EXCESS MORTALITY DUE TO DIABETES DURING THE COVID-19 PANDEMIC IN COLOMBIA. AN ECOLOGICAL STUDY. AN ANALYSIS OF THE REFRECA PROJECT

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Background: Patients with diabetes are at increased risk of mortality due to COVID-19. For this reason, the objective of the study is to estimate the excess mortality from diabetes during the year 2020 compared to the period 2015-2019 in Colombia.

Methods: Ecological study of secondary source. Deaths from diabetes during the period 2015-2020 were identified from vital statistics records according to ICD-10 codes. Age-adjusted diabetes mortality rates were determined by comparing the relative increase between 2015-2019 and 2020. The moving average of expected deaths from diabetes in the 2015-2019 period was calculated using the endemic channel methodology to estimate excess mortality. The Spearman's rank correlation coefficient was estimated between the adjusted rates for the year 2020 of each department with basic health indicators.

Results: We identified an average of 7,663 deaths from diabetes (ICD-10: E10 to E14) in the period 2015-2019 and 10,182 deaths in the year 2020. The age-adjusted mortality rate per 100,000 inhabitants was 23.06 for the period 2015-2019 and 27.11 for the year 2020, with a relative increase of 17.56% and excess mortality of 25.85%. In the case of insulin-dependent diabetes (ICD-10: E10) the relative increase in the adjusted mortality rate was 3.62% and the excess mortality was 9.98%. For non-insulin-dependent diabetes (ICD-10: E11), an increase in the mortality rate of 46.48% and excess mortality of 57.68% was obtained. A correlation of -0.499 and 0.571 was observed between the mortality rate from diabetes with the percentage of compliance of HbA1c < 7% and the mortality rate from COVID-19 respectively.

Conclusions: During the first year of the pandemic, there was a significant increase in mortality from diabetes compared to the expected deaths. Compliance with the prior control of diabetes and preventive measures in COVID-19 at the population level are decisive in reducing mortality in this group of patients.