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Application of E-health in Coronavirus (COVID-19) Pandemic

Elham Hoseini [1]*, Forouzan Zare[1]

1. Department of Health Technology Assessment, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

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Corresponding Author:
Elham Hoseini
hoseini20007@yahoo.com

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Since March 2020, the World Health Organization (WHO) has announced the spread of Coronavirus (COVID-19), which has become a global health disaster, as a pandemic (1). Studies have shown that with the prevalence of COVID-19, the prevalence of anxiety and depressive symptoms in 2019 increased by 15% and 11%, respectively (2). As the spread of this pandemic spreads around the world, technologies came to the aid of patients and health care workers (3). One of the uses of the application is to inform citizens if the people are infected with the virus and to encourage them to inform the health authorities and ask for their support (4). Over time, the demand for eHealth, and by its nature, such as remote medicine and population health monitoring is increasing (5).

E-Health (also written eHealth) is a combination of electronic communication and medical information technology (6). This term can include a wide range of services or systems in the field of medicine/healthcare and information technology, such as electronic health records, electronic prescriptions, telemedicine or telephone medicine, m-Health, and more (6).

Web-based data and approaches in health crises are important for evidence-based monitoring and control and general emergency management (7).

Telemedicine or telehealth with previous successful experiences in the management of acute respiratory infectious diseases such as severe acute respiratory syndrome (SARS) and the Middle East Respiratory Syndrome (MERS) seems to be useful in combating coronavirus. In order to better control and manage the COVID-19 crisis, developed countries as well as the developing countries can improve the efficiency of their healthcare system by reducing direct clinical exposure. This is in line with the new national laws and regulations. By doing so, healthy people are kept away from infected centers, and safe access to elderly care is increased (1). Telehealth has previously used an Ebola Contact Tracing (ECT) mobile app in an epidemic similar to COVID-19 called Ebola (1).

Since the WHO has declared COVID-19 a pandemic, mobile applications can be tracked with the help of national health officials and the monitoring of COVID-19 pandemics. Patient medicine and direct guidance to the citizens play a role in controlling the disease. That is why WHO is trying to provide users with an application that provides information and advice based on the symptoms of the disease. Launched in March 2020, in addition to WhatsApp-based messaging service, it provides up-to-date

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information about Covid-19. Google and Apple also shared a Bluetooth protocol, announcing support for tracking applications with the ability to identify the proximity of mobile phones nearby and the data exchange mechanism with potentially confronted participants (8). Other applications include the Citizens' Volunteer Tracking Program, based on Bluetooth proximity technology, which was approved by European Union Member States on May 13, 2020, with the support of the European Commission and with the impossibility of tracking the location of individuals. This program is voluntarily installed by citizens, and the national authorities disable programs at the end of the epidemic, and users are free to delete it whenever they want (4).

Evidence provided by Xiaoyun Zhou and co-authors shows the role of Telehealth in reducing the burden of COVID-19 mental health in depression, anxiety, and post-traumatic stress disorder (PTSD) in coronavirus epidemics (8).

In the United States, a number of virtual healthcare companies have made it possible for physicians and patients to communicate through secure video chats. By enacting a law that allows the use of smartphones or phones that have audio and video capabilities in remote areas, the government has supported the expansion of the use of remote services by providing medical services. The Australian government also provides virtual visits to protect health care providers and patients against the disease by providing funding for Medicare telehealth services, encouraging providers, and helping to provide mental health services and the “Medicare support at home” program (1).

In general, many developing countries are not ready to use special solutions, especially in remote and rural areas, despite the significant growth of smartphone technology and the expansion of Internet networks, and unlike most developed countries in many developing countries, there are no legislation and/or rules to protect telemedicine as health care services. Since governments have a key role to play in supporting and budgeting health care systems for telemedicine, it is important to enact those regulations and laws. In this regard, developing countries are advised to review and update the technology infrastructure, as well as to provide laws and guidelines for overcoming legal and ethical barriers related to crisis management (1). Accordingly, one of the most important issues is the legal formulation of the use of medical traps and its introduction in the health care system and the anticipation of an appropriate application (1).

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Authors' contribution

E.H and F.Z contributed to the research and writing of the manuscript.

Conflict of Interest

The author does not have any conflict of interest.

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