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# TELEHEALTH, TELEMEDICINE AND PUBLIC HEALTH

TELESAĞLIK, TELETIP VE  
HALK SAĞLIĞI

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PUBLIC HEALTH  
HALK SAĞLIĞI

# Telehealth, Telemedicine and Public Health

## Telesaglık, Teletıp ve Halk Saęlıęı

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# Remote Healthcare Services Delivery by Health Information Technology Companies

## Sağlık Bilişim Firmalarının Uzaktan Sağlık Hizmetleri Sunumu

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**ABSTRACT** Remote healthcare service delivery (RHSD) is a new model that all healthcare systems face, especially after the COVID-19 pandemic. Policymakers are implementing USHS to increase the effectiveness, efficiency, patients' access to services and cost control. RHSD implementation in Türkiye started with the regulation issued in the first quarter of 2022. While health institutions authorized by the Ministry of Health can provide RHSD, this authorization has not been granted to the information technology (IT) companies that set up the infrastructure of this service. Increasing RHSD on a global scale have created a financing dimension. In this study, the current situation was analysed and recommendations were developed to the effect that granting this authority to IT companies operating in this field in Türkiye, provided that they fulfil the necessary conditions, would increase the share to be received from the global scale and that this window of opportunity could be used in favour of Türkiye.

**Keywords:** Delivery of healthcare; telemedicine; remote consultation

**ÖZET** Uzaktan sağlık hizmeti sunumu (USHS), özellikle COVID-19 pandemisinden sonra tüm sağlık sistemlerinin yüz yüze olduğu yeni bir hizmet sunumu modelidir. Politika yapıcılar, sağlık sistemlerinin etkinliğini ve verimliliğini artırmak, hastaların hizmete erişimlerini yükseltmek ve maliyet kontrolü sağlamak amacıyla USHS uygulamalarını devreye almaktadır. Türkiye’de USHS uygulaması 2022 yılının ilk çeyreğinde çıkarılan yönetmelik ile başlamıştır. Sağlık Bakanlığı’nın yetkilendirdiği sağlık kuruluşları uzaktan sağlık hizmeti sunabilirken, bu hizmetin altyapısını kurgulayan bilişim firmalarına ise bu yetki verilmemiştir. Küresel ölçekte giderek artan USHS uygulamaları beraberinde oldukça büyük bir pazar oluşturmuştur. Bu çalışmada, Türkiye’de bu alanda faaliyet gösteren bilişim firmalarına, gerekli şartları yerine getirmeleri suretiyle bu yetkinin verilmesinin, global ölçekteki pazardan alınacak payı artıracığına ve bu fırsat penceresinin Türkiye lehine değerlendirilebileceğine yönelik analizler yapılarak öneriler geliştirilmiştir.

**Anahtar Kelimeler:** Sağlık hizmeti sunumu; teletıp; uzaktan konsültasyon (telekonsültasyon)

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Telemedicine, a term that emerged in the 1970s and literally means “remote healing,” refers to the use of computing technologies to improve health outcomes by increasing access to healthcare and medical information. Over time, different ideas have emerged to define the concept of telemedicine and it is seen that it is defined in many different ways.<sup>1,2</sup> The World Health Organization, on the other hand, has defined the concept of telemedicine from a broad perspective as “health services provided by all healthcare professionals who use information and communication technologies for the diagnosis, treatment and prevention of diseases and injuries, valid information exchange and continuity for the diagnosis, treatment and prevention of diseases and injuries, research and evaluation, for the improvement of the health of individuals and communities.”<sup>3</sup>

The use of telehealth technology provides various benefits, especially in non-emergency/routine care and in situations that do not require face-to-face patient and service provider interaction, such as providing psychological counseling.<sup>4</sup> Remote healthcare delivery reduces resource utilization in healthcare facilities, improves access to care, and minimizes the risk of direct person-to-person transmission of the potential infectious agent.<sup>5</sup> In addition to keeping people safe, including patients and healthcare workers, another important advantage is that it provides broad access to caregivers.<sup>6</sup>

With the COVID-19 pandemic, it has become quite common for patients and physicians to receive healthcare services without the need to be in a physical environment in Türkiye, as well as all over the world. Türkiye, pioneering in this sense, has implemented a regulation on the legislation for the provision of remote healthcare services. The “Regulation on the Provision of Remote Health Services” published in the Official Gazette dated February 10, 2022 regulates the relevant field and determines the procedures and principles. In the said Regulation, remote healthcare service is defined as “the health service provided by the healthcare professional to the person requesting health services through the remote health information system in health facilities that have received an operating license”.<sup>7</sup>

Within the scope of the regulation; examination, medical observation, follow-up and evaluation of the person, controlling previously diagnosed diseases, providing medical counselling services to the person, consultation and secondary opinion, prescribing, monitoring clinical indicators such as blood sugar and blood pressure, providing services that support healthy life and psychological health, interventional or surgical operation upon an operating license from the Ministry of Health and it is possible to provide many services such as protecting the health of people in endemic and epidemics, monitoring the health status of the elderly and people in high-risk groups and people who want their health status to be controlled through wearable technologies, and providing international remote health services by health institutions with international health tourism permits.<sup>7,8</sup>

With the Regulation, the authority to provide health services in Türkiye has been given to individuals and institutions that are defined as service providers by the Ministry of Health, ranging from private physician practices to health research and application centers of universities. However, this authorization has not been given to institutions that have the necessary information infrastructure and platforms to provide remote health services.

In this article, suggestions have been developed by discussing the issue of whether health informatics companies should be authorized to provide remote health services.

## LEGISLATION

Article 3 of the “Regulation on the Provision of Remote Health Services” published for the provision of remote health services, which includes the legal basis, includes the provision that “This Regulation has been prepared on the basis of Articles 9 and Annex 11 of the Basic Law on Health Services dated 7/5/1987 and numbered 3359 and Articles 355 and 508 of the Presidential Decree on the Presidential Organization dated 10/7/2018 and numbered 1.” However, when we look at the said Laws and Presidential Decrees, it is understood that there is no clear authority in this regard.

There are arguments that the legal regulation of remote health services through a regulation published by the Ministry of Health instead of preparing it as a law contradicts the principle that constitutional rights such as the right to life and the right to a healthy life can only be limited by law. Over time, it is considered that it will be necessary to evaluate the legal validity of the said Regulation with judicial decisions, and when necessary, to establish clear legal bases in this regard.

## PERSONS AND INSTITUTIONS AUTHORIZED TO PROVIDE REMOTE HEALTHCARE SERVICES

The Regulation expresses the general nomenclature of persons authorized to provide remote health services as health facilities. In Article 4 of the Regulation, health facility; It is expressed as “health institutions and organizations authorized by the Ministry within the scope of this Regulation to provide remote health services”.

Looking at the entire regulation, it is seen that there is no clear definition of a health facility. For this reason, looking at the general practice of the Ministry of Health; We can refer to clinics, polyclinics, medical centers, hospitals, university hospitals and other health institutions and organizations that have received operating permits/licenses as persons and institutions authorized to provide remote health services.

## STRUCTURE OF INFORMATION SYSTEMS FOR REMOTE HEALTHCARE SERVICE DELIVERY

Due to the regulation and the nature of the remote health service, it is necessary to have a software and information environment in order to provide remote health services.

With the definition made in Article 4 of the Regulation, the remote health information system; It is defined as “secure software that enables written, audio or video communication produced by the Ministry or approved for use in the provision of remote health services by being registered by the Ministry”. As can be understood, the software in question can be produced and put into use by the Ministry, or it can be used by being approved by the Ministry.

At the same time, it is possible for the software in question to be prepared by the health facilities themselves and approved by the Ministry, and it can be prepared by information technology (IT) companies and made available to health facilities, provided that the approval of the Ministry is obtained.

Since the preparation stage of the regulation, health informatics companies have also requested the authority to provide remote health services by fulfilling the required conditions, since the patient and the physician do not need to be physically together. It was evaluated that the demand in question should be discussed by considering the future of digital health systems and business opportunities in the world, and a solution should be developed for the benefit of the country.

## DISCUSSION OF THE AUTHORITY OF HEALTH INFORMATICS COMPANIES TO PROVIDE REMOTE HEALTHCARE SERVICES

It is an indisputable acceptance that health services should be offered within their own discipline, whether they are offered in a physical environment with face-to-face interaction between the patient and the physician or in space-independent environments. However, provided that the requirements of the legislation are complied with, the practice of carrying out the service in question by health-care professionals but also by legal entities as an organization is widespread.

For example, in Türkiye, it is possible for other health facilities other than clinics to be run by legal entities. In this context, the health informatics company has the right to operate a private hospital, medical center (provided that it does not exceed 49% share) or health facility by obtaining a home health service license. Our discussion is on allowing the provision of remote health services without assuming the role of health service provider, but provided that the necessary criteria imposed on health facilities related to the remote provision of health services are met.

During the preparation of the regulation, it was stated by the public authorities that this issue was open to dis-

cussion, but it would be appropriate to start this process with the existing health facilities at the beginning in terms of the regulation coming into force without being subject to new discussions, and it was accepted by the sector.

However, considering that the Regulation has been in force for about 20 months, it is considered that it is time to put the discussion on the agenda. Because the location-independent feature of the remote health service does not make it possible to discuss the issue only in terms of the country's domestic law and domestic market.

Here, with the experience of the sector, our suggestion is that while the current status is maintained without any changes in terms of domestic law, the necessary authorization should be granted to IT companies for the provision of remote health services abroad, taking into account the world market.

Otherwise, the opportunities in the world market will be missed, and there is no obstacle for foreign digital health companies to offer this service by appealing to the Turkish market.

## CONCLUSIONS AND RECOMMENDATIONS

Eysenbach considered remote health service as an important e-health application that brings together the concepts of medical technology and health care, covering the processes of providing services using internet-based technologies, obtaining, transferring and developing data about the service in order to improve the quality of health services and increase access. In this context, e-health applications; He stated that it has features such as increasing efficiency, increasing quality, being evidence-based, strengthening and encouraging the system, allowing information exchange, expanding the scope of services, and increasing equality within the scope of ethical values.<sup>9</sup> Thanks to these features, remote health care applications are becoming increasingly common around the world. While 38% of insurance companies worldwide offered telemedicine services in 2019, this rate increased to 59% in 2020.<sup>10</sup> The provision of healthcare services through information systems has become widespread all over the world with the COVID-19 pandemic. In Germany, Sweden, France, the United Kingdom, Italy, Switzerland, Croatia, Poland, Austria, Belgium, Denmark, Estonia and Luxembourg, examinations are carried out through the provision of remote health services.<sup>11</sup> In addition, it is stated that the global digital health market size, which was 86 billion dollars in 2015 in terms of software, hardware and services offered, reached 192 billion dollars in 2020 and is estimated to increase to 505 billion dollars in 2025.<sup>12</sup>

In order to ensure the effective integration of digital health solutions with the health system in Türkiye, the goals and actions aimed at developing and interoperability of telehealth systems and disseminating their use, as well as the dissemination of pilot application examples for remote health service delivery, have found their place in official policy documents such as the 12 Development Plan, the Medium-Term Program (2024-2026) and the 2024 Presidential Annual Program.<sup>13,14</sup>

In Article 15 of the Regulation on the subject, it is a priority in terms of legislative change that the authorization granted to health facilities that have received an international health tourism authorization certificate is also granted to health informatics companies,

provided that they meet other criteria sought for health facilities.

In order to realize the digitalization opportunities that arise not only in service delivery but also in all dimensions of health in favour of our country by targeting the world market, it is recommended to make the necessary legislative changes to authorize IT companies to provide remote health services, provided that they meet the necessary conditions sought for health facilities for the foreign market. Whether this regulation will be implemented with a new law or an update to the regulation currently in force should be evaluated by the official authorities. In this way, it will be ensured that our country starts to get the share it deserves from the world market in the field of digital health.

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