
Covid-19 may have caused the loss of more than 20.5 million years of life worldwide

- *Research with prominent participation by the Centre for Research in Health and Economics (CRES-UPF) and the Max Planck Institute for Demographic Research, has calculated the years of life lost (YLL) rate due to the pandemic in 81 countries.*
- *In the study, published in the journal Scientific Reports, the researchers conclude that the YLL rate associated with covid-19 is between two to nine times higher than that attributable to seasonal flu, and that on average, for each death sixteen years are lost.*
- *Of the total years of life lost, 44.9% occurred in individuals between 55 and 75 years of age, 30.2% among people under 55, and 25% in the over 75s.*
- *The research, supported by the "la Caixa" Foundation, confirms that in countries where deaths are recorded by gender, the YLL rate was 44% higher in men than in women.*

Barcelona, 19 February 2021.- The major direct and indirect effects of covid-19 have forced the authorities to implement policies that strike a balance between minimizing the immediate health impact of the pandemic and containing the long-term damage to society arising from protective policies.

One parameter that is crucial for calculating how restrictive policies might be warranted is the mortality impact of covid-19, which has led to large-scale international collaborations in order to collect data that records deaths attributable to the pandemic.

Despite the limitations, each of these research avenues and associated health measures (infection rate, deaths and excess deaths) is important in order to inform the public and policymakers about the mortality impact of covid-19.

A study by a group researchers from several international universities and research centres, including lecturers from the UPF Department of Economics and Business Héctor Pifarré i Arolas (first author) and Guillem López Casasnovas, both researchers at the Centre for Research in Health and Economics (CRES-UPF), has estimated the premature mortality impact of covid-19. It has done so by calculating years of life lost (YLL) due to covid-19 compared to YLL for other common illnesses, such as the flu or cardiovascular diseases.

The research, published recently in the journal *Scientific Reports* (Nature Research), also involved the researchers Mikko Myrskylä, Enrique Acosta and Tim Riffe (Max Planck Institute for Demographic Research, Germany); Adeline Lo (University of Wisconsin-Madison, USA), and Catia Nicodemo (University of Oxford) and has been co-funded by the “la Caixa” Foundation.

“Our results confirm that the mortality impact of covid-19 is large, not only in terms of numbers of deaths, but also in terms of years of life lost”, assert the authors, who consider their study a snapshot of the situation of the pandemic in early 2021.

How many years of life have been lost due to covid-19? And in relation to other illnesses?

The years of life lost rate is the difference between an individual’s age at death and their life expectancy. The researchers estimated YLL caused by covid-19 using data on more than 1,279,866 deaths in 81 countries. They also analysed data on life expectancy and made projections of total deaths from covid-19 by country.

The authors estimate that a total of 20,507,518 years of life have been lost due to covid-19 in the 81 countries included in this study, with an average of sixteen years per individual death. Of the total YLL, 44.9% occurred in individuals between 55 and 75 years of age, 30.2% among people under 55, and 25% in the over 75s. In the countries for which records of the number of deaths by sex were available, YLL was 44% higher in men than in women.

In the countries most affected by covid-19, and in relation to other global common causes of death, the life years lost rate due to the pandemic has been between two

and nine times greater than the mean YLL rate associated with seasonal flu, and between 1/4 and 1/2 higher than the YLL rate attributable to heart disease.

Interpretation of the results in the context of an evolving pandemic

In 35 of the countries studied, the data coverage spans at least nine months; in these cases, this suggests that it will probably include the full impacts of the pandemic in 2020, or at least its first waves, while for other countries, these figures are still rising. The authors warn that “these results must be understood in the context of an ongoing, evolving pandemic; this study is a snapshot of the possible impacts of covid-19 on years of life lost on January 6, 2021”.

Moreover, the authors suggest that “estimates of years of life lost may be underestimated, due to the difficulty of accurately recording covid-19-related deaths”, since “both policies and practices about coding the deaths are only just being developed and standardized”. In addition, they stress that the study is limited to analysing premature mortality, and that a full assessment of the impact of the pandemic on health should consider the burden of disability associated with the disease.

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Reference article: “Years of life lost to COVID-19 in 81 countries”, (February 2021). Pifarré i Arolas, H., Acosta, E., López Casasnovas, G., Lo A., Nicodemo, C., Riffe, T., Myrskylä, M. *Scientific Reports*
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