

## **Different approaches to the analysis of causes of death during the COVID-19 epidemic**

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### Abstract

#### Objective

The aim of the study is to assess the impact of the COVID-19 pandemic on causes of mortality through multiple methodological approaches.

#### Materials and methods

The causes of mortality in the Veneto region (Italy) during the first epidemic wave, March-April 2020, were compared with the corresponding months of the previous two years. Both the underlying cause of death (UCOD), and all diseases reported in the death certificate (multiple causes of death) were investigated; a further analysis was carried out through a simulation where the UCOD was selected after substituting ICD-10 codes for COVID with unspecified pneumonia.

#### Results

Overall 10,222 deaths were registered in March-April 2020, corresponding to a 24% increase compared to the previous two years. COVID-19 was mentioned in 1,444 certificates, and selected as the UCOD in 1,207 deaths. Based on the UCOD, the increases in mortality were observed for COVID and related respiratory conditions, diabetes mellitus, hypertensive heart diseases, cerebrovascular diseases, and ill-defined causes. Multiple causes of death and the simulation analysis demonstrated further increases in mortality related to dementia/Alzheimer and chronic lower respiratory diseases.

#### Conclusions

This first report demonstrates an increase of several causes of death during the pandemic, underlying the need of a continuous surveillance of mortality records through different analytic strategies.

### **FULL TEXT**

<https://pubmed.ncbi.nlm.nih.gov/34002836/>