

Background:

Italy responded to COVID-19 with stringent lockdowns and a mass vaccination campaign. We describe the temporal and regional impact of these measures on mortality, along with social-behavioral correlates.

Methods:

The analysis uses National Ministry of Health data on COVID-19 mortality (CM), excess mortality (EM), and vaccine uptake, along with survey data. We calculate avoidable mortality (AM) as observed mortality minus the lowest regional EM rate in each period.

Results:

In 2020-21 EM was 180,169, of which 76% were counted as COVID-19. This fraction varied from 13% in the South in Jun-Oct 2020 to 140% in the Northeast in Mar-Jul 2021. Impact varied across Italy, with EM and AM highest in the North during the first and second waves (Feb-Jun 2020 & Nov 2020-Feb 2021) and in the South afterwards (Mar-Dec 2021). After the first wave, there were 33,587 avoidable deaths, 41% of which were in the South. Higher rates in the North in Nov 2020-Feb 2021 were possibly due to less social distancing (e.g. avoiding social events and staying home from work/school), perhaps because residents of the North are more likely to be employed in private industry, which were more likely than public agencies to remain open. Higher rates in the South after Mar 2021 were possibly due to lower trust in hospitals and reduced vaccine uptake, particularly among those aged 80+.

Conclusions:

Official CM was differentially under-reported, so EM estimates provide a more robust picture of regional and temporal patterns of COVID-19 deaths. Mortality was high in the North in the second as well as first wave. It was high in the South afterwards (Mar-Dec 2021), accounting for 41% of avoidable mortality.

Key messages:

- Excess mortality estimates provide a more robust understanding of regional and temporal patterns of COVID-19 deaths than reported COVID-19 deaths.
- Heterogeneous impact of COVID-19 was associated with differences in preventive habits, trust levels, and vaccine uptake.

Abstract citation ID: ckad160.976
Regional and temporal patterns of Italian COVID-19 mortality

Michael Stoto

F Sanmarchi¹, D Golinelli², G De Girolamo³, P Rucci¹, MA Stoto⁴

¹Department of Biomedical and Neuromotor Sciences, Alma Mater Studiorum - Università di Bologna, Bologna, Italy

²Det of Molecular and Developmental Medicine, University of Siena, Siena, Italy

³Unit of Epidemiological and Evaluation Psychiatry, IRCCS Istituto Centro San Giovanni di Dio Fatebenefratelli, Brescia, Italy

⁴Department of Health Management & Policy, Georgetown University, Washington, USA

Contact: mike.stoto@gmail.com