The impact of health QR code system on older people in China during the COVID-19 outbreak

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Sir,

The COVID-19 pandemic continues to sweep the world with the cumulative number of confirmed cases now exceeding 22 million [1]. Countries have issued many policies to limit the spread of the pandemic, and policies using information technology have played an important role. Since 11th February 2020, China has initiated an information-based preventive measure, the health QR (Quick Response) code system. The system was first used in Hangzhou and has been rapidly adopted across the whole country. The health QR code is a personal identification code generated by online self-declaration and background data review. The code, based on real data, can be used as an electronic voucher giving permission for an individual to enter or exit public spaces, and to permit travel from one area to another.

The health QR code system is widely praised but is not free from problems. The privacy of citizen data aside, reliance on a system that is so heavily reliant on digital technology may reduce autonomy for older people without access to the required technology, and may thus increase the risk of social isolation. A widely-reported example on Chinese social media concerned an older man blocked from using the subway system by staff because he had no access to his own health QR code. China's population aged 60 years and over has reached 254 million, accounting for 18.1% of the total population, but only 23% of them use the Internet [2]. Perhaps due to limitations in ability or willingness to learn, older people are easily left behind by new technological advances and thus may have difficulties applying for their

health QR codes. A shift towards digital media and rapid technological advances of traditional media have led to the rapid demise in paper-based media. Some older people report that fighting the virus is already hard enough, and the struggle with changing technologies adds another layer of pressure.

As a tool for communication, the Internet can increase older people's contact with the outside world, reduce their loneliness and enhance their sense of belonging [3]. However, the reality is that older people are too often disenfranchised by technology. Older adults are often isolated from information on the web, resulting in reduced social participation and limited social networks, and some may even suffer from physical and mental health problems such as depression and anxiety [4]. As a social gap, the digital divide existed before the COVID-19 pandemic, and it has been sharply widened by the special social controls implemented during the pandemic. Older people have become in some cases disconnected from the ability to access finances – they may have difficulty shopping for groceries in supermarkets and withdrawing money in banks without their health QR codes.

Old mobile phones with only simple functions are widely used. Even with smartphones, older people may only be able to receive content; physical, technical and cognitive barriers may prevent them from genuine two-way smartphone interaction. . A survey showed that only 13.7% of older people can use Didi or other car-hailing applications to take a taxi [5]. Application for a health code involves steps such as typing, real-name authentication, and information backtracking, which is difficult for older adults who rarely use interactive

devices to complete.

The government emphasized the significance of digital management during the COVID-19 outbreak, but the status of older people should also be fully considered. Society operates in accordance with rules and regulations, but care and empathy for populations with particular needs should not be neglected. A paper health certificate, for example, or a family-associated code that can be swept vicariously by children may help to improve a challenging situation. Supermarket staff should also actively provide operational assistance to older people who cannot complete digital transactions alone. Children should spend adequate time and patience at home to teach their elders how to surf the Internet, help them enjoy the benefits of technological development and reduce their risk of social isolation. When we consider the social participation of older individuals who lack access to smart devices, we are considering both them older people now, but all of us in the future.

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