



**THE USE OF COMPUTER TECHNOLOGY IN MEDICINE IN THE PROCESS OF  
DIGITALIZATION**

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**Annotation:** This article covers the role of computer technology in the field of Medicine and their importance in the process of digitization. The advantages of modern directions such as the formation of a digital medical system, artificial intelligence, telemedicine, electronic health systems and their practical application are analyzed. Also, the relevance of this process is based on the example of the reforms carried out to digitize the health system of Uzbekistan.

**Keywords:** digitization, computer technology, medicine, telemedicine, artificial intelligence, electronic health, information systems, creative thinking, medical approach, digital medicine.

**Introduction.** In the 21st century, digital technologies are making fundamental changes in all areas, including medicine. Computer technology allows you to automate not only the storage and processing of medical data, but also diagnostic, therapeutic, preventive and managerial processes. As a result of the digitization of Medicine, the efficiency of the health system is increasing, errors related to the human factor are decreasing, and the quality of service provided to patients is improving. Therefore, the “application of computer technologies in medicine in the process of digitization” is today not only an urgent, but also a topic of strategic importance.

Relevance of the topic. Digital technology has ushered in a new stage in the management of the health care system. E-health (e — Health), telemedicine, artificial intelligence-based medical diagnostics, genome analysis, and database management systems are all shaping the digital ecosystem of modern medicine. Within the framework of the “**Digital Uzbekistan – 2030**” strategy in the Republic of Uzbekistan, a complete digitization of the medical system is being carried out. Electronic cards, digital laboratory systems, as well as remote counseling services (telemedicine) are widely introduced in medical institutions. These processes serve to improve the quality and speed of medical care, as well as to ensure openness and transparency in medicine.

**Purpose and objectives of the work** Purpose of work: The study of the importance of computer technology in the process of digitization in medicine, the scientific justification of their effectiveness in the fields of diagnostics, treatment, analysis and management.

Tasks of work:

\* Study the theoretical foundations of the application of digital technologies in the field of Medicine;

\* Analysis of the structure and benefits of the electronic health system  
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\* Study the theoretical foundations of the application of digital technologies in the field of Medicine;



- \* Analysis of the structure and benefits of the electronic health system;
- Demonstrate the practical importance of telemedicine and artificial intelligence technologies;
- \* Coverage of information security and data protection issues in medicine;
- \* Assessment of the results of digitization in medicine based on the experience of Uzbekistan.

#### **Main part**

Electronic health systems (E-Health) Electronic health systems provide all information about patients to be stored on a single electronic base. This system helps doctors to quickly view medical history, compare the results of the analysis, and make the correct diagnosis.

Telemedicine Telemedicine is a system for providing remote medical counseling, diagnostics, and surveillance services.

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2. Telemedicine Telemedicine is a system for providing remote medical counseling, diagnostics, and surveillance services. It plays a key role in providing rapid medical care to people living in remote areas.

3. Artificial intelligence and data analysis Artificial intelligence is widely used in medicine in image analysis, early disease detection, genetic research, and drug testing modeling.

4. Biotechnology and simulation systems Virtual models created through computer technology make it possible to pre-test the effects of new drugs, practice surgical procedures.

5. Information security In addition to digitization, it is also important to ensure information security in medicine. It is necessary to protect patient data, save from unauthorized access, introduce special authorization systems for doctors. Practical importance of work The results of the study can serve as a practical guide for the effective use of computer technology in medical institutions, the organization of Electronic Document Management, the development of telemedicine services and the implementation of diagnostic systems based on artificial intelligence.

**Conclusion.** The use of computer technology in medicine in the process of digitization is making fundamental changes in the health system. It increases the speed, quality and accuracy of medical care, allows rational use of resources.

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