

Can contact tracing apps save us from COVID-19?

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Credit: University of Canterbury

Associate Professor in Health and Medical Geography at the University of Canterbury, Dr. Malcolm Campbell says that relying on smartphone-based approaches involves some big assumptions and we need to

carefully consider what our assumptions are.

"There are five main measures we have to eliminate COVID-19; isolation, [contact tracing](#), quarantine, social distancing and hygiene measures," Assoc Prof Campbell says.

"Contact tracing is vital. So is the current lockdown. So, we need a range of virus response weapons, particularly as we don't quite know yet if we are "flattening the curve". What is key to get a grip on the pandemic is that we need to be sure that the infection is slowing or ultimately stopped. This means an infected person infects one person or less. Then, the epidemic will start to head towards elimination. The more we follow the guidance, the higher the chances of this happening."

What use are big data or smartphone apps?

"It looks like there is the possibility of adding some apps and tech smarts to our COVID-19 arsenal of weapons. We can use [mobile phone data](#) to see if people are indeed staying home (#stayhome), whether it is sunny or rainy. But, 'educating' people on social distancing can be hard work. Other countries, for example, Singapore, have used an app on mobile phones with Bluetooth for 'real-time' contact tracing.

"So let's just imagine you've been out walking about (in your [local area](#)) with a smartphone in your handbag, pocket or wherever, the data that is collected from Bluetooth signals can be used to see if you have come into contact with somebody else who has COVID-19. Now, here is the really important bit, assuming you are alerted to this [important information](#), that someone you came into contact with has COVID-19, you'll then need to self-isolate. This requires high public trust and buy-in. It also requires people to get tested when they think they might have COVID-19.

"There are also three other important considerations which are really key; you need to have a smartphone with you, with the right app, with the Bluetooth turned on. If not, our clever solutions fall over. We know from previous research using technology in a healthcare setting, that not everyone has smartphones—often those with health challenges as well as some groups of older people. As long as these people stay isolated, the risk is mitigated, but still, we cannot assume that technology is 100% effective and will save us all."

Has New Zealand any unique advantages, as the virus doesn't appear to have spread as widely here as in other countries?

"New Zealand is an island nation, reasonably well isolated geographically. But, I don't think the virus cares about that. We also have a smaller population than the similarly sized United Kingdom, so our population densities are generally lower. Compare London, Birmingham and Greater Manchester to Auckland, Wellington and Christchurch.

"We need to be really careful about looking for magical technological solutions to solve everything. The lockdown is tough medicine, but a runaway pandemic is worse, especially for those in our communities who really need our protection from the virus right now. We still need to try and 'stamp it out' wherever we are in NZ."

Provided by University of Canterbury

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