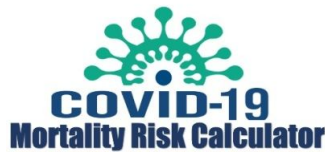**Online Calculator for COVID-19 Mortality Risk**



A new addition to the COVID-19 Risk Tools suite by the Johns Hopkins Bloomberg School of Public Health, an [online mortality calculator](#), assesses the risk of dying from COVID-19 in currently uninfected individuals. It has been presented in an article published in Nature Medicine (Jin et al. 2020) and  is available online for interested public health professionals and general public.

*You might also like:* [Cross-Border Management of COVID-19 Lab Results](#)

Various parameters, such as age, gender, race, social deprivation and pre-existing health conditions, are the basis for calculating the level of risk. The model accommodates data from the UK-based OpenSAFELY [study](#) adjusted to account for mortality rates across U.S. states published by the Center for Disease Control. Based on these, the calculator also estimates risks of future infection and complications after infection.

The authors argue that the calculator could be useful in identifying high-risk populations to inform vaccine prioritisation policies, in addition to other proposed guidelines, such as those by the National Academy of Sciences and Medicine.

"A variety of models were already being developed to project the spread of the pandemic at the population level, but there were limited efforts towards building and validating individual-level models for predicting outcomes in the United States," says study senior author Nilanjan Chatterjee, Bloomberg Distinguished Professor of biostatistics and genetic epidemiology, whose research focusses on risk assessment of non-communicable diseases such as cancer. "We saw an opportunity and a need for this type of tool that we had been developing already and realised that our particular expertise could fill this gap and be useful for individuals as well as policymakers."

It is known that the disease affects different populations differently. For example, children usually have no or mild symptoms while people with pre-existing conditions such as diabetes are at a much higher risk of developing life-threatening symptoms or dying. According to Chatterjee, such additional factors, although known, have been included into pandemic control strategies and measures only to a limited extent.

The online calculator invites users to provide information on their sociodemographics, such as age and postal code; behaviours (e.g. smoking); and existing health conditions (e.g. cancer). Based on these, the tool assesses the user's mortality risk level (from lower than average to very high risk) compared to the average risk for the U.S. population, at an individual level or for a particular group.

In their paper, researches showed that the risk distribution varies greatly depending on individual factors and across geographical regions, as well as on the general pandemic dynamics (to factor it in the tool is updated on a weekly basis). Incorporating these multiple factors, the model may help with protecting vulnerable populations, allocating vaccines and personal protective equipment, as well as with other interventional measures.

Source and image credit: [Johns Hopkins Bloomberg School of Public Health](#)

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