

INTERNATIONAL LEGAL ANALYSIS AND REASONS FOR THE IMPLEMENTATION OF TELEMEDICINE IN THE HEALTHCARE SYSTEM OF VARIOUS COUNTRIES

Visolakhon I. Toshmatova ¹, Bobir T. Khalmukhamedov ²,
Nargiza M. Nurillaeva ³

1 PhD student of Tashkent State University of Law, Uzbekistan

2 PhD student, Assistant of the Department of Internal Diseases №1
Tashkent Medical Academy, Uzbekistan
E-mail: bobur.h@mail.ru

3 M.D., Associate Professor, Head of the Department of Internal diseases №1
Tashkent Medical Academy, Uzbekistan
E-mail: nargizanur@yandex.ru

ABSTRACT

Objective of the study: to study the legal framework and analyze the experience of introducing information and communication technologies by some foreign countries into the field of medicine. **Material and methods:** analysis and generalization of scientific, methodological and foreign literature, a test questionnaire and analysis of results. The testing was carried out on the basis of the questions of the additional professional training program for doctors in the specialty 31.08.54 “general practice”, 31.08.49 “therapy” on the topic “telemedicine in the work of a primary care physician. The survey involved 32 students of the Faculty of General Medicine in the direction of general medicine. **Results:** About the term telemedicine technologies among 32 interviewed respondents correctly answered - 6 people (18.8%), when asked about the system of identification and authentication of participants in remote interaction when providing medical care using telemedicine technologies - 7 people answered correctly (21.8%), about the procedure for organizing and providing medical care using telemedicine technologies that can be used in the provision of primary health care were answered correctly by 8 (25%) people, about digital photography only 3 people (9.4%) of graduates answered correctly. "What is the main purpose of telemedicine counseling?" - 9 people (28.1%) from 32 respondents answered for this question correctly. The lowest level of knowledge was shown by students in relation to the question of preparing the technical process for conducting a telemedicine consultation, the next question concerned the participants in the telemedicine consultation, and 0% was received in relation to the knowledge of the telemonitoring system. **Conclusion:** The low level of knowledge of modern information computer technologies by graduates indicates the importance of developing their knowledge in

relation to telemedicine consultations, it is necessary to expand the knowledge of graduates about the effectiveness of innovative methods of providing medical services to the population. The latter is relevant during the period of coronavirus infection, in order to avoid direct contact with the sick person and at the same time not leave the patient in a helpless state.

Key words: international law, information and communication technologies, telemedicine, healthcare, the right to health, family medicine.

INTRODUCTION

Currently, the topic of health and a healthy lifestyle has become relevant for all of humanity. The preservation and maintenance of health in each individual person can be influenced by factors: social-economic, political, environmental and many others. The human right to health is provided for in international documents, in which the right to health protection has received normative consolidation. In accordance with article 25 - Universal Declaration of Human Rights, “everyone has the right to a standard of living, including food, clothing, housing, medical care and necessary social services, which is necessary to maintain the health and well-being of himself and his family” [1]

The right to health protection has also been enshrined in several regional treaties, which include the European Social Charter 1961 [2] and the Revised European Social Charter 1996 [3]. From the content of both charters, it follows that the right to health care is understood as creating certain preconditions for maintaining a person's healthy status, and not as ensuring access to medical care.

In accordance with Art. 11 of the European Social Charter, states undertake to take measures aimed at:

- 1) elimination, as far as possible, of the causes of ill health;
- 2) the provision of consulting and educational services aimed at strengthening health and a healthy lifestyle and developing a sense of personal responsibility for their health;
- 3) prevention, as far as possible, of epidemic, endemic and other diseases, as well as accidents.

Thus, it should be noted that the right to health protection is a basic universally recognized human right: it is enshrined in many international universal and regional treaties and confirmed by numerous declarations and resolutions of intergovernmental organizations and conferences.

The basic components of the right to health are defined in article 12 in general comment No. 14 - of the Committee on Economic, Social and Cultural Rights. This right includes the following main components [4]:

- accessibility is the need for a sufficient number of functioning public medical institutions, goods and services, as well as programs for everyone. Accessibility can be measured by analyzing disaggregated data across different and

multiple stratifiers, including age, sex, location and socioeconomic status, and qualitative surveys to understand coverage and coverage gaps in the health workforce.

An example of accessibility to the right to health during a pandemic is the creation and opening of a new specialized medical complex in Zangiata region, two special hospitals "Zangiota-1" and "Zangiota-2" intended for the treatment of patients with coronavirus (5. Resolution of the Cabinet of Ministers of 4.08. No. 461 "On measures to improve the efficiency of providing medical care to patients infected with coronavirus infection").

- acceptability - refers to respect for medical ethics, cultural norms and gender sensitivity. Acceptability requires that healthcare facilities, goods, services and programs are people-centered and meet the specific needs of different populations, meet international standards of medical ethics regarding confidentiality and informed consent. Here, an example of the acceptability of the right to health is the creation of a set of measures for the prevention of coronavirus infection in primary health care, the development of temporary clinical guidelines for the management of patients with COVID - 19 with specific steps to treat patients with varying degrees of severity of the disease.

Speaking about the quality of medical services, we mean such definitions as safety, efficiency, people-centeredness, timeliness, fairness, integration.

Since, from an epidemiological point of view, a new coronavirus infection requires compliance with sanitary standards, it is not always possible to ensure the full implementation of high-quality medical care to the population (reception in a doctor's office). In this regard, recently it has been widely introduced into the practice of consulting at a distance (online consultations, telegram bots, channels, video consultations, video conferencing (VCS), etc.), i.e. certain types of telemedicine.

PURPOSE OF THE STUDY.

To study the legal framework and analyze the experience of introducing information and communication technologies by some foreign countries into the field of medicine.

MATERIAL AND METHODS.

Analysis and generalization of scientific, methodological and foreign literature, a test questionnaire for future general practitioners (6th year graduates of the medical faculty of the Tashkent Medical Academy) and analysis of its results. The testing was carried out on the basis of the questions of the additional professional training program for doctors in the specialty 31.08.54 "general practice (family medicine)", 31.08.49 "therapy" on the topic "telemedicine in the work of a primary care physician. The analysis of the study included about 20

sources of foreign articles and manuals related to the experience of using telemedicine services and analyzed them. The survey involved 32 students of the Faculty of General Medicine in the direction of general medicine, who received a doctor's diploma in the specialty "general medicine", "general practitioner".

RESULTS.

Before the test survey, graduate students completed a 3-day course of familiarization with various types of information technologies used today in healthcare. The questions were as follows:

1. Define the term telemedicine technology? The following answer was correct: telemedicine technologies are information technologies that provide remote interaction of medical workers with each other, with patients and (or) their legal representatives, identification and authentication of these persons, documenting their actions during consultations, consultations, remote medical monitoring of the patient's health condition. Out of 32 interviewed respondents gave correct answers - 6 people (18.8%);

2. On the example of the Russian Federation, in order to identify and authenticate participants in remote interaction in the provision of medical care using telemedicine technologies, in accordance with the Federal Law of July 29, 2017 N 242-FZ "On Amendments to Certain Legislative Acts of the Russian Federation on the Application of Information Technologies in the field of health "is used? The answer was as follows: a unified identification and authentication system. When calculating, it turned out that 7 people answered correctly, i.e. 21.8%.

3. According to the order of organization and provision of medical care with the use of telemedicine technologies, they can be used in the provision of primary health care (primary pre-medical health care; primary medical health care; primary specialized health care). The answers to the questions were all correct, i.e. disease prevention activities; diagnostic measures; measures for treatment and medical rehabilitation; activities for the formation of a healthy lifestyle. Of the 32 respondents, 8 (25%) people answered correctly.

4. In the absence of special devices for imaging locus morbi, when preparing for a telemedicine consultation, can a doctor do the following? He can take digital photographs, which is indicated in the line with the correct answer. Here, only 3 people (9.4%) of graduates answered correctly.

5. What is not a deontological requirement for telemedicine procedures? Of the respondents, 8 people (25%) answered that the fulfillment of any patient's wishes according to the principle "the client is always right", when providing telemedicine procedures on a paid basis.

6. When asked about "The main purpose of telemedicine counseling?" it was necessary to answer: the provision of timely high-quality medical care at the point of need (in fact, ensuring a single standard of quality of medical care in any geographic location and in any conditions), which was done by 9 people (28.1%) out of 32 respondents.

7. Who is not a participant in the telemedicine consultation? The correct answer was: operator. This was noted by only 5 people (15.6%).

8. For what tasks is telemonitoring not suitable? The answer was: the need to get the opinion of a specialist about the patient's health. The lowest number of responses ever received, i.e. 2 people (6.3%).

9. Communication according to the scheme "many points-to-point", when the data of many patients are transmitted to the consultation center, is organized within the framework of such telemedicine technology as telemonitoring. Unfortunately, none of the respondents provided the correct answer.

The lowest level of knowledge was shown by students in relation to the question of preparing the technical process for conducting a telemedicine consultation, the next question concerned the participants in the telemedicine consultation and 0% was received in relation to the knowledge of the telemonitoring system.

According to foreign scientific literature, telemedicine uses ICT to overcome various geographic barriers and contributes to expanding access to health services [6].

The experience of foreign European countries shows the success of this technology.

In the United States, at the federal level, physician-patient telemedicine can be used to provide patients with specialized care (primary and secondary examination, monitoring of chronic diseases, remote diagnostics, treatment correction, follow-up) as an alternative to expensive face-to-face appointments. Telemedicine is also used for emergency medical care. However, each state has its own restrictions and peculiarities.

Beginning in January 2019, Arizona expanded its parity law to include telemedicine services for the treatment of substance use disorders (SUDs). The state of Kentucky passed a law that came into force on July 1, 2019, allowing telemedicine services to be provided at home and allowing VHI to reimburse psychologists and other non-medical providers for telemedicine services [7].

The teleECG initiative in Norway is a telemedicine service used to improve the early diagnosis and treatment of suspected myocardial infarction in out-of-hospital patients. TeleECG service, one of the first major telemedicine programs in

Norway, was launched in 1995 following initial pilot projects. This service was pioneered in northern Norway as a way to shorten the time from the onset of acute heart conditions to treatment. Currently, more than 100 ambulances are equipped with teleECG service, and it is provided throughout the country. It is planned to implement this service in all districts within the next 5-10 years. This teleECG system can be used by patients at home as well as in an ambulance on the way to the hospital. Ambulances are equipped with equipment for collecting and transmitting ECG images to hospitals, which have imaging facilities and storage systems for received data. The resulting images are analyzed at the hospital by a cardiologist who can diagnose and recommend an immediate action plan.

The effectiveness of treatment of patients with cardiac diseases increased by 15-20%. The ability to remotely contact and consult with a cardiologist has improved the quality of medical care in ambulances. It is estimated that about 50% of antithrombotic agents are received by patients in ambulances. The mobility of this service brings tangible benefits to patients.

The teleECG initiative has also improved collaboration between medical professionals of different specializations who are part of the same team. By sharing experiences and jointly overcoming challenges with teleECG systems, emergency physicians, general practitioners and cardiologists have learned to work more effectively together, which was a challenge at the beginning of this initiative [6].

Difficulties also include legal discussions about the role and responsibility of each health worker (emergency doctor, general practitioner and cardiologist) in the treatment of each case. Much of the responsibility fell with the ambulance physician, and ultimately the general practitioner (if involved) is ultimately responsible for treating the patient. The consultant cardiologist at the hospital is responsible for the advice given to them. All three professionals are required to document all cases (from diagnosis to treatment) for legal protection and safety reasons.

Digital healthcare in the UK refers to health-related services provided online on a regular basis, including the transmission of text messages, audio, video information, images and other digital data for the prevention, diagnosis, treatment and monitoring of patient care. Guidelines have now been developed for digital service providers to limit such services to primary care, such as online consultation with physicians and prescribing drugs in response to online questionnaires. Telemedicine initiatives in England are not united under a single national program, but are viewed as a combined health and social services that operate at the local government level [7].

In Sweden, already in 2008, telemedicine services were offered in more than 100 applications and in more than 75% of hospitals. The Swedish regulator gives the following definition of telemedicine: Telemedicine interaction occurs when a doctor or health care provider offers diagnosis and treatment on the Internet or via telephone applications. Telemedicine types most commonly used in Sweden are teleconsultation (doctor-patient) and telemonitoring. Teleconsultation and videoconferencing in Sweden is possible with up to 12 participants at the same time. In addition, the national helpline (1177) provides citizens with 24/7 access to nursing advice, supported by expert advisory services (teletriages, teleconsultations). Patients also have the opportunity to receive information on the procedure for obtaining services via the Internet, including the waiting time in line, possible options and personalized services (access to their medical records, calendar of visits).

From April 2020, Japan is likely to allow patients to consult online with pharmacists about prescribed medications. The central government already allows doctors to consult online, and the Ministry of Health is seeking to legally empower pharmacists by introducing a bill to revise the law at an upcoming session of parliament that requires face-to-face meetings.

The revised law will also allow patients to receive their medicines online, but only a limited group will be able to use the service initially. The government has allowed residents of designated areas in Aichi, Hyogo and Fukuoka prefectures to conduct online pharmaceutical consultations. They have been available to residents of outlying islands and sparsely populated areas since the summer of 2018.

Developed countries are more likely to view legal issues related to patient privacy and confidentiality as obstacles to telemedicine development, as well as competing health system priorities and lack of demand.

Thus, international experience shows the widespread use of telemedicine technologies by specialists from leading countries in routine practice. But the availability of the possibility of using this innovative technology does not mean the existence of legal support for telemedicine consultation. As with all health services, the emphasis is on informed consent.

CONCLUSION.

The low level of knowledge of modern ICT by graduates indicates the importance of developing their knowledge in relation to telemedicine consultations, it is necessary to expand the knowledge of graduates about the effectiveness of innovative methods of providing medical services to the population. The latter is relevant during the period of coronavirus infection, in order to avoid direct contact with the sick person and at the same time not leave the patient in a helpless state.

According to data from the World Health Organization (WHO) from 2010, the creation of the Global Observatory on eHealth will collect and analyze information using ICTs that will bring benefits to healthcare and improve patient health.

In particular, in our country, work has begun on the introduction of e-health, which is being solved by the creation of electronic clinics and medical institutions based on ICT, but this issue does not find a worthy solution in the creation of this type of technology in remote areas of our country. In all countries, including in our republic, this technology is especially relevant for establishing communications and services in rural and underserved settlements, whose residents traditionally suffer from a lack of access to medical care.

There is no single definition of telemedicine because according to research in 2007, 104 definitions of this concept were identified. Therefore, WHO has adopted the following general definition for telemedicine - the provision of health services in an environment where distance is critical, health workers using ICTs to exchange relevant information for the diagnosis, treatment and prevention of disease and injury, research and evaluation, and continuing education of health workers to improve the health of the population and the development of local communities [9].

The multiple definitions indicate that telemedicine is an open and constantly evolving science as it embraces new advances in technology, responds and adapts to changing health and social needs.

Telemedicine can also facilitate closer communication between doctors and patients, as it provides healthcare professionals with opportunities for case-based learning that can then be applied to future patients [10,11] / Applying technologies that would otherwise not be available in developing countries allows health-care workers to develop their technological skills, which can then be applied in other contexts [12].

In addition, the lack of information on the legal framework and guidelines for the use of telemedicine in a clinical context can be a deterrent to the practice. Ethical aspects of the use of telemedicine services in developing countries are also questionable. It is obvious that the use of telemedicine in underdeveloped countries in order to expand access of the population to medical services is of great benefit, but the question also arises whether this method is the most effective use of limited resources [13].

Where telemedicine does indeed improve overall health system performance, the benefits cannot be overemphasized, but it can be a heavy burden on an

underdeveloped health system (for example, it requires a lot of staff time and other resources such as electricity).

Information technologies make it possible to provide services on the territory of different states, however, the law operates within a certain national jurisdiction. A doctor licensed in one country has the right to provide services and carry out medical activities on its territory. Accordingly, even with the use of information technology, he is not entitled to provide services to a patient who is on the territory of another state.

Obviously, going beyond the national framework of telemedicine will require serious efforts on the part of states, harmonization of national requirements for licenses. The ways of solving this problem in the future can be demonstrated by the example of the United States, where the solution to this problem is modeled to a certain extent. A ban on the provision of medical services, including the use of telecommunication technologies, without a license [8].

Several states in the United States require patient consent (oral or written) to receive telemedicine services. Patient consent is also required for the transmission of health information for scientific or educational use. The Oklahoma Telemedicine Law requires the patient's "informed written consent" to comply with the terms in which telemedicine services will be provided. The law empowers health agencies to take steps, where necessary, to establish and maintain "confidentiality in procedures and practices" in medicine.

Telemedicine is directly related to the question of the protection of personal data that allows the identification of a person, as well as the answer to the question of whether sensitive information should be publicly available. Many researchers note that with the development of technology, personal data becomes more and more available. Many researchers note that with the development of technology, personal data becomes more and more available. When providing telemedicine services, information about the patient's health status becomes known not only to the doctor, but also to third parties.

Foreign practice shows that the development of telemedicine requires a detailed study of a number of issues related to electronic information about the state of health. Note that in many countries "basic" laws on personal data, protection of personal data in the telecommunications system have been in force for a long time. The concept of "health information" includes several provisions:

- ◆ by content: information related to a person's past, present or future physical or mental health status, the provision of services to the person in the health care system, and payment for these services;

◆ by subjects of its creation and dissemination: information created by a public health authority, insurer, school or university, etc., transmitted by the provider [8].

Thus, the law does not apply, for example, to information transmitted by a patient from his home, in which the appropriate equipment is installed.

Health information that allows the identification of a person as requiring additional protection is protected separately. Privacy regulations require that entities handling such information take measures against the misuse of personally identifiable health information and guarantee consumer rights regarding the use and disclosure of personal health information. These rules set out who can use and open health information.

Operators are required to protect the confidentiality of health information, including from unauthorized access to it. They should train employees on security issues, develop agreements with third parties regarding privacy, obtain patient consent to disclose information.

Telemedicine, in general, must comply with a variety of legal and ethical requirements, especially in the area of patient privacy and confidentiality. For example, in developing countries, the main legal issues are the transfer of a given patient abroad, whether this is in accordance with the law of that country and whether these documents have legal force in relation to the provision of these services.

Unfortunately, these legal issues are not given sufficient attention in our national health legislation at this time.

REFERENCES

1. Resolution of the UN General Assembly 217 A (III) of December 10, 1948 // Consultant Plus
2. International human rights instruments: Collection of documents. M., 2000.- p. 570
3. European Social Charter 1996 // Consultant Plus
4. Kolotsei I.A. The right to health care and medical care as a constitutional value. Abstract of the thesis. Dissertation PhD in Law. SPb., 2010.22 p.
5. Resolution of the Cabinet of Ministers of August 4, 2020, No. 461 "On measures to improve the efficiency of providing medical care to patients infected with coronavirus infection"
6. Telemedicine. Opportunities and Development in Member States // Report on the results of the second Global eHealth Survey. Global E-Health Observatory Series. Volume 2, 2010

7. Hefei Wen, B; Janet R.C; Jason M.H et al “State Parity Laws and Access to Treatment for Substance Use Disorder in the United States Implications for Federal Parity Legislation”. JAMA Psychiatry. 2013;70(12):1355-1362. doi:10.1001/jamapsychiatry.2013.2169
8. Bogdanovskaya Glai Y. Legal regulation of telemedicine: the US experience // Doctor and information technologies. 2007. No.3. URL: <https://cyberleninka.ru/article/n/pravovoe>
9. Vladzimirsky A.V., Lebedev G.S. Telemedicine. M .: GEOTAR - Media; 2018 .-- 576 p.
10. <https://evercare.ru/category/telemreditsina>.
11. <https://www.pgplaw.ru/analytics-and-brochures/alerts/approved-the-order-of-organization-of-medical-care-using-telemedicine>.
12. Hongyang Yan, Jin Li, Xuan Li, Gansen Zhao, Sun-Young Lee and Jian Shen. Secure Access Control of E-Health System with Attribute-Based Encryption // Intelligent Automation & Soft Computing. 2006. Vol. 22. No 3. P. 345–352.
13. Gantt W. (Editor), ABA Health Law Section. E-Health, Privacy and Security Law. Second Edition, Cumulative Supplement. BNA Books, 2015.