Pan American Health Organization
World Health Organization
Americas

TUBERCULOSIS AND INEQUALITIES IN HEALTH
in the Americas, 2014

Tuberculosis (TB) continues to be a troubling example of the extreme socioeconomic health inequalities in the Americas. These inequalities are even more evident when analyzing the distribution of the **incidence of TB** in countries according to the **Human Development Index** (HDI).*

Figure 1. ***Inequalities in TB prevalence by quartiles in countries grouped according to HDI. The Americas; 2000, 2005, 2009, and 2013***

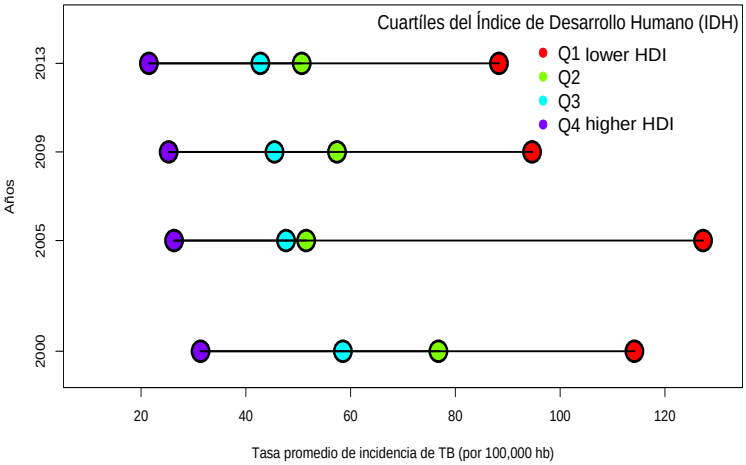
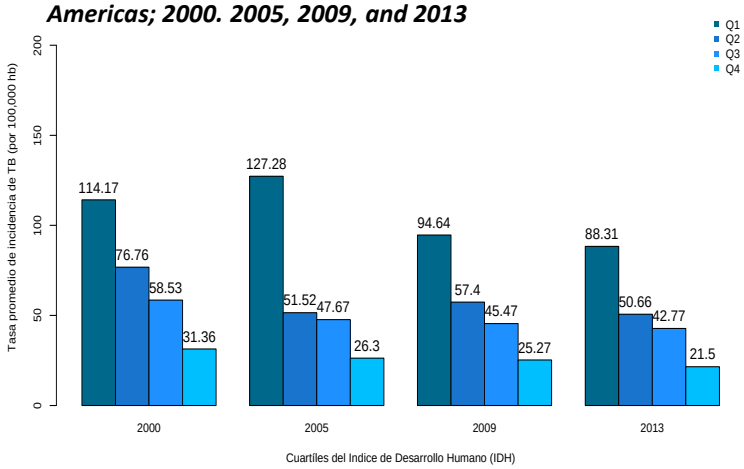


Figure 1— *equiplot*— shows distribution of the incidence of TB from 2000 to 2013 in four groups of countries categorized according to their HDI:

- Lines show slight shift to left; i.e., average incidence of TB has dropped slightly.
- Length of line shortened only slightly; i.e., absolute inequality has changed very little.

Figure 2. ***Gradients of inequality in TB incidence rate by quartiles of countries grouped according to HDI. The Americas; 2000. 2005, 2009, and 2013***



- Incidence of TB gradually fell as HDI level increased, showing the "social gradient."
- Great inequality in TB prevalence exists between the extreme quartiles, that is, the group of countries with the lowest HDI and the group with the highest HDI; this pattern held steady over the four years examined.

* Human development index (HDI): indicator to help determine a country's level of development; includes three variables: life expectancy, education, and income.

Figure 3. ***Regression lines of absolute inequality in TB incidence rate according to HDI. The Americas; 2000, 2005, 2009, and 2013***

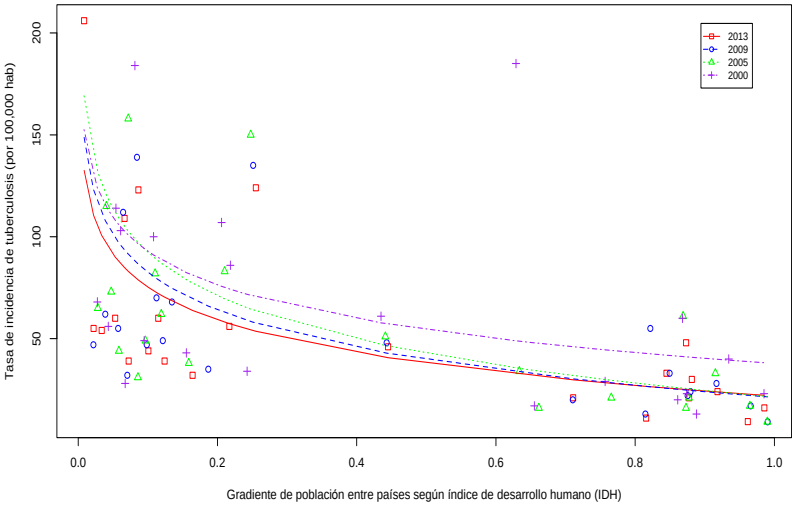
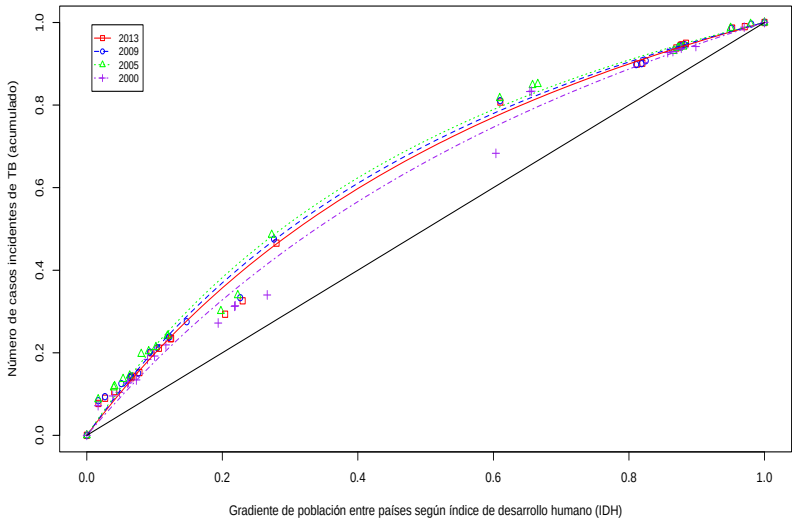


Figure 4. ***Concentration curves of relative inequality in TB incidence rate according to HDI. The Americas: 2000. 2005, 2009, and 2013***



Absolute inequality and relative inequality in TB incidence according to the social gradient defined by HDI.

•The flatter or more horizontal the linear regression (see Figure 3), and the more closely the concentration curve is to the diagonal (see Figure 4), the less inequality there is in the incidence of TB.

- These figures reveal reveal two situations: i) there is significant inequality in the incidence of TB; and ii) this trend has changed little over time.

- In 2013, in absolute terms: a) there was an excess of 54 TB cases per 100,000 population as a result of inequality in HDI between countries; and b) in relative terms, such inequality reveals that the 20% of countries with the lowest HDI had more than 35% of all new cases of TB diagnosed that year.

Conclusion: The ecological evidence presented shows that more distal causes (such as the social and sanitary exclusion suffered by the vulnerable populations) favor the incidence and development of TB. This is an illustration of the *social determinants* of TB.

Research on social inequities and risk of TB should be encouraged and promoted in each country and community as well as systematic monitoring of TB inequalities through the national health surveillance systems.

The social determinants of TB must be addressed in order to reduce the existing unjust and preventable population inequalities, both in terms of the risk of contracting it and the opportunities to prevent and cure it.

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