

## Importance of surveillance in the treatment of patients with tuberculosis

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Dear Madam Editor:

Concerning the article published article “Characteristics and frequency of tuberculosis before and during the COVID-19 pandemic among adults treated in a primary healthcare center in Lima, Peru, 2019-2020,” which provides valuable information, it should be noted that it shows some limitations such as the sample size and lack of detailed information about laboratories tests performed on patients. In addition, there is no evidence of information about the specific measures taken into account to address tuberculosis in the first year of the COVID-19 pandemic, e.g., to use an epidemiologic surveillance system aimed to strengthen the epidemiological system, thereby assessing or proposing new prevention and control strategies that could even provide evidence to improve decision-making <sup>(1)</sup>.

Peru has been one of the most economically affected countries during COVID-19. In April 2020, the impact of unemployment was very evident since most economic activities were restricted. For this reason, freelancers were the most affected by job loss during the peak shutdown periods and increased underemployment <sup>(2)</sup>. Countries with a high poverty rate among their population are also associated with a worse health status and a high number of different diseases. Therefore, tuberculosis is associated with social deprivation, extreme poverty, overcrowding and lack of housing. People affected by the pandemic, especially the unemployed, are less likely to adhere to treatment due to poverty and difficult access to healthcare services. Non-adherence to treatment is considered one of the main barriers to control this disease since treatment interruptions lead to its progression, death, transmission and development of drug-resistant strains <sup>(3)</sup>.

Governments' approach was generally reactive to reduce damage caused by COVID-19 during the pandemic. Hence, there were fewer workers and fewer tuberculosis reports and fewer patients who complied with the full treatment, which, together with the lack of supplies or drugs, reflected the low investment in health by the Peruvian government. Consequently, more people got infected, developed the disease and mortality increased <sup>(4)</sup>. Based on the foregoing, considering the different factors that arose during the pandemic such as the negative impact on economy (poverty), lack of healthcare personnel and inefficiency of the Peruvian government to care for both prevailing diseases and COVID-19, it is safe to say that effective measures—e.g. adequate surveillance—were not taken for tuberculosis. Therefore, there were failures in the detection of new cases, the timely administration of treatment and the transportation or delivery of drugs to patients already diagnosed. As a result, adherence to treatment was very irregular. In addition, good prevention and early diagnosis could not be carried out because health campaigns were not performed in the first year of the pandemic as in the previous years. Such campaigns used to be carried out in the most vulnerable population and included control and diagnosis of infection, localization of contacts and isolation <sup>(5)</sup>.

Briefly, the article invites us to reflect on the fact that the health system should reduce social inequality that affects our society and work to improve the management of different diseases that were left aside during the pandemic, e.g. the case at hand. This will be a good starting point for future research on the impact of COVID-19 on surveillance and control of tuberculosis.

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## BIBLIOGRAPHIC REFERENCES

1. Centro Nacional de Epidemiología, Prevención y Control de Enfermedades del Ministerio de Salud. Vigilancia de tuberculosis [Internet]. CDC MINSA; 2023. Available from: <https://www.dge.gob.pe/portalnuevo/vigilancia-epidemiologica/vigilancia-de-tuberculosis/>
2. Organización Internacional del Trabajo y Oficina de la OIT para los Países Andinos. Mercado laboral peruano: impacto por COVID-19 y recomendaciones de política [Internet]. Perú: OIT; 2021. Available from: [http://www.ilo.org/lima/publicaciones/WCMS\\_776325/lang-es/index.htm](http://www.ilo.org/lima/publicaciones/WCMS_776325/lang-es/index.htm)
3. Alcívar-Solórzano LP, Arteaga-Intriago MÁ, Cando-Suviaga MA, Vines-Sornoza TP, Macías-Alcívar EM, Cevallos-Garay WA. Factores que inciden para la presencia de tuberculosis. *Dominio de las Ciencias*. 2018;4(4):69-97.
4. World Health Organization. Global tuberculosis report 2022 [Internet]. Geneva: WHO; 2022. Available from: <https://www.who.int/publications-detail-redirect/9789240061729>.
5. Aguilar-León P, Cotrina-Castañeda J, Zavala-Flores E. Infección por SARS-CoV-2 y tuberculosis pulmonar: análisis de la situación en el Perú. *Cad Saude Publica*. 2020;36(11):1-4.

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