

Study reveals extent of coronavirus spread in hospitals during pandemic peak

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Researchers studying the spread of SARS-CoV-2 among healthcare workers have found high levels of asymptomatic infections during the peak of the pandemic in London. These results, published as part of correspondence in *The Lancet* today, highlight the importance of routinely screening healthcare staff for the virus to protect frontline workers and their patients.

As part of the SAFER study, researchers at University College London Hospitals (UCLH) NHS Foundation Trust, collected twice-weekly self-administered nose and throat swabs and monthly blood samples from 200 frontline [healthcare staff](#). These [staff](#) are caring for patients in a variety of roles within A&E, [intensive care](#), and the acute medical unit at UCLH.

In partnership with the Francis Crick Institute, swabs were tested to assess whether staff were currently infected, and blood serum was tested for antibodies to the virus spike protein, which would indicate exposure to the virus.

Initial analysis of samples taken between 26 March

and 8 April 2020, the peak of the pandemic in London, revealed that 25% of [healthcare](#) staff tested had already had the [infection](#), and a further 20% acquired infection within the first month of follow up.

Overall, 45% of healthcare staff had evidence of having been infected with SARS CoV-2 by the end of the first month of follow up.

Importantly, 38% of infections were not associated with symptoms within seven days of the positive swab. For those who did develop symptoms, the average time for this happening was four days from a positive swab test.

These results indicate a significant proportion of healthcare workers were able to carry the infection in a healthcare environment without feeling unwell. This demonstrates the importance of regularly testing staff, including those who do not have symptoms, to prevent the spread of coronavirus within healthcare settings.

Eleni Nastouli, SAFER Chief Investigator and Head of virology at UCLH, said: "The aim of our study is to improve the evidence base around healthcare worker infection, to inform our response to a possible second wave of infection, and protect patients and staff. The dedication of UCLH staff to complete the study at such extraordinary times shows how much NHS staff value evidence and support healthcare related research.

"The study is also a valuable foundation to help answer pertinent questions around how long immunity might last and the risk of reinfection."

Charles Swanton, senior group leader at the Crick and UCL, Cancer Research UK's chief clinician and consultant oncologist at UCLH, said: "The coronavirus testing partnership between the Crick COVID Consortium and UCLH continues to provide valuable insight into the spread of infection,

especially within healthcare settings.

"In order to protect patients and NHS staff in the event of another spike in [coronavirus](#) infections, and crucially, to be able to resume normal treatments for diseases like cancer safely, we need to test staff on a regular basis to provide COVID-protected hospital sites.

"The invaluable work of all our staff working tirelessly in the Crick COVID Consortium is helping us achieve this in North London."

As well as providing testing for this study, The Crick rapidly set up a testing service with UCLH for [healthcare workers](#) across North Central London. As part of this service 50,000 tests have been processed for staff from many London hospitals, care homes, the London Ambulance Service, mental health trusts and community providers.

The results from the SAFER study and others have already helped make hospitals and other healthcare settings much safer for staff and patients during the continuing pandemic. Patients should continue to attend appointments, unless told not to.

More information: Catherine F Houlihan et al. Pandemic peak SARS-CoV-2 infection and seroconversion rates in London frontline health-care workers, *The Lancet* (2020). [DOI: 10.1016/S0140-6736\(20\)31484-7](#)

Provided by The Francis Crick Institute

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