

IMPROVING MEDICAL RADIOLOGY SERVICES IN THE REPUBLIC OF UZBEKISTAN WITH THE INTRODUCTION OF INNOVATIVE DIAGNOSTIC METHODS



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ИННОВАЦИОН ДИАГНОСТИКА УСУЛЛАРИНИ ЖОРИЙ ЭТИШ БИЛАН ЎЗБЕКИСТОН РЕСПУБЛИКАСИДА ТИББИЙ РАДИОЛОГИЯ ХИЗМАТИНИ ТАКОМИЛЛАШТИРИШ

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СОВЕРШЕНСТВОВАНИЕ СЛУЖБЫ МЕДИЦИНСКОЙ РАДИОЛОГИИ В РЕСПУБЛИКЕ УЗБЕКИСТАН С ВНЕДРЕНИЕМ ИННОВАЦИОННЫХ МЕТОДОВ ДИАГНОСТИКИ

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Резюме. Аҳолига тиббий ёрдам кўрсатишда теле Tibbiёт технологияларининг самарадорлиги муҳокама қилинмоқда. Телемедицина беморларни масофадан бошқариш усули сифатида аҳоли ва соғлиқни сақлаш ташкилотлари ўртасидаги алоқани соддалаштирди. Усулнинг асосий афзалликлари, шу жумладан universal фойдаланиш имконияти, масофавийлик ва максимал самарадорлик берилган, бу технология бугунги кунда шифокорлар ва беморларнинг ҳаётига киришга имкон берди.

Калим сўзлар: клиника, амбулатория қабули, масофавий ёрдам, коронавирус пандемияси, фойдаланиш имконияти

Abstract. The effectiveness of telemedicine technologies in providing medical care to the population is discussed. Telemedicine as a method of remote patient management has simplified the connection between the population and healthcare organizations. The main advantages of the method are given, including universal accessibility, remoteness and maximum efficiency, which have allowed this technology to enter the life of doctors and patients today.

Key words: clinic, outpatient appointment, remote support, coronavirus pandemic, accessibility.

The development of information and telecommunications technologies is one of the strategically important tasks of reforming Russian healthcare, making it possible to improve, personalize, and most importantly, ensure maximum accessibility of medical care to the population. The covid -19 pandemic made it possible to demonstrate the widest possibilities of remote patient consultation, confirmed the need for the further development of telemedicine, which has become an integral part of the treatment process, and has been able to effectively adapt to a constantly changing environment.

Currently, the Samarkand State Medical University Multidisciplinary Clinic has created a base for the formation and development of remote methods of organizing and providing quality medical care.

The purpose of the article is to show the effectiveness of telecommunication technologies in

providing medical care to the population. The authors also analyzed literary sources from the resources PubMed, Elsevier, UpToDate, Elibrary, Scholar Google on the specified topic.

The effectiveness of telemedicine technologies

Telemedicine is a fairly new direction at the intersection of several areas: medicine, telecommunications, information technology - for the targeted exchange of medical information between medical specialists and patients in order to improve the quality and accessibility of diagnosis and treatment of the latter.

One of the main advantages of telemedicine is the ability to provide highly qualified care, while significantly reducing the time and cost of patients and the medical institution. According to the authors of Dorsey E. R., T e pol E. _ J. , telemedicine (if proper-

ly organized) should occupy a significant part of the treatment process.

A pressing health problem for both clinics and many other medical institutions in Uzbekistan remains the achievement of high quality and accessibility of specialized medical care. Telemedicine technologies contribute to the optimal solution of these problems. Innovative technologies ensure the virtual presence of an experienced medical specialist, which makes it possible to improve treatment and diagnostic processes and receive advice both in real time and in a deferred format. Online training allows medical workers to acquire professional knowledge remotely, improve their skills, undergo retraining, etc.

Telecommunication forms of consultations provide medical care to the patient without additional financial costs per patient, which meets the principles of effectiveness and efficiency in the use of budget funds, allowing one to achieve the best result within the amount of finances determined by the budget. If necessary, when one medical institution is not enough to provide free medical care within the framework of the state guarantee program, several health care organizations may be involved. In these cases, telemedicine provides the necessary highly qualified and specialized medical care in real time without an in-person visit to the doctor, which significantly saves time and financial costs for patients.

The coronavirus pandemic has accelerated the introduction of telemedicine technologies in the outpatient setting. During the period of rising incidence of the new coronavirus infection and its intensive spread, patients at the clinic who were in self-isolation needed medical consultations, and telemedicine became a priority form of medical care. The most promising area of teleconsultations has become the “doctor-patient” format. Now all our patients have the opportunity to get a doctor’s appointment without leaving their apartment. This is especially convenient for people over 60 years of age and those with chronic diseases, as it reduces the number of visits to the clinic. According to B. Calton, N. Abedini and M. Fratkin, this approach made it possible to cover the widest possible range of patients with chronic diseases, as well as palliative patients with minimal risks of infection. In the future, it is likely that the doctor himself will decide who prefers this format. For example, during the initial visit, the patient will visit the clinic in person, and then will be monitored remotely.

During the period of peak incidence rates of the new coronavirus infection, “in the era” of omicron, more than 25% of city residents using services had signs of ARVI. According to the observations of the authors A. E. Loeb, Sandesh S. _ Rao et al., almost 50% of consultations in Western clinics during the pandemic were via telemedicine. In such conditions, providing every patient with a doctor's visit is

physically difficult for any healthcare system. This required the authors to organize a Center for Remote Patient Support. Its main goal was 100 percent coverage of the population with medical care.

From the total number of cases, a group of patients with a mild course of ARVI and a group of patients with an asymptomatic course of a new coronavirus infection were identified (later the latter was transferred to remote support).

During the wave of the Omicron strain, more than two thousand patients at the clinic were monitored remotely at one time. A procedure was introduced for daily robotic calling of patients with a specific list of questions regarding their current health status. This made it possible to actively identify patients with deteriorating health conditions and promptly refer a doctor to them, as well as provide qualified advice if questions arose during treatment. All results of automated surveys entered the medical information system. If necessary, the doctor contacted the patients and clarified their condition.

Teleconsultation in the “doctor-patient” format of health; in case of deterioration, a medical team was sent to them for an in-person examination, correction of treatment, or decision on the issue of hospitalization. In February and March 2022, more than 500 people received daily correspondence qualified consultation from six doctors. Consultations were held regarding both covid -19 and chronic diseases.

In addition, the clinic has introduced a service for remote monitoring of the health status of citizens with unstable blood pressure. All patients with hypertension received blood pressure monitors equipped with a GSM module. These devices transmit blood pressure readings to the information system at the doctor’s workplace. The doctor can remotely assess blood pressure levels and carry out adequate and timely adjustments to online treatment. This made it possible to reduce the number of visits to the clinic and significantly reduced the time for prescribing personalized hypertension therapy. Currently, the clinic is equipped with 29 tonometers for remote blood pressure monitoring.

In the outpatient healthcare sector in Samarkand, the priority remains the preventive direction. And here telemedicine technologies play an important role. Using automated calling, patients are invited to preventive measures, such as medical examinations and preventive medical examinations. A system is being developed for remote questioning of the patient during medical examination without him visiting the clinic with

the following display of the results in the medical information system at the doctor’s workplace. A remote consultation with a general practitioner based on the results of medical examination has been introduced. The use of telemedicine has significantly increased the activity of the population in undergoing

preventive examinations and contributes to the formation of a healthy lifestyle.

The introduction of telemedicine in a clinic takes place in comfortable conditions for a working doctor, while ensuring patient safety and compliance with medical ethics and law, and allows reducing the cost of medical services by rationalizing the use of available resources (time, personnel, equipment). A particularly important advantage of distance consulting is the ability to invite a "hard-to-reach" top-class specialist as a consultant.

Conclusion. Telecommunication technologies are the most important factor in increasing the quality of medical care. Modern telecommunication technologies provide access to information resources in the field of healthcare, increase the efficiency of interaction between medical institutions, reduce the costs of patients when seeking medical care, and in the future allow practical healthcare to be brought to a new, even higher level of work.

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Резюме. Обсуждается эффективность телемедицинских технологий в оказании медицинской помощи населению. Телемедицина как метод дистанционного ведения пациентов упростила связь между населением и организациями здравоохранения. Приведены основные преимущества метода, в том числе универсальная доступность, удаленность и максимальная эффективность, которые позволили этой технологии сегодня войти в жизнь врачей и пациентов.

Keywords: клиника, амбулаторный прием, удаленная поддержка, пандемия коронавируса, доступность