

## **Excess diabetes-related deaths: The role of comorbidities through different phases of the COVID-19 pandemic**

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### Abstract

#### Background and aims

Diabetes confers an excess risk of death to COVID-19 patients. Causes of death are now available for different phases of the pandemic, encompassing different viral variants and COVID-19 vaccination. The aims of the present study were to update multiple causes of death data on diabetes-related mortality during the pandemic and to estimate the impact of common diabetic comorbidities on excess mortality.

#### Methods and results

Diabetes-related deaths in 2020-2021 were compared with the 2018-2019 average; furthermore, age-standardized rates observed during the pandemic were compared with expected figures obtained from the 2008-2019 time series through generalized estimating equation models. Changes in diabetes mortality associated with specific comorbidities were also computed. Excess diabetes-related mortality was +26% in 2020 and +18% in 2021, after the initiation of the vaccination campaign. The presence of diabetes and hypertensive diseases was associated with the highest mortality increase, especially in subjects aged 40-79 years, +41% in 2020 and +30% in 2021.

#### Conclusion

The increase in diabetes-related deaths exceeded that observed for all-cause mortality, and the risk was higher when diabetes was associated with hypertensive diseases. Notably, the excess mortality decreased in 2021, after the implementation of vaccination against COVID-19.

Keywords: COVID-19; Comorbidities; Diabetes; Mortality; Trend

### **FULL TEXT**

<https://pubmed.ncbi.nlm.nih.gov/37407311/>