

# Infectio

## Asociación Colombiana de Infectología

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### LETTER TO THE EDITOR

## Epidemiology of Tuberculosis among Homeless Persons, Pereira, Risaralda, Colombia, 2007-2010<sup>☆</sup>

### Epidemiología de la tuberculosis entre personas sin techo de Pereira, Risaralda, Colombia, 2007-2010

Tuberculosis (TB) is one of the most important infectious diseases globally and its occurrence among risk groups –those with HIV/AIDS, indigenous populations, and individuals living in crowded conditions and/or extreme poverty such as homeless persons all the more<sup>1-4</sup>. Within the world morbidity and mortality burden of TB, special consideration has been recently given to disease incidence among homeless persons, not only because they can be a risk, a source of transmission and a hub for persistent presence of the pathogen, but also for their varying clinical evolution and outcome<sup>5-8</sup>. Despite the above, there are few published studies regarding TB among homeless persons in Latin America. Some isolated references can be found at Medline and Scopus from Brazil and Puerto Rico<sup>9,10</sup>, but none from Colombia. In this country, only approaches to the social aspects<sup>11</sup> and public policies regarding TB among this population<sup>12</sup>, have been reported.

For these reasons, the objective of this epidemiological study was to assess the occurrence of TB among registered HLP in the Pereira metropolitan area, Colombia, 2007-2010, and design a proposal for improvement of our approach to the disease and its evolution. Pereira is the major city among the Coffee-Triangle (also called Coffee Axis). Morbidity and mortality, as well as clinical-therapeutic evolution of the registered homeless population in the Pereira metropolitan area, Department of Risaralda, Colombia, 2007-2010, at the TB program were analyzed. Clinical, epidemiological and bacteriological diagnoses were made for each case. Cumulated incidence and mortality rates were also analyzed in comparison to those of the general population within the same

municipality. Data was obtained through active and passive collection as part of the TB program, including multiple-source verification supported by the Epidemiological Surveillance System (SIVIGILA), TB trimester program reports and TB treatment cohort reports. Collected data was included in an Excel<sup>®</sup> 2007 for Windows Vista<sup>®</sup> spreadsheet and analyzed with SPSS v.17.0<sup>®</sup>.

During the study period, 74 homeless persons with TB were diagnosed, from a total of 1,470 evaluated individuals (registered at the Social Development Secretary of Pereira) (cumulated incidence=50.3 cases/1,000pop., range 5.44 to 22.44; year 2010=16.32). Outcome condition was: treatment self-withdrawal in 43.2% (range 36.4-55.6%), therapeutic failure, 4.1% (0.0-9.1%), deaths, 2.7% (0.0-8.3%), cured, 39.2% (33.3-42.4%) and completed treatments, 10.8% (4.2-25.0%) (fig. 1).

Comparing the 2010 TB incidence among homeless persons with that of the general population (0.6585/1,000pop.) is 76.45 times higher in that risk population. In the same way, case fatality rate in 2010 was 2.5 times higher than in the general population (3.3%). These results have important implications in public health as well in the management and evolution of TB in these individuals, persistence of infection, drug-resistance and potential transmission to those in proximity to these infected persons<sup>1-12</sup>. For these reasons, secondary to this report a project was proposed for a Center to attend homeless persons with TB, in order to address the issue through integrated social, epidemiological, clinical, diagnostic and therapeutic management. In the future, we expect to analyze the potential impacts of such interventions on the reduction and better control TB incidence among homeless persons in Pereira, Risaralda, Colombia.

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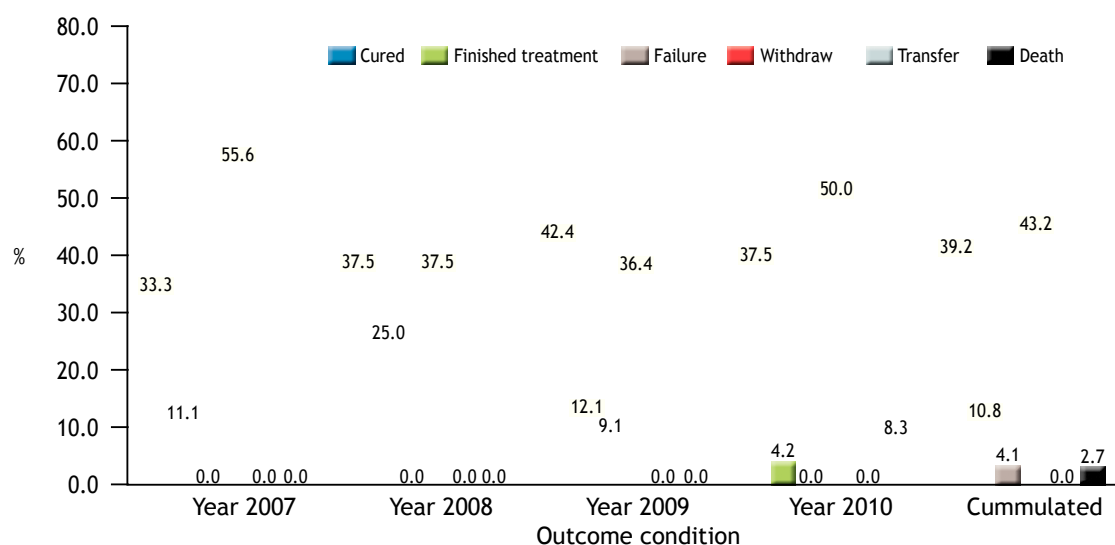


Figure 1 Outcomes for the cohort of homeless persons, Municipality Pereira, Tuberculosis Control Program, 2007-2010.

## Conflict of Interests

We declare no conflict of interests.

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