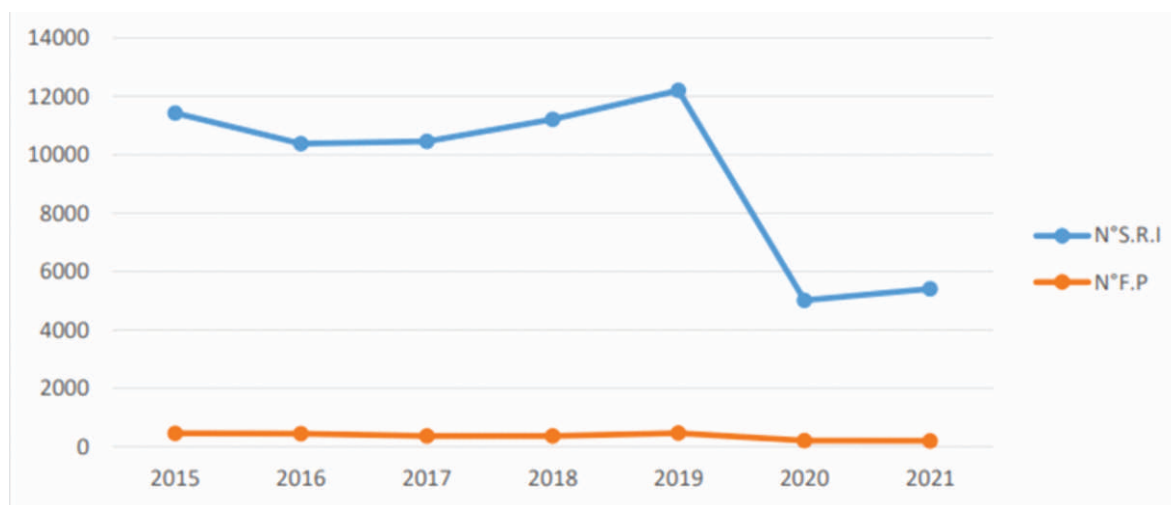
**Figure 1.** Annual frequency of cases hospitalized for tuberculosis and type 2 diabetes mellitus (green line), tuberculosis and HIV (blue line), and deaths from tuberculosis (red line).

The average uptake of respiratory symptoms decreased by 46.8% during the pandemic period, compared to the pre-pandemic period (Figure 2); however, no change was found in the percentage of positive smear microscopy when we compared

the period prior to the pandemic (3.7%) with the period of the pandemic (3.8%). In addition, we evidenced that there was no change in the average number of hospitalizations of patients with MDR-TB<sup>(9)</sup>.

LETTERS TO THE EDITOR

### SINTOMÁTICOS RESPIRATORIOS CON TBC BK+



**Figure 2.** Annual frequency of detection of respiratory symptoms (blue line) and annual frequency of positive smears for *M. tuberculosis* (orange line)

Finally, the average number of deaths hospitalized for tuberculosis increased by 60% during the pandemic (Figure 1), compared to the previous period; this would be due to the late diagnosis of the disease and hospitalization due to severe complications, such as meningoencephalitis (MEC), TB and TB with respiratory failure<sup>(10)</sup>.

Today, two years after the pandemic began in Peru, the ambitious challenge is to mitigate its effects, without neglecting pre-existing diseases, especially remembering that both infections share social determinants of health, related to poverty, which today would have increased after confinement throughout Peru.



In addition, any investment made in the management of the coronavirus should be used for the care of TB patients; citing as examples effective social isolation, hand washing, and mandatory use of a mask in closed public places. Similarly, the implementation of new molecular laboratories to optimize and speed

up the diagnosis of TB in the future. The current situation is radically changing the way we manage TB for the foreseeable future and unmasking vulnerabilities; it is necessary to get back on track, in order to avoid an unprecedented health crisis<sup>(11)</sup>.

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