

24. Analysis of digital contact tracing technologies employed in Covid-19 pandemic

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Abstract

The corona virus disease 2019 (COVID-19) is a worldwide pandemic that has claimed lives and negatively changed the mobility patterns of humans. Various Infection control measures have been employed for COVID-19, among them digital contact tracing technologies (DCTT). DCTTs are used to track and notify users digitally about their interactions with infected individuals and help strengthen health service systems. COVID-19 infections have reduced worldwide as Nations have adopted use of DCTT like Global Positioning Systems (GPS), Bluetooth, Quick Response (QR) Codes, Wireless Fidelity (Wi-Fi) which use health data, symptoms monitoring, mobility, location and proximity data for contact tracing. This paper reviews literature by analyzing GPS, Bluetooth, QR Codes and Wi-Fi as DCTTs employed for COVID-19 through desk study, highlighting their success and failure with an aim of stipulating ways the technologies have been used and how they could be improved for better results. Beyond its use for mitigating and containing COVID-19, digital technology can complement or in some cases amplify the traditional approach to global health program implementation. Digital contact tracing technologies (DCTT) have challenges, of key to note is low smartphone adoption, poor user acceptance, privacy concerns and digital training skills, to mention a few, that have all hampered digital contact tracing but are all overshadowed by the health benefits of DCTT and is required in addition to manual contact tracing. However, additional policy efforts are needed, to gain wide spread adoption of Digital Contact Tracing technologies (DCTT) among the public as a valuable means for containing the effects of the Covid-19 pandemic.

Keywords: COVID-19, Contact tracing, Digital contact tracing, DCTT, GPS, QR