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Turdimuratov Baxtiyor Kurbonovich

Tashkent State Dental University, Termiz Branch Lecturer,

Department of Social and Humanitarian Sciences

Phone: +998 (88) 697-48-48 E-mail: baxtiyor.turdimurodov6668@gmail.com

Termez State University lecturer

Kurbanova Mohinur Baxtiyorovna

mohinur.kurbanova88@gmail.com Phone: +998 77 223 78 88

Tashkent State Medical University Termez branch treatment faculty 1st year students

Xushboqov Dilshod Shokirovich

dilshodxoshbokov@gmail.com Phone: +998 50-002-66-44

Tashkent State Medical University Termez branch treatment faculty 1st year students

Eshqobilov Og'abek Xusan o'g'li

og'abekeshqobilov@gmail.com Phone: +998 94-213-66-22

Abstract: *The introduction of information technologies into healthcare practice changes the forms and methods of interaction between doctors and patients, diagnostic and treatment procedures, methods of disease prevention and health recovery. Attention is drawn to the emerging digital divide between rich and poor countries, older and younger users, and other segments of the global society that have access to and potential use of information technology. The specificity of responsibility in the application of digital technologies is considered.*

Keywords: *digital medicine, digital divide, digital technologies, risks and dangers, responsibility, ethical foundations of science, telemedicine technologies*

INTRODUCTION

Digital technologies and telemedicine in medicine are becoming an integral part of modern medicine. These areas serve not only to improve healthcare services, but also to create convenience for patients and make the healthcare system more efficient. The issue of ethics and responsibility of scientists in medicine and healthcare, especially in scientific areas such as biotechnology, genetic engineering, biology, nanotechnology, technology, remains relevant. Recently, special attention has been paid to the social perception of digital medicine and new technologies.

The introduction of information technologies into healthcare practice is significantly changing the forms and methods of interaction between doctors and patients, diagnostic and treatment processes, methods of disease prevention and health restoration. Digital technologies are widely used in medicine for the following purposes:

1. Medical data management:

- *Storing and sharing patient health information through electronic medical records (EMRs).

- *Securely managing large amounts of data using cloud technologies.

2. Analytical automation:

- *Automatic analysis of examinations such as X-rays, MRIs, and CT scans using artificial intelligence (AI).

- *Obtaining laboratory results quickly and accurately.

3. Early detection of malfunctions:

- * Algorithms and analytical programs to determine the risk of diseases.

- * Monitoring heart rate, blood pressure, and other vital signs using monitoring devices.

4. Robotic surgery:

- *Performing complex surgical operations using robots.

- *Performing the procedure with high precision and minimally invasive methods.

Currently, computers are widely used in many areas of medicine. Starting from the computerized entry of a doctor's order - a computerized system of doctor's prescriptions, ending with robot interns assisting surgeons during operations. Also, computers play an important role in the work of clinics in general, helping to plan and perform various administrative tasks, track finances, conduct inventory, etc.

Thus, the IT industry provides an ever-expanding range of capabilities (web applications, "smart sensors", etc.), which are becoming an integral part of users' everyday lives.

Such capabilities are used primarily by fans of sports and an active lifestyle (for example, since 2006, Nike has been producing sneakers with sensors in the sole, Adidas has been producing T-shirts with electrodes that read heart rate, there are bracelets and watches that record physical activity, various sensors give a signal when a person bends over and transmit this information to a smartphone, "smart alarm clocks" generate a signal in the most appropriate phase of sleep and help to get enough sleep).

IT technologies are also used by people who take care of their health and are necessary for patients to monitor their well-being remotely. In Germany, since 2020, for the first time in the world, they have begun to write medical applications for patients with diabetes, which are available on prescription and include digital diaries, functions for supporting physiotherapy or psychotherapy treatments, as well as blood pressure measurement[1].

Undoubtedly, the future of the healthcare system includes the further development of digital medicine.

In the short term, the main directions of development of digital medicine are the introduction of electronic medical records, the development of the concept of the "connected patient" (monitoring the condition and providing medical services using

embedded smart devices) and telemedicine. In a broad sense, “smart healthcare” means smart healthcare from the latest mobile and computer settings, which control healthcare.

Many clinics have begun using networked personal computers to store and transfer data related to administrative tasks.

Computer technology has made reference information available to any doctor or patient. Today, almost everyone has a personal computer or handheld device (tablet, smartphone, PDA), which allows them to obtain the necessary medical information[2].

Telemedicine is a method of providing remote medical services, which is carried out using modern means of communication. It includes the following services:

Remote consultations:

The ability of patients to consult with doctors via video communication.

Exchange of experience with doctors at a great distance.

Monitoring systems:

Remote monitoring of the patient's health at home.

Devices that automatically signal when malfunctions are detected.

Education and training programs:

Online training courses and seminars for doctors.

Promoting a healthy lifestyle to patients.

Emergency services:

Providing rapid care to patients in difficult conditions or remote areas.

Coordination of services during epidemics and natural disasters.

Advantages:

Expanding access to medical services.

Improving the quality of medical care and saving time.

Reducing healthcare system costs.

Disadvantages:

Difficulties in ensuring data security.

Technical problems with devices and technologies.

Need to provide flexible services for each patient.

Computer technology is penetrating more and more deeply into other areas of our lives, bringing many new things, good or bad, sometimes it is difficult to say. But progress cannot be stopped only by fear of something new. This also applies to medicine. Many diseases will become incurable if some brave people do not decide to treat them differently than before. The main thing to remember is that man creates technology, man improves it, and only he can be responsible for this.

Modern information technologies have a positive impact on the development of new methods of organizing medical care for the population. Many countries have long been actively using new technologies in the healthcare sector. Teleconsultations for patients and staff, exchange of information about patients between different institutions, remote

recording of physiological indicators, real-time monitoring of operations - all this is provided by the introduction of information technologies in medicine. This brings the informatization of healthcare to a new stage of development, has a positive impact on all aspects of its activities. Information systems are present in all areas of medicine and healthcare. The use of various forms of information exchange in the medical sector is one of the urgent problems of the present time. Their regulation will achieve automated exchange of information in the medical and healthcare system, increase the productivity of employees in this field, and improve the quality of patient care[3].

Recently, a competition has begun in medical institutions of our country to create multimedia, animated electronic database sites taking into account the requirements of the time, the requirements for improving the quality and efficiency of user services. Many of them, while superior in some aspects, still require further processing and modification in others. Therefore, we focused on analyzing and studying existing sites in our country, as well as on the ease of use of programs that should be created in the future.

The basis of modern medical institutions is the development of a database on the creation and storage of electronic documents in medical institutions in our country, the formation of a database on this topic, and the development of a policy for using this database. The task of quickly delivering them to users in accordance with the requirements of the time and converting them into an electronic form is one of our main goals. During the further activities of medical institutions, this database will be supplemented and enriched with information on electronic documents, becoming a well-formed form. An electronic document management system is a set of inputs and programs that allow for the effective organization of the processes of creating, storing, manipulating and placing electronic documents. Life itself, with its unprecedented achievements in science and technology, is showing convenient ways to quickly create, store, transfer and access information in a new, advanced way [4].

CONCLUSION

Information systems have been created in the healthcare system to work with information flows. The information system is a generalized set of organizationally regulated documents and information technologies, including the use of computing techniques and communication tools that perform information processing processes. The purpose of medical information systems is to support various tasks of providing medical services to the population, manage medical institutions, and ensure information exchange in the information management of the healthcare system itself.

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