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ADVANTAGES AND RISKS OF TELEMEDICINE AND ONLINE MEDICAL SERVICES

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Annotation: This article analyzes the concept of medical service and its main aspects, identifies online services, which are a modern form of medical services, their types and main features. Information is provided about the functioning of online medical services and telemedicine on platforms in foreign countries, and about leading service platforms.
Keywords: medical service, telemedicine, law, digitization, citizens' health care.

TELEMEDITSINA VA ONLAYN TIBBIY XIZMATLARNING AFZALLIKLARI VA XAVFLARI

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Annotatsiya: Mazkur maqolada tibbiy xizmat tushunchasi va uning asosiy jihatlari tahlil qilinib, tibbiy xizmatlar ko‘rsatishning zamonaviy shakli bo‘lgan onlayn xizmatlar va ularning turlari hamda asosiy xususiyatlari aniqlandi. Onlayn tibbiy xizmatlar va teletibbiyotning xorijiy davlatlar platformalaridagi ishlashi, yetakchi xizmat ko‘rsatish platformalari xaqida ma`lumotlar berildi.
Kalit so‘zlar: tibbiy xizmat, teletibbiyot, huquq, raqamlashtirish, fuqarolar sog‘ligini saqlash.

ПРЕИМУЩЕСТВА И РИСКИ ТЕЛЕМЕДИЦИНЫ И ОНЛАЙН-МЕДИЦИНСКИХ УСЛУГ

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Аннотация: В статье анализируется понятие медицинской услуги и её основные аспекты, определяются онлайн-услуги как современная форма медицинских услуг, их виды и основные характеристики. Приводится информация о функционировании онлайн-медицинских услуг и телемедицины на платформах в зарубежных странах, а также о ведущих сервисных платформах.
Ключевые слова: медицинская услуга, телемедицина, право, цифровизация, охрана здоровья граждан.

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In the digital age, a new paradigm is emerging in medicine: telemedicine and online medical services. They are becoming increasingly popular as a tool that enables healthcare systems to operate conveniently, quickly, and cost-effectively. Today, telemedicine is seen as an important tool for providing adequate medical care to the population, not only in developed but also in developing countries. According to WHO data for 2022, the use of telemedicine services worldwide increased 3.5-fold compared to 2019. In particular, the COVID-19 pandemic has prompted the mandatory implementation of teleconsultations, ensuring the continuity of the healthcare system. The concept of telemedicine first emerged in the second half of the 20th century in the United States and Europe. The need for remote health monitoring of astronauts as part of NASA space programs led to the application of these technologies in civilian medicine. Since the 1990s, the development of the internet and mobile communications has ushered in a new era in this field. Today, telemedicine encompasses such areas as teleconsultations, telemonitoring, teleconsultations, teleradiology, telepathology, and telemedicine education. Furthermore, the constant growth of the world's population, various diseases, and the effects of pandemics also contribute to a further increase in the need for medical services. According to the World Health Organization, if the world population reached 7 billion in 2011, by 2021 this figure will be almost 7.9 billion. By 2030, the world population is expected to grow to 8.5 billion, by 2050 to 9.7 billion, and by 2100 to 10.9 billion. This dramatic growth is primarily due to the increasing number of people surviving to reproductive age, which is accompanied by a significant change in fertility rates, accelerated urbanization, and migration. These trends have a profound impact on future generations [1]. Many people are turning to online portals with video conferencing for online consultations. Utilizing this technological advancement offers numerous benefits, including cost savings, convenience, confidentiality for both physician and patient, and improved communication. This service, online medical consultations, is one of the most common types of medical services. In the modern era, online consultations have become more relevant than ever, especially during the COVID-19 outbreak. Further research is needed to validate this technique in plastic surgery. There is a clear need to standardize medical consultation procedures, communication channels, encryption, and data storage, which play a crucial role in maintaining quality treatment and maintaining social distancing.

In the 21st century, some doctors and surgeons are changing medicine. Scientists working in laboratories are testing new technologies, from software to robotics, that have the potential to fundamentally change the medical landscape, delivering better outcomes, lower costs, greater accessibility, and greater convenience. Online medical services are increasingly being provided via telemedicine. Therefore, when searching for online medical services, it is helpful to first research the companies providing these services and their offerings. The online journal GovHealth [5] listed companies such as Teladoc, MEMD, ICliniq, Amwell, MDlive, Doctor on Demand, and Virtuwell, along with a list of the services they provide. For example, ICliniq, like other telemedicine providers, offers a wide range of services for patients, including the ability to schedule appointments online. Patients can also provide doctors with their medical history and request a phone or video call.

The company's 3,000 doctors can answer online questions across 80 different medical specialties. Previous questions and answers are also available on their website. Online, phone, and video consultations are also available, but these are dependent on the doctor's schedule. A

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unique "virtual hospital" service is also available for specialists in this field.

Their services [1] include:

- Psychiatry;
- Oncology;
- Obstetrics and Gynecology;
- Dentistry;
- Sexology; - Dermatology;
- General Medicine.

Taking advantage of the growing online services market, MeMD has created an online platform where it's easy to register for an account. With the MeMD platform [1], patients can consult with a doctor on multiple conditions in a single consultation.

They cannot discuss these issues and charge you an additional fee, but only if the doctor is willing to discuss the matter with you. A disadvantage of MeMD is that they do not conduct laboratory testing like other service providers. Teladoc [2] was one of the first telemedicine companies in the US, and they have a rich history, experience, and service. They are certainly one of the most popular providers.

They provide a wide range of medical services, including:

– Skin care and dermatological issues;
– Pediatric services;
– Urgent care;
– Mental health consultations, especially in cases of growing concern about depression and substance abuse. These medical providers are distinguished by the diversity of services they provide and the variety of indications. Their core principle is also based on the classical method of service delivery.

This is why telemedicine-based medical services are now well-established and have a legal basis in many countries. Telemedicine-based services [3] can generally be defined as the use of electronically exchanged medical information to improve patient health. Furthermore, the national definition of this concept or the concept attached to it can be considered the result of advances in telecommunications technologies in the field of healthcare [4]. It is noted that this phenomenon contributes to a qualitatively new level of treatment efficiency, as well as diagnostics. In particular, in the United States, there are separate laws at both the federal and state levels that clearly define the concept of telemedicine, the scope of activities of entities, their rights and responsibilities, and also regulate issues of licensing, liability and protection of personal data. For information, it is worth noting that the funds received by the American Hospital Association [4] through telemedicine programs account for 11%. Cost reduction was due to the implementation of telemedicine, telephone consultations, the ability to accept new patients, a decrease in absenteeism, and even the opportunity to work from home on a flexible schedule several days a week. After discharge from the hospital, patients can undergo rehabilitation therapy remotely and consult with doctors, which saves time and money for both the patients themselves and the healthcare system.

Clearly, the use of telemedicine can be achieved with various organizational, technical, and economic advantages. There are four main types of telemedicine applications [4], namely:

– Real-time video (synchronous).
– Store and transmit (asynchronous).
– Remote patient monitoring.

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– Mobile medical services.

Telemedicine provides medical services to citizens living in rural areas or unable to visit a hospital due to a disability. This strengthens principles of social justice and ensures equality of medical services. Teleconsultations eliminate the need for patients to visit a clinic and wait in line, saving time and transportation costs. During the pandemic, telemedicine reduced epidemiological risks and slowed the spread of infectious diseases. Using smartwatches and sensors, patient health indicators are transmitted to doctors in real time, enabling prompt response to dangerous situations. Teleconsultations facilitate collaborative decision-making between specialists in complex clinical situations. Online webinars, conferences, and master classes for doctors and students enable rapid acquisition of new knowledge. It should be noted that the legal relations associated with this regulation are aimed at supporting, rather than hindering, the provision of online medical services. Given the legal relations existing in Uzbekistan in this regard, medical services and the principles for their implementation are regulated by a separate legal act [5] and by-laws. Compared to the practices and legislation of foreign countries [5], the licensing procedures for medical services and national legislation have both common features and specific characteristics. However, the provision of online medical services is not regulated in our national legislation. According to the Law "On the Protection of Citizens' Health," medical services are provided to citizens by medical and preventive institutions within private and other healthcare systems, and the Republic of Uzbekistan has a unified healthcare system consisting of a combination of public, private, and other healthcare systems.

This form of regulation indicates the absence of restrictions on the provision of medical services. As noted above, the provision of online medical services in each country is enshrined in legislation at various levels, and the provision of services via telemedicine requires licensing. Our country has also developed its own market for these services, which can be seen on various websites and platforms.

Teleconsultations do not include a physical examination, which is necessary for diagnosing many conditions, and the risk of misdiagnosis is higher. Electronic medical data can be vulnerable to cyberattacks. Therefore, data encryption, server security, and user authentication are required. Part of the population does not have internet access or lacks the skills to use technology, which can exacerbate social inequalities in access to telemedicine services. The issue of liability for adverse events arising from remote consultations with doctors is not clearly defined in the legislation of many countries.

Telemedicine is fundamentally changing the medical education system. Through webinars, online courses, virtual labs, and simulators, students practice surgical procedures in a safe environment. Virtual reality (VR) and augmented reality (AR) technologies make it possible to study anatomy in 3D. Continuing medical education (CME) courses for doctors are being conducted remotely, and the certification system is becoming more convenient. Telemedicine platforms enable the collection of data for clinical trials in real time, accelerate multicenter research, and strengthen international scientific collaboration. Physicians from different countries are able to quickly master common clinical protocols, improving the quality of medical care.

In conclusion, telemedicine and online medical services improve the convenience, speed, and efficiency of the healthcare system. However, issues related to data security, diagnostic quality, digital equality, and legal regulation must be addressed. For the successful development of telemedicine services in the future, it is important to strengthen cybersecurity,

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increase digital literacy among the population, adapt legislation, and train physicians in telemedicine skills.

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