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Letter To Editor

Cardiac Telerehabilitation, an Effective Strategy Against Covid-19 Epidemic

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Dear Editor

Covid-19 is one of the most destructive and clinically important infectious disease known in recent years, and it has reached an epidemic rate with unprecedented speed [1]. High levels of Covid-19 infection in many countries have led to home quarantine as well as the closure of educational centers, companies and businesses. In hospitals, most outpatients, visits, diagnostic measurements, clinical services, and elective surgeries have been suspended. These also include hospital-based cardiac rehabilitation (CR) programs in most countries [2, 3]. Covid-19 has had a profound effect on CR programs. With public lockdown policies, hospital-based CR services were impossible worldwide [1]. Some CR units in hospitals were closed and their medical and nursing staffs transferred to Covid-19 units. In some units, capacity or staff was reduced, and their operational capabilities were limited. Additionally, because of the lack of referrals by surgeons and cardiologists and the fear of patients from being infected with Covid19-, some active CR centers saw a decrease in patient referrals [4]. The consequences of long-term closures of CR centers and delays in the start of these programs after a cardiac event can lead to less improvement in cardiopulmonary fitness [5] and long-term complications, including increased hospital admissions and the re-exposure of this vulnerable population to infection [4], which will, most probably, result in an increase in acute coronary artery syndrome (ACS), left ventricular systolic dysfunction, or heart failure and poorer physical function in patients due to immobility over a long period [6].

Studies have shown that with the infection and spread of Covid-19, patients with chronic diseases such as cardiovascular disease (CVD), high blood pressure, or diabetes are at risk for more serious disease and worse consequences, including increased disability and mortality [7, 8]. It has also been reported that in patients with CVD, the mortality rate of Covid-19 increases up to fivefold [9]. These challenges have led many countries' rehabilitation centers and healthcare systems to develop and replace CR models with E-health interventions and the use of mobile technology to provide services with remote patient monitoring in order to reduce the effects of the spread of the epidemic, to remove barriers to physician–patient communication, and to continue care and secondary prevention measures for cardiovascular patients [10-12]. With such techniques, healthcare workers communicate with patients using smart phones. They can also use smart phones to plan, intervene, and evaluate the results of nursing care or counseling and training [13]. This technology leads to rapid access to

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better services and a comprehensive increase in quality in the provision of health services. It also allows people to have a virtual presence instead of traveling long distances to be physically present and facilitates the transmission of large amounts of information to them in a short time [14]. Moreover, the feedback of this program allows patients to track their progress, increase self-management skills, and subsequently support more sustainable behavioral change [11].

The Covid-19 Epidemic is an Opportunity for Cardiac Telerehabilitation

During the Covid-19 epidemic, people turned to their mobile devices more than ever, and to stay healthy, they tracked published health information and scrutinized social media. Such actions can increase and strengthen the necessary opportunity and motivation for health professionals to provide rehabilitation services to target groups through smart phone applications and remote health [12, 15].

The current state of communications and mobile technology provides an attractive media option to support home health programs. This technology integrates sufficient computing power, user interface, memory, and communication capabilities to implement programs required for personal health management [16] and the potential to facilitate health interventions and motivate patients to improve health behaviors, including secondary prevention of CVD [17].

Therefore, it is suggested that due to the prolongation of this pandemic, healthcare services and CR associations in Iran create interaction between patients and healthcare providers by creating the necessary frameworks and designing and supporting technology-based programs as well as informing patients of the benefits and facilities of these applications [18, 19]. They should also empower patients through digital self-care by focusing on patient monitoring and participating patients for rapid access to CR services through smartphone applications. This can be an effective and practical strategy for clinical control, reducing risk factors, the correct management of drug use, and monitoring of cardiovascular patients through the use of mobile technology. In addition, the barriers to accessing these services are removed for those groups of patients who need most to reduce risk factors, such as older people, rural populations, and low-income people in society [20].

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