

New clinical risk management tools are needed to prevent COVID-19 deaths, say experts

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A new study exposes the dire need for new clinical risk management tools to help hospital healthcare workers prevent the deaths and intensive care admissions of Black, Asian and minority ethnic (BAME) COVID-19 patients with pneumonia, say researchers.

The call for healthcare policy change comes after a new study led by the University of Birmingham has revealed [ethnic minority](#) COVID-19 patients from areas with the highest levels of household overcrowding, air pollution, poor housing quality and adult skills deprivation are more likely to be admitted to hospital suffering pneumonia and requiring intensive care. Indian, Pakistani, African, Caribbean, Chinese, Bangladeshi and mixed ethnicity patients were all more likely than Caucasians to be admitted from an area with at least one form of deprivation.

The first of its kind study of 3,671 patients with COVID-19 admitted to four Midland hospitals provides new important and detailed insights into the stark contrasts between ethnic minorities and

Caucasians.

It found 81.5% of ethnic [minority](#) COVID-19 patients were more likely to be admitted to hospital from regions of highest air pollution deprivation compared with 46.9% of Caucasians. 81.7% of hospitalised ethnic minority COVID-19 patients were more likely to be admitted from regions of highest household overcrowding deprivation compared with 50.2% of Caucasians.

Crucially, the study found that existing tools used by medics to predict or measure risk and manage the care of COVID-19 patients with pneumonia are insufficient, and can result in underscoring of ethnic minority patients. This is particularly due to the fact that often they do not take into consideration that ethnic minority patients are at greater risk of serious illness with COVID-19 at a younger age than Caucasians. The study found of those patients hospitalised, ethnic minorities, including Indian, Pakistani, African, Chinese, Bangladeshi and any other non-Caucasian ethnic group were under the age of 65, while Caucasians were older than 65.

Existing scoring also does not take into account important risk factors that ethnic minority patients are much more exposed or vulnerable to, including suffering multiple pre-existing underlying health conditions, obesity, and deprivation, such as living in overcrowded households or areas of high pollution.

The researchers say underscoring can potentially lead to inappropriate levels of care as clinicians are left falsely reassured regarding the severity of illness and risk of a patient's deterioration.

The results showed ethnic minority patients with pneumonia and low CURB65 scores—a tool used by clinicians to predict severity of pneumonia—had

higher mortality than Caucasians (22.6% vs 9.4% respectively). Africans were at highest risk (38.5%), followed by Caribbean (26.7%), Indian (23.1%), and Pakistani (21.2%) patients. Provided by University of Birmingham

The research was supported by the National Institute for Health Research (NIHR) and its publication comes following the gripping BBC 1 documentary "Why is COVID killing people of colour?" which was released earlier this year where the lead author, Dr. Marina Soltan, was interviewed by David Harewood following a previous study she led showing that patients with [chronic conditions](#) such as hypertension or kidney disease are nearly twice as likely to die from COVID-19 and that many patients with these conditions come from deprived areas.

Lead author Dr. Marina Soltan, a NIHR Academic Clinical Fellow in Respiratory Medicine at the University of Birmingham and the NHS England Health Inequalities Improvement Policy and Delivery Lead for Data and Research, said: "The COVID-19 pandemic has shone a harsh light on health inequalities. This study demonstrates an urgent need for the development of novel clinical risk stratification tools, ensuring they reflect risk factors to which ethnic minorities are predominantly predisposed".

"This work has implications for how we train healthcare professionals to recognise multi-ethnic risk factors and public health implications for how to narrow the gap on health inequalities"

"Meanwhile, partnership with both government and industry is beneficial to prevent the rise in the number of patients with multiple chronic illnesses and reduce inequalities, ensuring everyone has access to suitable housing, employment and education opportunities, regardless."

More information: Marina A Soltan et al, COVID-19 admission risk tools should include multiethnic age structures, multimorbidity and deprivation metrics for air pollution, household overcrowding, housing quality and adult skills, *BMJ Open Respiratory Research* (2021). [DOI: 10.1136/bmjresp-2021-000951](https://doi.org/10.1136/bmjresp-2021-000951)

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