

IMPACT OF THE COVID-19 EPIDEMIC ON THE TOTAL MORTALITY OF THE RESIDENT POPULATION IN THE FIRST FIVE MONTHS OF 2020

This third Report, jointly produced by Istat and the Istituto Superiore di Sanità (ISS), shows an analysis of total mortality and Covid-19 deaths in May 2020 and an updating of the analysis of January-April 2020 data, already presented in the second Report.

Total mortality data analysed in the report refers to the first five months of 2020. Today Istat releases data of 7,357 municipalities (out of a total of 7,904, 93.1%, relating to 95.0% of resident population in Italy). The database, realised in Istat, is obtained thanks to the integration of population register sources (ANPR and municipalities) with the data of the Tax Register¹.

The Istituto Superiore di Sanità (i.e. the Italian National Institute of Health) by the decree 640, of the Italian Civil Protection of 27 February 2020, is responsible for the Italian National integrated Surveillance of cases of Covid-19.

The system contains data on all laboratory confirmed cases (i.e., by RT-PCR on nasopharyngeal swabs) of COVID-19 as for the case definition published and regularly updated online by the European Centre for Disease Prevention and Control (ECDC). Data is collected daily using a secure online platform from the 19 regions and two Autonomous Provinces (AP) of the Italian territory², according to an increasingly harmonized track-record. Data collected include information on: demographics, clinical severity, comorbidities, date of symptom onset, date of diagnosis, date of death (or recovery), region of diagnosis and municipality of residence.

Data here reported are continuously updated and the decision to take as a reference the first five months of 2020 allows to carry out the analysis of the impact of the Covid-19 epidemic on the total mortality of the resident population on a database as consolidated as possible³.

¹ For more information on quality and mortality data coverage see the Methodologica Note included in the Report.

² Data of the ISS COVID-19 Integrated National Surveillance is not perfectly aligned with the flow of Civil Protection and the Ministry of Health which report aggregated data sent daily by the regions

<http://opendatadpc.maps.arcgis.com/apps/opsdashboard/index.html#/b0c68bce2cce478eaac82fe38d4138b1>.

³ Date of the integrated surveillance database refers to July 1th 2020.

SYNTHESIS OF MAIN RESULTS

- The number of Covid-19 cases reported in Italy is highest in March with 113,351 cases, (the peak is reached in March 20th), therefore it begins to decrease; 94,658 cases were reported in April, although many deaths in April referring to those diagnosed in March. The decline continues sharply in May (22,893 cases).
- Of the 232,639 Covid-19 cases reported up to May 31st, 2020, 54.2% (121,297) are female. The median age class is 60-64 years (compared to the 0-100 range). For people aged 75 and more, women are 61%, also due to female prevalence in this age class. Just 1% of the reported cases concerns subjects under the age of 14.
- Integrated National Surveillance registered 32,981 deaths from Covid-19 positive people from February 20th to May 31st 2020; of these 15,133 (46%) died within the month of March (the peak was reached on March 28th), 13,777 (42%) in April and 4,014 (12%) in May. The continuous updating of data by the Regions has allowed to acquire a further 406 deaths (28,967 compared to 28,561) that occurred in the months of March and April but communicated after the date of updating of the database of the second Report (May 25th 2020)
- The heterogeneity in the geographical spread of the epidemic is confirmed. It is contained in the Southern Regions and in the Islands, on average higher in those of the Centre than in the South and very high in the Northern regions. Considering Covid-19 cases and deaths, 72% of the reported cases and 80% of the deaths are in the provinces defined as "high" spread, 19% of the cases and 14% of the deaths in the "medium" spread" and respectively 9% and 6% in the provinces with "low" spread.
- Mortality from overall causes decreases as Covid-19 cases and deaths decrease. At national level, total deaths drop from 82,260 in March and 67,153 in April to 47,100 in May. The estimate of excess mortality goes from an average increase of 49.4% in March (27,195 more deaths in 2020 than the 2015-2019 average) and 36.6% in April (17,991 more deaths) to a decrease of 2.2% (1,081 less deaths). The mortality of the high-spread provinces decreases. Overall in this area, deaths goes from 43,612 in March 2020 (122.2% more than in 2015- 2019) and 32,559 in April (85.3% more than in 2015-2019) to 18,132 (3.9 % more than in 2015-2019).
- The most important drop is observed in Lombardia: deaths for the overall causes decrease from 25,119 in March and 16,573 in April 2020 to 7,742 in May. The excess of deaths compared to the average for the same months in 2015-2019 drops from 190.1% (March) and 111.9% (April) to 8.6% in May. The provinces most affected by the epidemic are the ones in which the most important reductions are observed. In Bergamo and Cremona the mortality decrease has been more accentuated, the excess mortality drops from 574% (March) and 126% (April) to -1% in Bergamo and from 403% (March) and 162% (April) to 10% in Cremona.
- In May 2020, the highest level of excess mortality is observed in the province of Lecco (20.2% more deaths than the 2015-2019 average), even though in this province there is a drop compared to March (185%) and April (129%).
- The decrease of mortality in May concerns both male and female and it is the stronger the higher was mortality excess in March and April. Number of deaths of people aged 75-80 resident in the high-spread provinces is lower than the 2015-2019 average (-3.9%), after it reached the peak in March (145%) and it had a first decrease in April (67%). Mortality excess is still present in May in the high-spread provinces in the population aged 80 and more (8.2%).