

# Tuberculosis avoidable deaths

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## Opinion

In the 70's and 80's, studies about avoidable deaths, from different population groups, aroused in medical literature. In 1976, Rutstein et al.,<sup>1</sup> proposed a reflection on deaths that, considering medicine's advances, were expected to no longer occur or, at least, have this frequency decreased over the years.

In Brazil, Ortiz in 1980,<sup>2</sup> formulated the first classification of causes of death in children less than one year old, with regard to their avoidability, by the SEADE Foundation in São Paulo. Malta et al.,<sup>3</sup> in 2007, pointed out failures in the provision of health services that resulted in avoidable deaths, considering technologies used in the Brazilian Unified Health System. They proposed a list of causes of avoidable deaths, elaborated by a group of specialists, under the coordination of the Secretariat of Health Surveillance of Brazilian health ministry. This list was incorporated into the Brazilian mortality information system.

Classification systems for cause of avoidable deaths have been shown to offer managers and health professionals, valuable information as when health services or policies should invest to avoid or reduce the frequency of deaths considered preventable. The Brazilian list of causes of avoidable deaths proposes a typology aligned with the International Classification of Diseases (ICD-10) and analyses the conformities that are in the origin of these deaths. In this way, deaths could be avoided with the improvement of educational actions of health promotion, prevention of illness and curative actions. The latter would depend on the improvement of diagnosis and treatment of diseases.

Deaths caused by tuberculosis have been monitored worldwide for decades, and are considered as revealing serious inequities in health service access.<sup>4</sup> Data from the World Health Organization (WHO) in 2015 indicate that tuberculosis makes around 1.5 million victims per year.<sup>5</sup>

In Brazil, disease incidence rates have been falling over the years, but still remain at high levels, around 30 cases per 100,000 inhabitants. Likewise, mortality rates by tuberculosis are overwhelming in some states of the Federation. Data from 2014 indicate a mortality rate in the country around 2.2 per 100,000 inhabitants, varying from 0.5 in Distrito Federal to 5.1/100,000 in Rio de Janeiro state.<sup>6</sup>

The Brazilian list classifies tuberculosis deaths as reducible by preventive actions, considering vaccination as the main action to interfere in mortality by disease. It seems that this option should be reviewed, considering deaths in children older than 5 years and adults, in the light of scientific knowledge now available.

The BCG vaccine has shown a protection against the disease,<sup>7</sup> but, less than desirable, related to miliary and meningal tuberculosis. On the other hand, it is a consensus that an unfavorable outcome of a Tuberculosis case depends, above all, on three factors. The first would

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be the delay of the diagnosis, which leads to late identification of cases of the disease that, when detected, would already be at an advanced stage in its evolution. The second refers to tuberculosis caused by a mycobacterium resistant to one or more drugs among those employed in the basic treatment regimen (RMP+INH+PZA+BEM). Finally, when the disease occurs associated with other pathologies (as AIDS or Diabetes), being more difficult to control.

We understand that Tuberculosis, in Malta's classification for deaths of individuals older than five years, should be among the diseases considered "reducible by appropriate actions of health promotion, prevention, control and attention to diseases of infectious causes" and not among the considered "reducible by Immunoprevention". This new option would highlight the need to improve the quality of health services offered to the population, which is imperative to reduce current incidence rates, treatment abandonment and mortality in Brazil and worldwide.

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## Conflict of interest

The author declares no conflict of interest.

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