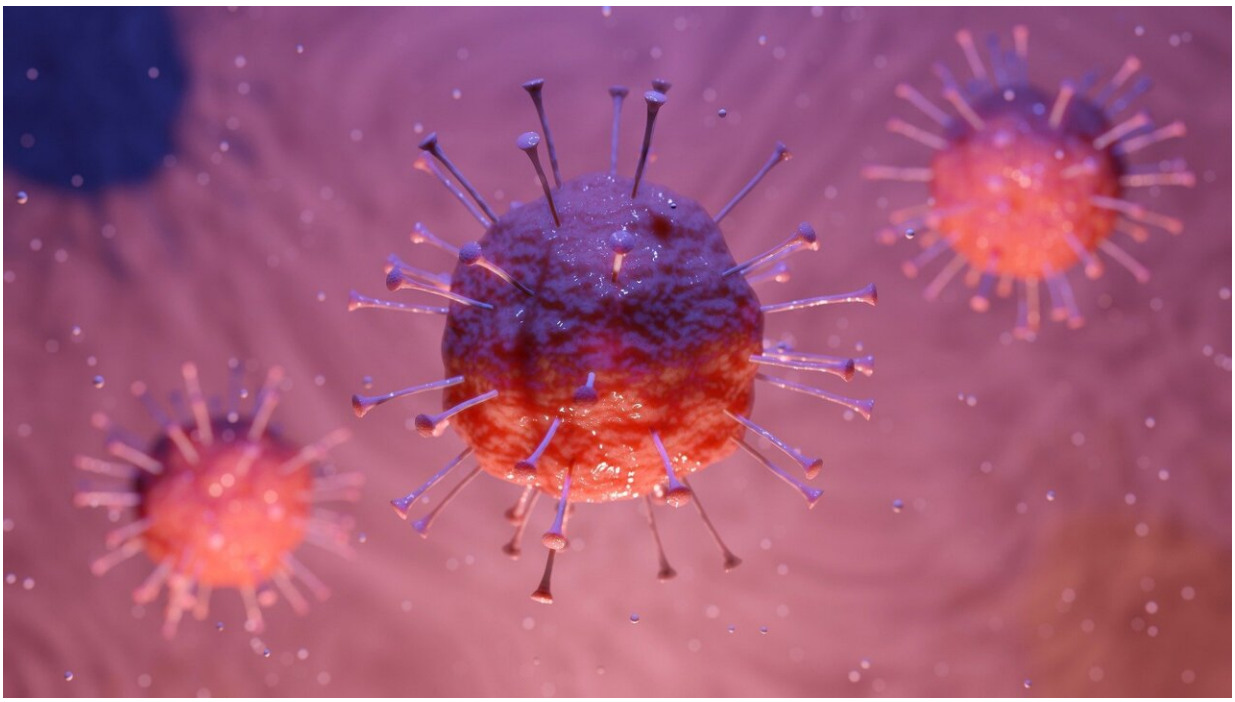
Medical Xpress

New estimates of excess mortality from COVID-19 suggest stronger suppression measures needed

March 24 2020



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A mitigation strategy aimed at slowing the spread of coronavirus could lead to at least 35,000-70,000 excess deaths over one year, find researchers from UCL, University College London Hospitals NHS Foundation Trust, the University of Cambridge, and Health Data

Research UK.

The new analysis, which estimates the excess number of deaths caused by COVID-19 in relation to underlying medical conditions and age, used NHS health records from 3.8 million adults in England. It shows that the UK government's measures do not go far enough in stopping the spread of the disease or identifying the most high-risk groups.

The team of clinicians, statisticians and epidemiologists say that stronger suppression measures, which aim to reverse epidemic growth, may be required in the UK to avoid excess mortality from coronavirus (COVID-19) and we must recognise that people with multiple underlying diseases are extremely vulnerable.

Lead author, Dr. Amitava Banerjee, associate professor in clinical data science and honorary consultant cardiologist, UCL Institute of Health Informatics, said, "The UK government is currently following a partial suppression policy of population-wide social distancing, combined with home isolation of cases, as well as school and university closures, but this is currently not mandated. Our study indicates that the government should implement more stringent suppression at population level to avoid not just immediate deaths but also long-term excess deaths."

The new study, published as a pre-print today, provides the public, researchers and policy makers with a model to estimate the excess mortality over one year from COVID-19, based on underlying conditions at different ages.

To date nearly all deaths related to the coronavirus (COVID-19) pandemic have occurred in people with underlying health conditions or at older ages, although clinical experience over the last few days suggests that may be changing. Therefore, people with chronic diseases such as heart disease, kidney disease and diabetes, and all older adults are being

told to isolate themselves during the COVID-19 outbreak.

However, current models to predict deaths from COVID-19 have ignored underlying conditions or the underlying risk of death, which means that they may not be accurately predicting the number of deaths, and they do not look at excess deaths over a one-year time frame.

The COVID-19 pandemic may cause excess mortality in the population both because of deaths among those infected, and because people who are not infected are experiencing social and economic upheaval; meanwhile the ability of health services to provide high quality of care for both infected and uninfected patients is threatened. This net effect of mortality on the population is thus not only a matter of modelling an infectious disease but modelling a wider societal impact.

The team estimated the excess mortality of COVID-19 infection under different scenarios and report that at least 20% of the UK population has one of the high-risk underlying conditions for COVID-19 infection previously listed by Public Health England. Current targeting of 1.5 million people (about 2.7% of the English population) announced by the Government today may mean that other 'high risk' people are not being tested.

Dr. Banerjee said: "Cardiovascular disease, for example, is not on the government list of conditions announced today. But in this paper, we show that the one year mortality for people with cardiovascular disease is 6%; and for people with two or more underlying health conditions is 11%. To date, only people with single disease risks have been included in the high-risk group, and not those with multiple diseases who are at a greater risk.

"We urge the government to be transparent about how 'extremely vulnerable' groups are identified. If it is on the basis of high background

mortality risk (pre-COVID-19), then the data and methods should be made available for public scrutiny."

While providing an important new model, the authors are clear on the limitation of this study, which is that it only includes the NHS health records of 5% of the UK population, as primary care data for most of the UK population is not available for research.

Furthermore, like other researchers, they cannot access national real-time detailed information about the COVID-19 epidemic from hospitals, nor yet from intensive care units, where a large proportion of coronavirus patients are already being treated.

Co-author Professor Harry Hemingway, consultant public health physician, professor of clinical epidemiology at UCL Institute of Health Informatics and research director of Health Data Research UK, said, "Legislation is urgently needed to free up nationwide NHS data so that clinicians and services can rapidly learn ways to tackle the consequences of the epidemic both in those with and those without the virus. The situation as it stands is not acceptable. The current regulatory and legislative environment around NHS data hampers the public health emergency response to the COVID-19 pandemic."

More information: Estimating excess 1- year mortality from COVID-19 according to underlying conditions and age in England: a rapid analysis using NHS health records in 3.8 million adults. DOI: 10.13140/RG.2.2.36151.27047

Provided by University College London