Global COVID-19 study finds higher infection risk was main driver of ethnic inequality

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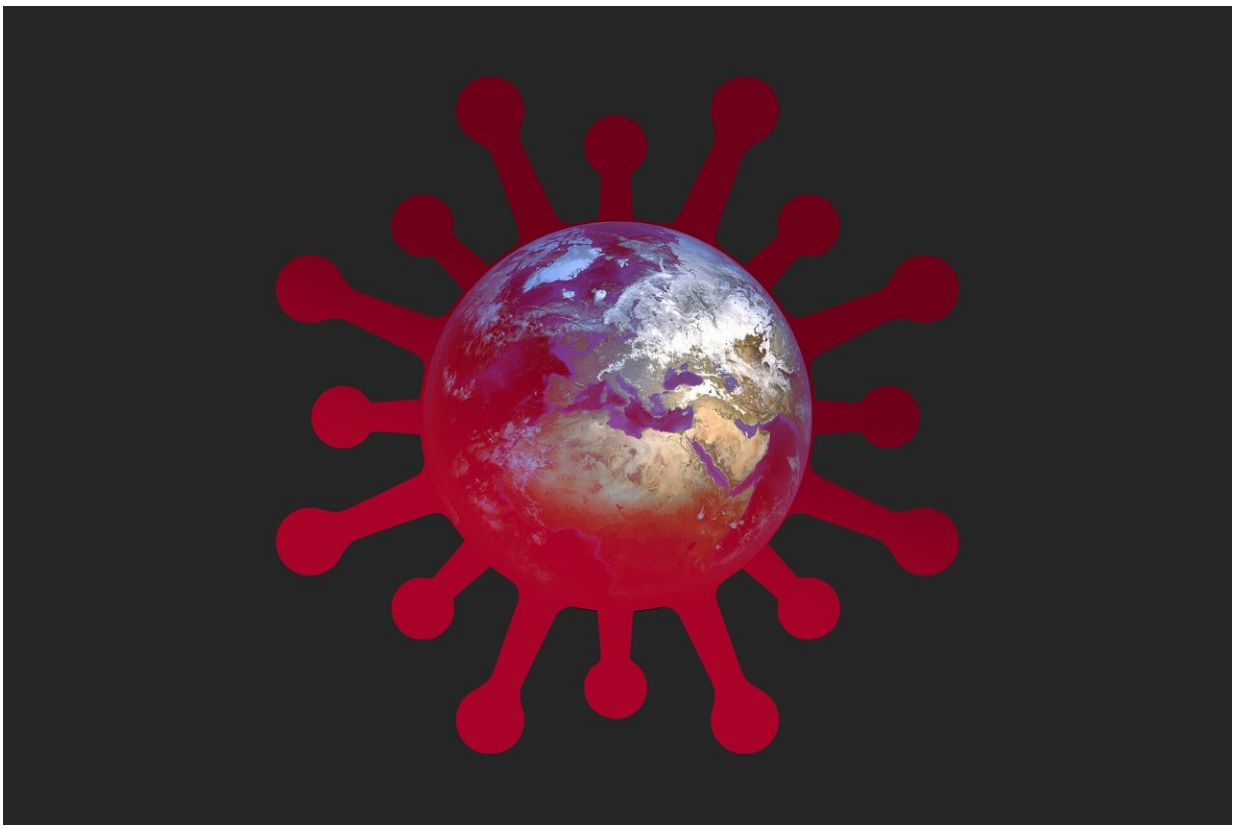

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In the most comprehensive analysis of ethnic inequalities in COVID-19 health outcomes to date, a major new global study has found that ethnic

minority groups experienced higher rates of severe illness and death during the pandemic because of their greater risk of infection.

The research, published in *eClinicalMedicine*, analyzed results from 77 research studies, covering 200 million people from around the world. Earlier research showed a higher risk of severe illness or death for people from ethnic minority groups, but it was not clear if this was due to higher infection risk, poorer prognosis once infected, or both.

The study found that the biggest driver of ethnic inequalities was in infection rates. Compared with the White majority group, South Asian people were 3 times more likely to test positive for infection, Black people were 1.8 times more likely, and Mixed and Other ethnic groups were each 1.3 times more likely.

Among studies that looked at the risk of severe illness or death from COVID-19 in the whole population, Black people were 1.5 times more likely to be admitted to hospital than the White majority, Indigenous people were 1.9 times more likely and Hispanic people were 1.3 times more likely. The risk of needing intensive care was also higher: South Asian, East Asian, Indigenous, Hispanic and Black groups all had more than triple the risk than White majority groups. Indigenous people had twice the risk of dying than White majority people, with the Mixed ethnic group at 1.4 times the risk and the Hispanic group at 1.3 times the risk.

The fact that more people from ethnic minority groups were admitted to hospital and more of them died seems to be due to a greater proportion of people being exposed to the virus and becoming infected—when looking at studies that only include people infected with COVID-19, the risks of severe illness and death are similar for ethnic minority groups and the White majority group.

However, after being admitted to hospital with COVID-19, ethnic minority people were more likely to be admitted to ICU compared to White people. These higher rates may be a reflection of poorer health before infection with COVID-19, or inequalities in access to healthcare or service quality—all of which are a result of structural and institutional racism.

Higher infection rates can be driven by socioeconomic inequalities experienced by ethnic minority groups, that were exacerbated by the pandemic, and occupational risks. Different patterns of employment, income and housing impacted the level of risk faced by people from different ethnicities—people from ethnic minority groups are more likely to have public-facing jobs, less likely to be able to self-isolate or work from home, more likely to live in overcrowded housing and less likely to have access to open spaces. These factors all increase the risk of COVID-19 infection.

Data was also shaped by inequalities in policy and service provision. While positive test rates for White majority and Hispanic people were similar, antibody tests—the best indicator of previous infection—showed that Hispanic people were twice as likely to have previously been infected with COVID-19. This suggests that Hispanic people may not have had adequate access to tests.

The researchers emphasize the importance of using disaggregated ethnic categories, as the use of broad groups can mask differences in health outcomes. The study found that South Asian people had a higher risk of infection, whereas East Asian people did not, and these differences may not have been found if a broad "Asian" group was used.

"The COVID-19 pandemic disproportionately impacted ethnic minority people, with the present findings demonstrating that the health inequalities earlier in the pandemic were largely driven by differences in

exposure," said the study's lead author, Dr. Patsy Irizar from The University of Manchester.

"Our study examines COVID-19 outcomes from ethnic minority groups globally," said Dr. Daniel Pan, joint lead author and NIHR Doctoral Research Fellow from the University of Leicester. "Although now there are reductions in mortality amongst ethnic minority groups in the UK, our work is of relevance to policy makers internationally, where ethnic minority groups continue to suffer disproportionately worse outcomes from COVID-19."

"This latest study, now of over 200 million individuals from around the world, confirms and builds on our earlier work highlighting the disproportionate risk of COVID-19 in ethnic minority groups," said Professor Manish Pareek, Chair in Infectious Diseases at the University of Leicester. "This work will be of relevance to UK's independent public inequiry into the pandemic, which has committed to examining the impact of inequalities at the forefront of its investigations. Going forward it is critical that policy-makers address health inequalities to improve health outcomes for ethnic minority groups.

"The COVID-19 pandemic shone a spotlight on the health inequalities experienced by ethnic minority groups," said Professor Vittal Katikireddi, Professor of Public Health and Health Inequalities at the University of Glasgow. "Monitoring these inequalities in the future will be important to ensure policy responses are helping create a fairer society."

More information: Patricia Irizar et al, Ethnic inequalities in COVID-19 infection, hospitalisation, intensive care admission, and death: a global systematic review and meta-analysis of over 200 million study participants, *eClinicalMedicine* (2023). DOI: 10.1016/j.eclinm.2023.101877

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