

Significant Role of Telecommunication and MHealth Technology in the Battle Against Corona Virus (COVID'19)

A R Rajeswari Rajasekaran

Department of Computer Science and Engineering, Sethu Institute of Technology, Kariappatti, Tamil Nadu, India, arrajeswari.2015@gmail.com

Abstract: *Telecommunication network has been used widely in our daily lives in numerous ways with vast number successful stories. Throughout the world the number of people benefited by the telecommunication and mobile technology enabled with internet is tremendously increasing. Telecommunication technology based applications are providing versatile services in various domains such as health care, education and disaster management. Now, telecommunication technology has contributing vast services to humankind in facing and dealing with COVID'19 pandemic. Hence, the objective of this paper is to review in detail about the significant role of telecommunication technology and MHealth in the fight against the deadly COVID'19 virus. Furthermore, this paper describes about the telecommunication technology and MHealth app for remote monitoring and diagnosis of infective patient, monitoring the quarantine people to prevent the spread of disease, monitoring the patient after discharge.*

Keywords: *Pandemic; COVID-19, Telecommunication; MHealth; Telemedicine; Tracking*

I. INTRODUCTION

COVID'19 deadly highly infectious virus is known to spread very fast to all part of world. The very first cases were detected in Wuhan, China in Dec'2019 and now it has spread very fast to every country. It could affect any healthy person who comes in proximity to any COVID'19 positive cases. Since, there is no vaccine as far now, prevention is the only measure people should follow to overcome this health crisis problem. Hence, government of many countries have proposed many polices and measures to defend against the COVID'19 pandemic. Science and technology have contributed significantly for the implementation of these policies during this unprecedented and chaotic time. This paper focuses on the significant role of telecommunication technologies in the battle against the spread of corona virus. Moreover, this paper presents a survey of telecommunication and MHealth applications that contributes to help and support the health care system to treat and reduce the outbreak of the virus.

II. TELECOMMUNICATION TECHNOLOGY AGAINST COVID'19 : A REVIEW

In this paper, the role of telecommunication and MHealth technology in the fight against Corona Virus has been reviewed under the following groups such as Contact Monitoring and Tracing, Remote Physiological Monitoring, Telemedicine, Tele Imaging, e- Education and Training.

A. COVID'19 Contact Monitoring and Tracing

In the current situation, since many researchers thought the worldwide are involved in primary process of COVID'19 vaccination. The only possible preventative measures against the pandemic are contact tracing, isolation of positive cases and social distancing. In the current era, the versatile development in the field of telehealth technology has emerged as tool in the war against the Covid'19. Through Mobile technology many apps are developed and employed for the purpose of contact tracing and isolation of positive case patient. Thus, with the help of this contact tracing app the library of positive cases can be created and the immediate isolation of the patients can be carried out without causing further spread of the infection. Yasaka et al.[1] developed a peer to peer effective contact tracing Mobile app by applying the anonymized graph of interpersonal interactions to conduct a novel form of contact tracing. Most recently, the world famous and leading technologist from Google and Apple have joined hands to develop a Bluetooth based contact tracing smart phone app that work across both iOS and Android platform.

National Informatics Centre, Government of India developed a mobile application known as Aarogya Setu [2,3] with the primary objective to track the COVID'19 positive cases. This application is designed for Android and iOS Smart phones with the GPS and Bluetooth features to track the virus infected person. Maghdid et al.,[4] developed Artificial Intelligence (AI) enabled framework using smart phones with numerous sensors such as cameras, microphone, temperature sensor, inertial sensors, colour sensor to diagnose the COVID'19. Since the most common symptoms of COVID'19 are as follows fever, dry cough, head ache and shortness of breath. This framework

