

Poor health outcomes from COVID-19 more probable among black patients

May 1 2020, by Dr Sabine L. Van Elsland, Ryan O'hare



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Black patients may be at increased risk of poorer health outcomes from COVID-19, according to an analysis of patients hospitalised in London.

The analysis, carried out by researchers at Imperial College London, characterises the main risk factors associated with deaths for patients admitted for COVID-19 to three hospitals in Imperial College

Healthcare NHS Trust, evaluating whether outcomes vary by ethnicity.

The findings reveal that over a five-week period, a large proportion of patients admitted were from ethnic minority groups when compared with last year's admissions at the same hospital Trust.

In addition, compared to white patients, [black patients](#) admitted to hospital with COVID-19 tended to be younger, have fewer pre-existing [health conditions](#), and have worse health outcomes.

Dr. Shevanthi Nayagam, a clinical research fellow within the School of Public Health, said: "Amongst our patient group, we found that patients from BAME groups were over-represented in admissions for COVID-19 compared to a normal year with other illnesses.

"In hospital, patients with a black ethnic background were younger and even though they had fewer pre-existing conditions, they tended to show a similar severity of illness than older patients from white ethnicity. It is critical that we understand whether this pattern is true across the UK and what the potential key drivers of these differences are."

Ethnicity insights

The analysis is presented in [the latest report](#) from The WHO Collaborating Centre for Infectious Disease Modelling within the MRC Centre for Global Infectious Disease Analysis (GIDA), and the Abdul Latif Jameel Institute for Disease and Emergency Analytics (J-IDEA).

This report, the seventeenth in a series, is a collaboration with the Division of Digestive Diseases, Department of Metabolism Digestion and Reproduction, Department of Infectious Disease, Department of Primary Care and Public Health, School of Public Health, NIHR Imperial Biomedical Research Centre and Imperial College Healthcare

NHS Trust.

The report describes 520 patients hospitalised between February 25 and April 5 2020 at three hospitals of the Imperial College Healthcare NHS Trust. Of this group, 302 (68%) had been discharged alive, 144 (32%) died and 74 (14%) were still hospitalised at the time of writing.

Several factors including older age, male sex, high number of comorbidities, reduced [oxygen levels](#) (hypoxia) on admission and certain admission blood tests (low blood platelet count, [renal failure](#), low albumin and raised bilirubin levels) were associated with increased mortality in hospital.

In terms of ethnicity, 40% of patients were from black and Asian minority groups, 38% were white and ethnicity was unknown for 22%.

Increased mortality risk

There was no overall difference in mortality between different ethnicities. However, patients of black ethnic minority were younger and had fewer pre-existing health conditions compared with white patients. The analysis suggests that patients with black ethnicity may be at increased risk of mortality from the disease.

The authors recommend that research is urgently expanded to see whether this pattern is replicated on a national level and better understand whether sociodemographic and biological factors could be driving differences in the COVID-19 epidemic at the community level.

Dr. Pablo Perez-Guzman, from Imperial's School of Public Health, said: "Consistent with previous studies, we find older age, male sex and severity of hypoxia on admission are significant drivers of hospital mortality among COVID-19 patients. We further identified renal failure,

hypoalbuminaemia and raised bilirubin were associated with increased odds of death in our population.

"For the first time, we describe the differences in clinical characteristics and outcomes by broad ethnic groups. People of BAME groups in our population were younger and overall had fewer known comorbidities than those of white ethnicity.

"Despite this, we identified a trend suggesting higher odds of hospital mortality amongst those of black compared to white ethnicity. Research is needed to investigate possible sociodemographic and biological differences in COVID-19 transmission and severity across sectors of the UK population."

Dr. Katharina Hauck, Deputy Director of the Jameel Institute at Imperial, said: "A key strength of this study is that we have used statistical methods to correct for age and comorbidity in the evaluation of patient outcomes, and robustly analyse the impact of [ethnicity](#). We hope that our findings will make a real difference to patients in the UK and abroad."

Professor Mark Thursz, head of the Department of Metabolism Digestion and Reproduction at Imperial, added: "The signals for adverse outcomes in ethnic minorities are concerning and warrant further investigation of the underlying causes."

The full report '[Clinical characteristics and predictors of outcomes of hospitalised patients with COVID-19 in a London NHS Trust: a retrospective cohort study](#)' is available on the MRC GIDA report website.

Provided by Imperial College London

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