Digital technologies and data privacy in the COVID-19 pandemic

13 August 2020

Digital technologies have an important role to play in responding to future pandemics, a new study in the journal, *Nature Medicine* reports.

During this unique study, researchers from the i-sense project, led by Professor Rachel McKendry from UCL, reviewed how digital technologies have been mobilized in response to COVID-19. The associated concerns with privacy, the effectiveness of such technologies and how they can be used in future pandemics were also examined by the team which includes Professor Vince Emery from the University of Surrey.

Researchers found to get the most out of digital technologies, they should be developed collaboratively with governments and healthcare providers, ensuring they meet public health needs and ethical standards. It was recommended that key stakeholders in the digital field, such as technology companies, should be long-term partners in preparedness planning rather than being partners only when emergencies are ongoing.

The benefits of digital technologies such as access to faster and more widespread communication, including through social media platforms, TV briefings and text message updates was noted by researchers. The efforts of some technology companies such as Google who have been prioritizing messaging from trusted sources, including the WHO, in their search responses were also recognized.

David Heymann, Professor of Infectious Disease Epidemiology at the London School of Hygiene & Tropical Medicine, said: "We need to ensure new digital technologies go through rigorous evaluation to identify those technologies that prove to be effective so that they can add to our armamentarium for outbreak control, adhere to privacy and ethics frameworks, and are built into online pathways developed in collaboration with end-users."

However researchers did find some problems with the use of digital technologies during pandemics. During the outbreak of COVID-19, many technologies have been adapted and developed on a scale never seen before, including new apps and data dashboards using anonymised and aggregated data to help inform public health interventions. This has led to concerns about civil liberties and privacy.

Chief scientific advisor, Department for International Trade, Dr. Mike Short CBE, said: "Although times of emergency may call for different data access requirements, any data used for the pandemic response should not be misused beyond this purpose, and systems need to be proofed against invasion of privacy and comply with relevant governance."

Researchers also noted that the use of data to inform outbreak response should also take into account the digital divide across the globe as although 67 percent of the global population
subscribe to a mobile device, 51 percent of the world's population are not mobile internet subscribers. As many of these interventions and surveillance methods rely on connectivity, researchers found many communities may be left behind or missed from statistics.

Professor Vince Emery, emeritus professor of translational virology at the University of Surrey, said: "This review provides further impetus to the deployment of digital technologies to sense pandemics and with the roll-out of 5G new exciting possibilities will develop and contribute to controlling major public health emergencies. Viruses know no borders and, increasingly, neither do digital technologies and data so it is important they are utilized to their full potential."


Provided by University of Surrey

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