CoVID Tracker Ireland: What is its Function?

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We have seen an explosion in the number of apps and technologies targeted at individuals to monitor, modify or communicate information about their health in the last ten years. The field of study is known as 'eHealth' - an umbrella term used to describe how technology and digital solutions can improve efficiencies and lower costs in healthcare systems[1]. Since the onset of the pandemic, the spotlight on eHealth has brightened, with researchers in the field tasked with providing a solution to the challenge of tracking and tracing individuals who have been exposed to CoVID-19.

Contact tracing is a vital aspect of infection control and disease. In mid-March 2020 when the number of cases worldwide were skyrocketing, it became clear that the manual track and trace method used by public health systems would quickly become overwhelmed. Governments began to seek digital tools to aid with the contact tracing process.

The development of Ireland's COVID Tracker App began on March 22nd 2020. The app's 'decentralised' approach in which user proximity is measured using Bluetooth and Exposure Notification System was refined over a number of months and the app was launched on July 7th 2020. The uptake of the app by people living in Ireland received widespread praise from national and international media - over 1 million people downloaded the app in the 36 hours following its launch. The Irish public demonstrated an eagerness to participate in the collective effort to contain the virus. In the eighteen months since the app's launch, information available on the app indicates there are 1.7 million active users and 3.74 million app registrations. The success in uptake of Ireland's app was used as a stick the beat the UK Government with in the UK media following the delayed launch of their NHS Covid 19 app. NearForm, the software company which developed Covid Tracker Ireland, deployed versions of the app in a number of U.S. states and in October 2020 the app linked with similar apps used in other E.U. nations to facilitate digital contact tracing when users travelled abroad.

Researchers in the eHealth field are more concerned with the continued engagement of users with the technology, understanding what features are working and refining the product rather than the initial download rates[2]. It is recognised that the initial enthusiasm of downloading an app is rarely matched with continued use.

Data available from the HSPC indicated that since the day of the app's launch - 7th July 2020 - to 22nd November 2021, there were approximately 503,421 positive cases of CoVID-19 reported in Ireland[3]. However, data available on the app's homepage on 22nd November 2021 indicated that only 20,946 individuals who tested positive uploaded their close contact details to the app for tracing purposes since the app was launched i.e. 4% of individuals who tested positive in Ireland since the app's launch used it for the purpose it was intended. If we conservatively estimate each of these 503,421 people had four close contacts, that would indicate that over 2,013,684 people needed to be contact traced. Again, data available on the homepage of the app on 22nd November told us that under 35,000 people had been contact traced as a result of information uploaded to the app. The app's homepage also indicates the number of people who have 'checked in' each day to report their symptoms. This figure of check ins has steadily declined over time, with less than 80,000 checking in daily over the last number of months - less than 5% of the 1.7 million 'active' users reported to be using the app. The HSE has not been able to confirm how many people who have the app are using it effectively for tracing purposes i.e. having both Bluetooth and location settings correctly enabled.

Granted, the criteria for contact tracing of positive cases since the app's launch have been redefined at various stages with the rollout of vaccination. In the last six months, functionality has been created within the app to display a user's proof of vaccination in the form of an 'EU Compatible Digital Covid Certificate'. While this undoubtedly is useful for users in displaying their vaccination status to gain entry to gatherings and events, is it now the case that this widely lauded contact tracing app has merely become a vaccine passport?

We are not the first to highlight the shortcomings of this app. Farrell and Leith of Trinity College Dublin's School of Computer Science and Statistics demonstrated unexplained shortfalls in the number of uploads being seen compared to what one should expect based on the number of cases experienced and the density of app deployment across the Irish population[4]. In an article published in *Nature Medicine* earlier this year, Colizza *et al* presented five key recommendations public health requirements for CoVID-19 contact tracing apps and their evaluation; integration with local health policy, high user uptake and adherence, quarantine infectious people as accurately as possible, rapid notification and ability to evaluate effectiveness transparently[5]. Currently, it is not clear how CoVID Tracker Ireland is performing under any of these criteria.

As eHealth moves forward, we are going to see new tools developed which enable us to more effectively manage chronic conditions and to combat future disease outbreaks. People need to feel empowered by digital health and shown that it can make a meaningful difference to their lives.

Government press releases claiming this app is an unmitigated success[6] undermines public trust at a truly crucial time for our society. If we want the general public to meaningfully engage with digital public health tools moving forward, the HSE needs to illustrate exactly how this app is contributing to the fight against CoVID-19 in this county.

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