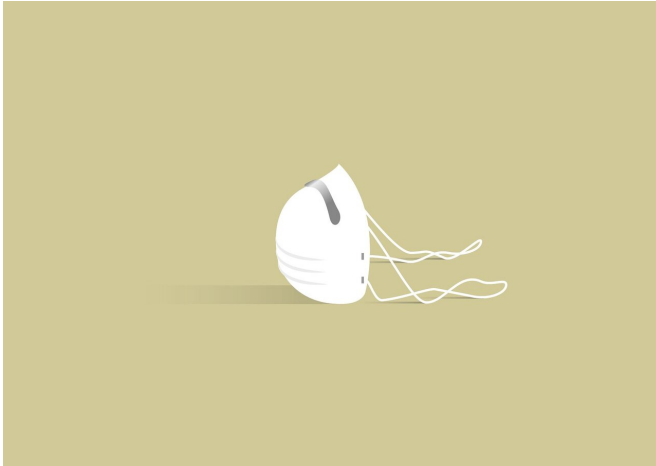


# Frontline healthcare workers more likely to test positive for SARS-CoV-2 despite PPE

31 July 2020



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A new study published today in *Lancet Public Health* has found that front-line healthcare workers with adequate personal protective equipment (PPE) have a three-fold increased risk of a positive SARS-CoV-2 test, compared to the general population. Those with inadequate PPE had a further increase in risk. The study also found that healthcare workers from Black, Asian and minority ethnic (BAME) backgrounds were more likely to test positive.

Using the COVID Symptom Tracker App, researchers from King's College London and Harvard looked at data from 2,035,395 individuals and 99,795 front-line health-care workers in the UK and US. The prevalence of SARS-CoV-2 was 2747 cases per 100,000 front-line health-care workers compared with 242 cases per 100,000 people in the general community. A little over 20 percent of front-line health-care workers reported at least one symptom associated with SARS-CoV-2 infection compared with 14.4 percent of the [general population](#); fatigue, loss of smell or taste, and hoarse voice were especially frequent.

BAME health-care workers were at an especially high risk of SARS-CoV-2 infection, with at least a fivefold increased risk of infection compared with the non-Hispanic white general community.

Professor Sebastien Ourselin, senior author from King's College London said: "The findings of our study have tremendous impact for healthcare workers and hospitals. The data is clear in revealing that there is still an elevated risk of SARS-CoV-2 infection despite availability of PPE.

"In particular we note that that the BAME community experience elevated risk of infection and in some cases lack access to adequate PPE, or frequently reuse equipment."

Researchers say their study not only shows the importance of adequate availability and use of PPE, but also the crucial need for additional strategies to protect healthcare workers, such as ensuring correct application and removal of PPE and avoiding reuse which was associated with increased risk.

Differences were also noted in PPE adequacy according to race and ethnicity, with non-Hispanic white health-care workers more frequently reporting reuse of or inadequate access to PPE, even after adjusting for exposure to patients with COVID-19.

Joint first author Dr. Mark Graham from King's College London said: "The work is important in the context of the widely reported higher death rates amongst [healthcare workers](#) from BAME backgrounds. Hopefully a better understanding of the factors contributing to these disparities will inform efforts to better protect workers."

Dr. Claire Steves, lead clinical researcher from King's College London said: "I'm very pleased we have now introduced masks and social distancing where possible for all interactions in hospitals—to protect ourselves and the population we serve. We

need to ensure this is reinforced and sustained throughout the health service—including in health care settings outside hospitals, for example in care homes.

"Additional protective strategies are equally as important, such as implementing social distancing among healthcare staff. Stricter protocols for socialising among healthcare staff also need to be considered."

Provided by King's College London

APA citation: Frontline healthcare workers more likely to test positive for SARS-CoV-2 despite PPE (2020, July 31) retrieved 30 May 2022 from <https://medicalxpress.com/news/2020-07-frontline-healthcare-workers-positive-sars-cov-.html>

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