

## Respiratory diseases in Peruvian prisons

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To the editor,

The purpose of this letter is to raise awareness about the importance of respiratory diseases in the Peruvian prison population. There are over 10 million prison inmates worldwide, and this number has increased by approximately one million over the course of this decade. Infectious diseases are more common amongst inmates than amongst the general public<sup>1</sup>. Prisons are a breeding ground for transmissible respiratory diseases such as bronchitis and tuberculosis (TB), caused by the presence of many risk factors such as overcrowding and poor ventilation, which aggravate the symptoms of asthma and emphysema<sup>2</sup>. Prisoners are infrequently exposed to sunlight, are poorly fed, and have the aggravating factors of alcohol and drug abuse, they are often homeless and come from areas with a high prevalence of TB<sup>3,4</sup>.

Data from the First National Prison Census of 2016 (*Primer Censo Nacional de Penitenciarias* 2016), prepared by the Peruvian National Institute of Statistics (Instituto Nacional de Estadística e Informática (INEI)), with the support of the Ministry of Justice and Human Rights, and the National Prison Institute (Instituto Nacional Penitenciario (INPE)), contained details about the health of prison inmates. The study included 66 prisons with 76,180 inmates.

Medical diagnoses of chronic diseases included: 6,416 prisoners with chronic lung disease (asthma, bronchitis and emphysema), of whom 92.3% were men (5,923) and 7.7% were women (493); 3,267 with infectious/contagious lung diseases, such as tuberculosis, of whom 98.3% were men (3,210) and 1.7% were women (57)<sup>5</sup>.

The study by Hernández-Vásquez and Rojas-Roque, using the same census as a basis, found the following data for inmates diagnosed with chronic lung disease: without CPD: a general frequency of

67,895 (91.6%); 64,059 (91.7%) amongst men and 3,836 (89.2%) amongst women. With CPD: a general frequency of 6,235 (8.4%); 5,771 (8.3%) amongst men and 464 (10.8%) amongst women. The data for tuberculosis is as follows. Without TB: general frequency of 70,918 (95.7%); 66,673 (95.5%) amongst men and 4,245 (98.7%) amongst women. With TB: general frequency of 3,212 (4.3%); 3,157 (4.5%) amongst men and 55 (1.3%) amongst women<sup>6</sup>.

This above data shows that the prison population is vulnerable to infection by TB from internal or external factors. It also shows that chronic diseases such as lung disease are common amongst inmates. More effective control of TB in prisons could protect inmates and staff from the spread of such diseases in prison and significantly reduce the national load of TB. Future studies should measure the impact of the conditions inside prisons on the transmission of TB and assess the risks to the population from the spread of the disease to the community<sup>4</sup>, especially with the risk factors present in Peruvian prisons.

The prison system can assist in the efforts to control tuberculosis and reduce the impact and prevalence of TB in countries such as Peru, and so it is important to identify the modes of transmission where TB is especially notable, and one such place is prison, where there are risk factors such as having chronic lung disease. In such centres, overcrowding, lack of basic services, late detection of cases, inadequate treatment and deficient control measures may increase the rate of transmission of TB to the general public.

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