

New study of healthcare workers could reveal who is most at risk from coronavirus

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A group of researchers funded by the British Heart Foundation (BHF) have set-up a clinical study of NHS Healthcare Workers to better understand the spread of coronavirus (Covid-19), and why some people are more affected by the virus than others.

This study, which could pave the way for new treatments, is the first to collect samples from [healthcare workers](#) on the frontline (doctors,

nurses, allied [health professionals](#), administrators and others) who did not have symptoms of the [virus](#). It started before the UK reached the Covid-19 peak.

As part of the study, samples of blood, saliva and nasal swabs from [healthcare](#) workers in three London hospitals are being collected in a bid to answer key questions about the virus. By taking a series of samples from frontline healthcare workers, who were most likely to be exposed early on in the pandemic, the study will help to understand who is most at risk. The team hope that this information will allow them to create individual 'risk scores' for developing complications from the virus.

They also want to know whether people exposed to the virus develop immunity, and if there are any 'hotspots' of exposure within a hospital. This research will also help to enhance ways of testing for the virus, and create a library of samples that could be used for drug or vaccine development.

So far, the team, including six BHF-funded researchers, have taken samples from 500 healthcare workers at Barts Heart Centre in London. The BHF's quick commitment to allowing its researchers to help with the Covid-19 pandemic whilst still receiving funding meant this team could build upon its research expertise and infrastructure, and act fast to push Covid-19 research forward. Sampling started on the first day of lockdown and the 400 participants were recruited in the first week. The team are now in the second month of follow-up.

Researchers now plan to recruit 1,000 healthcare workers across Barts Health NHS Trust, University College London, Queen Mary University London, the new NHS Nightingale Hospital and Royal Free Hospital.

Samples are being taken weekly for 16 weeks as part of the new Healthcare Workers study. This will create a library of around 500,000

samples covering the time before, during and after a person is exposed to Covid-19. These samples will be studied at leading UK research institutions in a collaborative effort to get the first answers before a 'second wave' of the virus.

The study will also help [answer questions](#) as to whether BAME healthcare workers are at higher risk of a more severe Covid-19 infection compared to Caucasian healthcare workers. The study has now extended to Cape Town and Sydney to enable researchers in the southern hemisphere to answer other questions about Covid-19.

Dr. Thomas Treibel, BHF Intermediate Research Fellow at Bart Health and University College Hospital London, said:

"Covid-19 is devastating families and severely disrupting our way of life right across the world. There is a lot we don't know about how the virus works, and so we have acted with speed to set-up this clinical study in response to the pandemic.

"Looking at samples from 1,000 frontline staff who are exposed to the virus will be crucial in understanding why some people become hospitalised with Covid-19, whereas some develop mild symptoms. By collaborating with the best minds and scientific labs in the UK and beyond, we will be able to get quick answers on how the virus works, including the role genetics plays and the immune response to Covid-19. Answering these questions will enable us to design much needed treatments before a second wave occurs."

The team started with no funding, other than their BHF-funded salaries, and have called for public donations. So far they have raised over £430,000 for the Healthcare Workers clinical trial.

Dr. Sonya Babu-Narayan, Associate Medical Director at the British

Heart Foundation said:

"Research like this is critical if we're to understand, and eventually effectively manage and treat this virus.

"As one of the UK's largest medical research charities we know that we can play an important part in the response, and we're empowering our army of researchers to contribute to the fight against Covid-19.

"This clinical study showcases the inspirational work of our BHF researchers, who we know are working tirelessly to make strides in our understanding of the virus. Their discoveries could help protect all of us, including people with heart and circulatory disease, who can be particularly vulnerable to complications caused by the virus, and ultimately help save lives in the UK and across the world."

Provided by British Heart Foundation

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