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## **Global study on COVID-19 finds higher mortality rate in non-Caucasians**

A new international study led by University of Cape Town (UCT) cardiologists found that Asians, Blacks, and Hispanics hospitalised with COVID-19 had almost two to four times higher risk of death than Caucasians.

The study published in the [Global Heart Journal](#), found that the main predictors of mortality were older age ( $\geq 60$  years), male, pre-existing coronary heart disease, diabetes, renal disease, severe COVID-19 infection with higher respiratory rates and requiring Intensive Care Unit (ICU) admission and oxygen therapy.

Interestingly, the researchers found that HIV status was positively associated with 30-day mortality but not in-hospital deaths, suggesting a differential immune response like lower likelihood of cytokine storm during acute illness but other susceptibilities coupled with health system factors affecting increased 30-day deaths.

"This study represents the first comprehensive global data on mortality, cardiovascular outcomes, and cardiovascular risk factors among hospitalised COVID-19 patients recruited from diverse global populations," says Professor Karen Sliwa, one of the principal investigators of the study and director of the Cape Heart Institute at UCT's Faculty of Health Sciences.

Forty hospitals from 23 countries recruited 5 313 patients with COVID-19. The team collected data on demographics and pre-existing conditions at hospital admission, clinical outcomes at hospital discharge (death, major adverse cardiovascular events (MACE), renal failure, neurological events, and pulmonary outcomes), 30-day vital status, and re-hospitalisation. Furthermore, hospital level resources and facility data were gathered from each participating hospital.

They also performed descriptive analyses and multivariable log-binomial regression models, adjusted for age, sex, ethnicity/income groups, and clinical characteristics.

This is the first global study to explore the relationship of hospital level resources and country income status with the clinical outcomes.

"We found COVID-19 patients recruited from low-, lower-middle-, and upper-middle- income countries (LIC, LMIC, and UMIC) were at significantly greater risk of mortality than high-income countries (HICs). Patients from LMIC and UMICs versus HICs had almost 2–3 times increased risk of MACE, but patients from LIC's had lower risk of MACE, which can be partly explained due to the variation in the demographic characteristics, and pre-existing chronic conditions," says Sliwa.

Sliwa says many LMICs have a high burden of cardiovascular disease and its risk factors that are associated with greater morbidity and mortality following a COVID-19. However, having certain cardiac conditions which are common in Africa such as rheumatic heart disease or cardiomyopathy provided no additional risk.

"Managing seriously ill patients with COVID-19 requires vast resources emerging as a daunting challenge even in HICs," adds Sliwa.

Reporting the results, Sliwa says the analysis demonstrated a greater rate of in-hospital deaths, post discharge 30-day deaths and MACE among Hispanics, and Asian populations compared to Caucasians.

"Higher prevalence of comorbidities such as hypertension, diabetes, renal disease and obesity among Asians, Hispanics, and other populations (such as Blacks and middle eastern populations) may play a role in the increased mortality and MACE in our cohort of COVID-19 patients," adds Sliwa.

This study, she says, can help guide future health care planning for the pandemic globally.

***ENDS***

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