

Data and health scientists combine to create COVID-19 'heat map'

April 2 2020, by Ben Robinson



This scanning electron microscope image shows SARS-CoV-2 (yellow)—also known as 2019-nCoV, the virus that causes COVID-19—isolated from a patient, emerging from the surface of cells (blue/pink) cultured in the lab. Credit: NIAID-RML

Users of a new health and wellbeing app are contributing to a [publicly-](#)

[available heat map of people with COVID-19 symptoms](#), providing a national picture of the outbreak and its spread over time.

The app was developed by UK company, Evergreen Life, in collaboration with data and health scientists. As more people add their responses to the data, the accurate information provided will help fight the virus. The data is being shared with leading universities, including Manchester, who will analyze it with the NHS.

The University of Manchester's Professor Tjeerd Van Staa and Dr. Ian Hall are among those analyzing the data. Dr. Hall, a Reader in Mathematical Statistics said: "Evergreen Life users are supporting a better understanding of the local experience of COVID19 disease through sharing their data which will be incredibly useful to national and local planning."

The data, based on 25,548 responses shows that at March 27, 10.4% of respondents had reported having the symptoms consistent with COVID-19, up from 8.1% in the initial survey on Sunday 22nd, before lockdown was announced.

Before lockdown, 53% with symptoms were staying at home and after lockdown 89% with symptoms are reporting they are staying at home—showing that the overwhelming majority of those with symptoms are now acting on government advice to self-isolate.

Dr. Hall added: "This is an exciting emerging data stream and I look forward to helping interpret the data, with colleagues in Manchester and Liverpool, as it provides situational awareness to users and [policy makers](#) alike."

Dr. Hall is also one of a special task force of statisticians who have been analyzing data models from the beginning of the COVID-19 outbreak to

help inform UK Government policy and response. They specialize on risk to communities that are in enclosed places, such as prisons or large vessels like a cruise ship; as well as analyzing highly social communities found in schools to much smaller social environments, like our family homes.

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Evergreen Life CEO Stephen Critchlow says: "We've asked our 750,000 users to help build a heat map of those with symptoms of COVID-19 to help the NHS and researchers better understand how the virus is moving and spreading around the UK. We've already heard from over 25,000 people and the questionnaire has been completed over 40,000 times.

"We have compared the situation before and after lockdown. It shows that while many more people are now staying at home, the number of people reporting symptoms has risen from 8.1% to 10.4%.

Users of the app, available from app stores, are being asked to report if they are self-isolating, have a dry cough or a temperature. The anonymized data is being used to create a national picture of those reporting symptoms. People will also be asked to report when they recover to enable further data analysis as the outbreak progresses. App users are also sent personalized information on national guidance, to support them, and optimize their wellbeing. The platform will also be offered to give the special advice from the NHS for users within the 1.5m people with the greatest risk of complications.

Digital health is one of most vibrant research areas at The University of Manchester, building on an exceptionally strong track record with more than 40 years of interdisciplinary research. The University has world-leading capabilities in engineering and [research methodology](#) for digital health technologies, as shown through the bio-health informatics research program at the School of Computer Science.

More information: The Heat Map is available here www.evergreen-life.co.uk/covid-19-heat-map

Provided by University of Manchester

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