

Section: EPIDEMIOLOGY

Abstract: EP-03

Evolution of leprosy in Brazil (2001–2024): Temporal trends in incidence and clinical-epidemiological profile according to the number of skin lesions and clinical forms

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INTRODUCTION: Brazil has the second highest absolute number of leprosy cases worldwide, making it a priority endemic area for epidemiological surveillance. The analysis of temporal trends and clinical profiles is essential to identify diagnostic gaps and support public health policies. **METHODS:** Ecological time-series study using secondary data from SINAN/DATASUS (2001–2024). The following variables were analyzed: overall detection rate, clinical forms (indeterminate, tuberculoid, borderline, and lepromatous), operational classification (paucibacillary/multibacillary), number of skin lesions at diagnosis, and degree of physical disability across the five Brazilian macroregions. Temporal trends were estimated using Prais–Winsten regression, with annual percent change and 95% confidence intervals. **RESULTS:** A significant decreasing trend in the overall detection rate was observed ($\beta = -0.877$; $p < 0.001$), with a more pronounced decline between 2003 and 2015, followed by stabilization and a slight increase from 2020 onward. The Midwest region showed the highest rates per 100,000 inhabitants. Multibacillary forms predominated, particularly borderline and lepromatous forms. Most patients presented more than 5 skin lesions at diagnosis, with a considerable proportion presenting 2 to 5 lesions. A decreasing trend was observed for the lepromatous form and for multibacillary classification in all macroregions ($p < 0.001$). Rates of grade 2 physical disability at diagnosis remained stationary ($p > 0.05$). **DISCUSSION:** The coexistence of declining incidence with predominance of multibacillary forms and multiple lesions indicates persistent late diagnosis. Regional disparities reflect the influence of social determinants and structural inequalities in access to primary health care. **CONCLUSION:** Leprosy remains epidemiologically relevant in Brazil. The stability of disability rates and the predominance of advanced clinical forms at diagnosis reinforce the urgency of strengthening active surveillance, expanding diagnostic coverage, and addressing regional health inequities.

KEYWORDS: Leprosy; Epidemiology; Incidence; Time-series studies.