

## Tuberculosis among health care workers treated at a university hospital in Bogotá, D.C., Colombia. 2008-2018

*Tuberculosis en trabajadores de la salud atendidos en un hospital universitario de Bogotá D.C., Colombia. 2008-2018*

Tuberculosis (TB) is an infectious disease that usually affects the lungs and has a high morbidity and mortality rate.

Although it has been established that being a health care worker is an important risk factor for contracting TB, this link is sometimes difficult to prove, particularly in a country like Colombia where, despite being an endemic area, the population at risk does not always have the necessary personal protection equipment (PPE) or adequate diagnostic resources. Furthermore, in the specific context of health care personnel, there are few studies that provide a reliable picture of the disease situation in the health care sector at the national level.<sup>1</sup>

With this in mind, Jurado *et al.*<sup>2</sup> conducted a descriptive observational study of case series in which they described the demographic and clinical characteristics, the most relevant laboratory findings, and the main diagnostic criteria of health care workers patients with TB treated at a quaternary care university hospital in Bogotá, Colombia.

First, Jurado *et al.*<sup>2</sup> searched the cases of TB diagnosed in the institution and registered in the National Public Health Surveillance System between 2008 and 2018, finding 199 patients with this disease, of whom 24 had a profession related to health care. When analyzing the sample, the authors found that the median age of the participants was 33.5 years and that the distribution by gender was equitable (50% women and 50% men). They also found that the majority of cases (62.5%) were pulmonary TB, that 4 patients were co-infected with HIV, and that 2 had autoimmune diseases requiring immunomodulatory therapy.

Regarding the occupation of the participants, Jurado *et al.*<sup>2</sup> found that 10 cases occurred in physicians, 4 in medical students, and the rest in people working in other hospital positions. The most frequent histopathological finding was necrotizing granuloma (n=14).

After analyzing the results of that study, it is possible to state that it provides a slightly broader perspective on the characteristics of health workers infected with TB in the country. In terms of descriptive statistics analysis, the demographic characteristics found indicate that some professions, such as secretaries, general service personnel, and dental and nutrition professionals, which would not be considered at high risk at first glance due to the low number of TB patients reported, actually presented the disease.

The findings of Jurado *et al.*<sup>2</sup> differ from those reported by Vargas-Restrepo,<sup>3</sup> who described cases of active TB between 2011 and 2017 in Colombian health care workers, finding 715 patients who mostly worked as nursing assistants and dentists (36.4%), followed by physicians (20.1%), and nurses (15.4%).

It is striking that the study of Jurado *et al.*<sup>2</sup> did not report any cases of TB in internists, pulmonologists or infectious disease specialists, which demonstrates the importance of providing adequate protection to all health care professionals, regardless of their perception of exposure to the disease or the patients they assess.

Although Jurado *et al.*<sup>2</sup> did not address the access of health workers with TB to PPE during their daily work, based on their results, it can be assumed that this access was not complete. This had already been described by Muñoz-Sánchez,<sup>4</sup> who, in a 2016 cross-sectional study of 336 health workers, reported that only 39% of the participants stated that they were always provided with respiratory protection. This demonstrated the lack of structured programs to protect staff from mycobacterial infections.

On the other hand, from the point of view of the diagnostic process, in the study by Jurado *et al.*<sup>2</sup> microbiological isolation was achieved in almost all cases and TB was

Romero-Rojas DS, Sanabria OO. Tuberculosis among health care workers treated at a university hospital in Bogotá, D.C., Colombia. 2008-2018. Rev. Fac. Med. 2021;69(3):e102956. English. doi: <https://doi.org/10.15446/revfacmed.v69n3.97128>.

Romero-Rojas DS, Sanabria OO. [Tuberculosis en trabajadores de la salud atendidos en un hospital universitario de Bogotá D.C., Colombia. 2008-2018]. Rev. Fac. Med. 2021;69(3):e102956. English. doi: <https://doi.org/10.15446/revfacmed.v69n3.97128>

diagnosed in only in one case based on clinical and radiological criteria, which demonstrates the need for active interventions to detect this disease in this population.

Furthermore, it is worth mentioning that since epidemiological descriptions provide information about the clinical follow-up and the natural course of the disease, it would have been interesting if Jurado *et al.*<sup>2</sup> addressed this aspect in their study.

Finally, had Jurado *et al.*<sup>2</sup> been able to carry out a multi-center case series, their study would have had greater epidemiological strength and could have undoubtedly obtained data regarding risk factors and possible associations with outcomes such as hospitalization, favorable clinical course or adverse effects, although a larger sample would have been required to provide analytical statistical data.

Notwithstanding the foregoing, this study constitutes an analysis of the demographic reality of TB patients in the Colombian health care sector, from which arguments can be drawn to strengthen epidemiological surveillance programs and, specially, protect health care staff.

**Dolfus Santiago Romero Rojas**

<https://orcid.org/0000-0002-1922-7606>

Pulmonary Medicine Fellow, Pulmonology Service,  
Hospital Universitario San Ignacio,  
Bogotá D.C., Colombia.

Pulmonary Medicine Fellow, Faculty of Medicine,  
Pontificia Universidad Javeriana,  
Bogotá D.C., Colombia.

[romeror\\_ds@javeriana.edu.co](mailto:romeror_ds@javeriana.edu.co)

**Oscar Orlando Sanabria**

<https://orcid.org/0000-0001-9668-6788>

Head of the Intensive Care Unit,  
Hospital Universitario San Ignacio,  
Bogotá D.C., Colombia

Professor, Department of Internal Medicine,  
Faculty of Medicine, Pontificia Universidad Javeriana,  
Bogotá D.C. Colombia.

[osanabria@javeriana.edu.co](mailto:osanabria@javeriana.edu.co)

## References

1. Monguí-Riaño J, Villamil-Ramírez HC, Maestre-Daza LM, Muñoz-Sánchez AI. Trabajadores de la salud con diagnóstico de tuberculosis en Bogotá, en el periodo 2009-2011. *Med. Secur. Trab.* 2013;59(233):417-25. <https://doi.org/hppq>.
2. Jurado LF, Barrera V, De La Rosa-Noriega ZR, Serpa C, Baldión M, Pinzón B, *et al.* Tuberculosis among healthcare workers treated in a university hospital in Bogotá D.C., Colombia. 2008-2018. *Rev. Fac. Med.* 2022;70(1):e90501. <https://doi.org/hppr>.
3. Vargas-Restrepo F. Tuberculosis activa en trabajadores de salud en Colombia 2011-2017 [dissertation]. Medellín: Facultad Nacional de Salud Pública, Universidad de Antioquia; 2019 [cited 2021 Dec 21]. Available from: <https://bit.ly/3v12T8r>.
4. Muñoz-Sánchez AI. Control de la exposición ocupacional a tuberculosis en instituciones de salud. *Med. Secur. Trab.* 2016;62(244):188-98.