

## **Evolution of Mortality from Human Immunodeficiency Virus Disease According to Population Density**

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### **Abstract**

The objective to this study is to estimate the trend in mortality from VIH according to the population size density of the province of residence in Spain between the years 2001 and 2019. We selected all deaths assigned to the International Classification of Diseases (ICD-10) for total VIH (B20-B24). The population and number of deaths according to age, sex and population density of the province of residence have been obtained from the National Statistics Institute. The provinces have been grouped into five categories based on their population density: less than 23.7 inhabitants per km<sup>2</sup> (density 1), between 23.7 and 49.6 inhabitants per km<sup>2</sup> (density 2), between 49.7 and 102.2 inhabitants per km<sup>2</sup> (density 3), between 102.3 and 220.3 inhabitants per km<sup>2</sup> (density 4) and more than 220.3 inhabitants per km<sup>2</sup> (density 5). We calculated the mortality rate from 2001 to 2019 for each density group and in both sexes. The trend in VIH mortality during this period was calculated using the mean annual percentage change (APC)

Between 2001 and 2019, the APC in the VIH mortality rate in the provinces of density 1,2,3,4 and 5 was respectively -4.9%, -7.0%, -9.5%, -8.7% and -9.0% in men and -4.6, -7.9%, -8.8%, -7.9% and -9.0% in women.

The provinces with the lowest population density showed the smallest reduction in HIV mortality in both sexes.

**Keywords:** deaths, HIV, Spain, trend, XXI century