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## Letter to the Editor

## COVID-19 contact tracing apps: the 'elderly paradox'



The SARS-CoV-2 pandemic will be remembered as the first to be tackled 'technologically': in a few months the major social networks have implemented information centers on the disease and neural networks, supercomputers and mathematical models have been developed for various purposes, including detection of COVID-19 cases,<sup>1</sup> rapid screening of drugs,<sup>2</sup> and contact tracing.<sup>3</sup>

The latter in particular is an essential activity in all stages of the infection, both initially to prevent its spread in the population, and during the 'tail' of the epidemic curve to block and contain new outbreaks. Public health departments are committed in this sense through questionnaires, interviews, and dedicated softwares based on Geographic Information System frameworks.

However, the increasingly interconnected nature of modern society makes smartphones a large reservoir of useful information, which can also be used by community medicine. In fact, many IT companies have released tracking applications based on bluetooth low-energy technology.<sup>4</sup> These programs however have several limits, first of all the fact that they must be downloaded by a large percentage of users to be fully useful. Furthermore, they must be made functional: bluetooth connection must always be on, and the device needs to be connected to the internet at least once a day to transmit electronic keys to the central server. This can constitute a problem for people aged 65 years and older, who have poor access, and understanding of these procedures.

In addition, these apps may hide an even greater critical point but due to the characteristics of the novel coronavirus and its related syndrome. As the rate of asymptomatic patients is high, often these subjects discover that they are positive late, when they have probably already transmitted the infection to their circle of contacts, and casually. Many may never discover their positivity. Young people, who are known to contract the disease in a mild form, could infect other peers (more likely on a social level), which would remain asymptomatic or paucisymptomatic, creating a silent

chain of infection. The diffusion could manifest itself only arriving to an elderly person, who, however, perhaps did not download the app or who does not know how to make it work properly. As a result, a real paradox would be generated: these apps would have a greater epidemiologic importance for older subjects, who are however less inclined to technology and more suspicious on a leak of personal data. For all these reasons, it is necessary to provide support for older age groups. Anyway, the contact tracing through app requires an increased ability to perform swabs and serological tests in the population, activities that already have their intrinsic value: we cannot wait for the elderly to act as indicators of an infection that could already be widespread in the population.

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19 June 2020

Available online 28 June 2020