Telehealth services support community during the COVID-19 outbreak in Iran: Activities of Ministry of Health and Medical Education

ABSTRACT

The Coronavirus disease 2019 (COVID-19) outbreak has been ravaging Iran and other countries with increasing morbidity and mortality. The pathogen spread rapidly and the outbreak caused nationwide anxiety and shock in Iran. To combat the COVID-19 epidemic, the Ministry of Health and Medical Education (MOHME) of Iran introduced several policies and activities, including the use of tele-health services. This letter to the editor uses anecdotal and other records to provide a summary of the activities of MOHME during the COVID-19 outbreak in Iran from February 1 to March 31, 2020. In this commentary, we reviewed the MOHME information site and extended the recommendations offered by MOHME via presenting the existing challenges and a roadmap of the necessary policy requirements. The existing evidence demonstrates that tele-health should have been rapidly implemented as it presents an effective mode of service delivery to reduce morbidity and mortality and decrease the burden on healthcare providers and the health system during the COVID-19 outbreak.

1. Introduction

On January 1, 2020, a new virus called COVID-19 was identified, which is growing rapidly [1,13]. A major change took place around the world, and the world chose quarantine and limiting direct contact among people, to reduce virus transmission, [1]. Given the global nature of COVID-19, which is a highly contagious disease, technology can provide the ability to adapt to new conditions [2]. One of the most effective technologies in this field is tele-health services [3].

Tele-health can reduce the contact between patients and healthcare providers, especially in cases where services do not require direct interaction, such as psychological services [4]. During the COVID-19 pandemic, increasing the use of tele-health can improve healthcare delivery and protect patients and healthcare providers [5]. In general, remote services lead to fast and continuous access, and it is crucial to provide easy interaction to diagnose and initiate treatment quickly and in accordance with the principle of fair access [6]. Moreover, telemedicine technologies play a very important role in the rapid decision-making of healthcare providers [7]. Therefore, considering the importance of tele-health during the current pandemic, by reviewing the MOHME information site, this letter describes the activities of MOHME during this period in Iran from February 1 to March 31, 2020.

2. Tele-health and COVID-19

During the COVID-19 outbreak, healthcare systems need to adjust the way they prevent, screen, and care for patients using methods that do not need in-person encounters. Tele-health services help provide necessary care to patients while minimizing the transmission risk of the disease to healthcare providers and patients [8]. Iran has a population of about 85 million and has adopted various strategies to manage the COVID-19 outbreak. In the past, the Iranian healthcare system has had

successful practical experiences in implementing tele-health services [9]. The potential to connect 60 million Iranians to the Internet is an important opportunity for MOHME to reduce the spread of COVID-19 by providing the necessary public and individual services. Iran was one of the first countries affected by the COVID-19 epidemic [11]. Therefore, it is important for MOHME to recognize the role of tele-health in the fight against COVID-19. Fig. 1 describes the major tele-health events related to COVID-19 provided by the MOHME in chronological order.

3. Telehealth services during the COVID-19 outbreak by MOHME

Following the outbreak of COVID-19 in China, Iran reached the warning stage of activities and policies to prevent the disease. Facing these concerns, the MOHME on February 9 started to provide training on the prevention of COVID-19 to supervisors through video conferencing [11]. On February 20th, the World Health Organization (WHO) declared that Iran reported one new case of COVID-19 in the past 24 hours (In Qom Province, the northern part of Iran) [12]. To better manage COVID-19, the MOHME worked with the Ministry of Information and Communications Technology to send educational text messages to raise public awareness [11]. This action of the MOHME had a positive impact on the general public and raised people's awareness of how to deal with each other and prevent the disease. Furthermore, due to the importance of nurses in facing the epidemic, the Nursing Deputy of MOHME launched a new system for the communication and training of frontline nurses. Although the electronic health record is a very challenging project and has its drawbacks, it has been effective in identifying cases of COVID-19 during the pandemic. One of the most important actions taken by the MOHME for the early diagnosis of COVID-19 was a national electronic screening plan [11]. This plan, which was one of the most successful actions of the MOHME during the pandemic, was praised by healthcare experts and led to better management of the outbreak. The
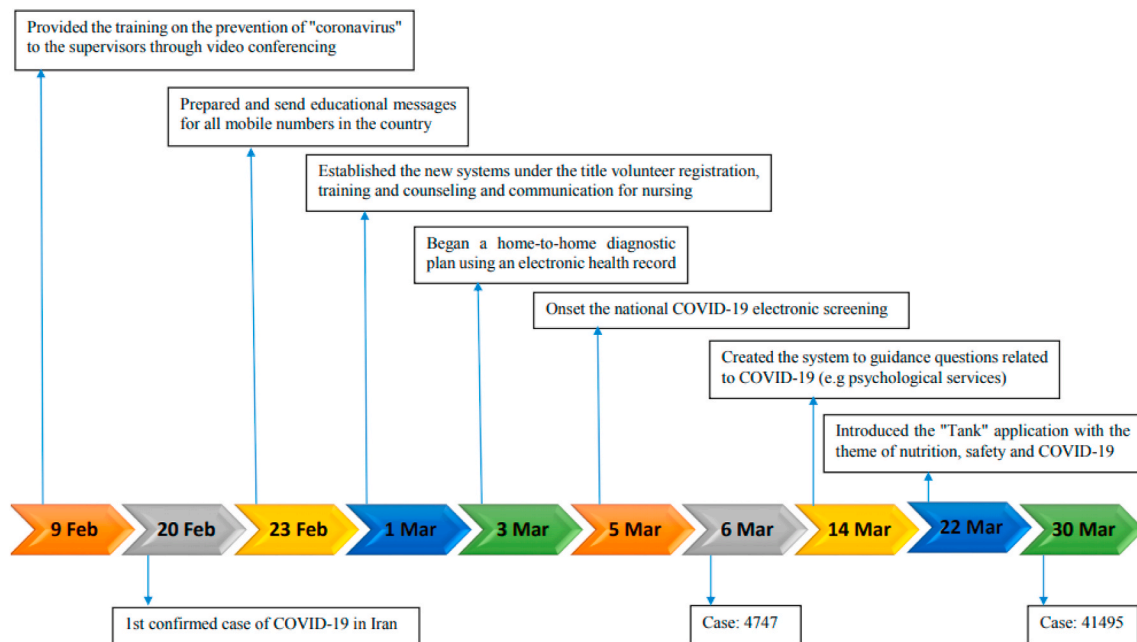
Fig. 1. Timeline of tele-health services by MOHME at the beginning of the COVID-19 outbreak in Iran.

COVID-19 electronic screening was planned to be implemented in two phases and, in the first phase, more than 70 million people were screened through a self-declaration system. To provide remote care services, the system of guidance and questions related to COVID-19 started in the MOHME and provided healthcare services such as psychological counseling, topics related to chronic diseases, and other services to the community for free with questions and answers [11]. In the issues related to COVID-19, applications were introduced by MOHME and other organizations during the pandemic. An effective application was "Tank" which guided users in the problems related to safety and nutrition [11]. Despite these activities by the Iranian government, the number of cases and deaths due to COVID-19 in the country had an increasing trend, such that on March 30, the number of patients reached 41495 [11]. In addition to this activity, the MOHME took other actions to better manage the outbreak, such as providing telephone consultations and electronic educational content, and disseminating accurate information through the media.

4. Challenges

Providing tele-health services in Iran has several challenges, including the implementation of electronic health records. These challenges include the lack of an integrated information system to connect all medical centers and educational and health organizations. Some of the interventions stated above, such as tele-education and tele-home care, are mostly available to those who can afford it. Another obstacle to implementing tele-health is the lack of motivation and culture in the community and providers. Moreover, the lack of specific insurance tariffs for remote services is a major barrier to tele-health services. Problems with the technical infrastructure, ethical issues, and the speed and cost of the Internet in some deprived areas of the country also prevent the use of remote services.

5. Conclusion

With the rise in the number of COVID-19 cases in Iran, tele-health is helping to reduce the spread of infection through community education and innovative healthcare delivery that does not put people at an increased risk of the disease, while promptly referring them for early diagnosis and treatment. Tele-health can also be used to screen for

COVID-19 symptoms and assess patients for potential exposure. All governments can utilize tele-health to decrease the transmission of infectious diseases, refer people to the right level of healthcare, and ensure safety for the health services provided online, thereby protecting patients, healthcare providers, and the community from exposure to infection. Finally, we propose that the MOHME addresses the challenges we have described and creates a suitable platform to exploit tele-health tools for reducing morbidity and mortality and alleviating the burden on healthcare providers and the health system during the COVID-19 pandemic.

Ethics approval and consent to participate

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Data availability statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Declaration of competing interest

The authors have declared that no competing interests exist.

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