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The Role of Digital Technologies in Improving the Effectiveness of Medical Institutions

Nematov Nizom Ismatullayevich
Assistant of Samarkand State Medical University

Abidova Gulsanam Hakim qizi
Student of Samarkand State Medical University

Abstract: This scientific article is dedicated to the study of the role of digital technologies in improving the efficiency of medical institutions. Currently, the quality of treatment and the speed of processes are significantly improved as a result of the widespread use of digital technologies in medical institutions. The article analyzes the use of electronic information systems, telemedicine, robotic assistants, and automated systems and their impact on productivity. However, the article also addresses data management and security, legal and ethical issues. Through data management systems, the consistency and accuracy of the treatment process increases, and with the help of telemedicine, remote communication with patients is established. Analyzing successful examples of these technologies in Uzbekistan and other countries, the article provides practical recommendations for increasing efficiency.

Key words: digital technology, telemedicine, information, robot assistant

Introduction: Nowadays, improving the efficiency of medical institutions is one of the important issues, in which digital technologies play an important role. This article examines how to improve the performance of medical institutions by using electronic information systems, telemedicine, robotic assistants and other modern technologies.

What we mean by digital technology: Digital technologies have become so embedded in our lives that today not only our daily activities, but also the development of socio-economic spheres cannot be imagined without them. Including the service system. Naturally, as in other industries, the introduction of digital technologies in service enterprises is fundamentally changing its activities. In particular, by creating a single electronic platform in the system, a modern method of data entry, collection, formation, and analysis was introduced. Today, digital technologies are rapidly developing and require keeping up with the times in every field. For example, the introduction of artificial intelligence technology is useful in data analysis and automation of repetitive processes in service enterprises, as well as in increasing transparency, while large-volume data — Big data — is the storage and processing of large volumes of data received by service enterprises. , provides an opportunity to better predict revenues and improve document exchange. Artificial intelligence and big data are coming to the rescue. For information, artificial intelligence is a special field of informatics. is the imitation of the capabilities of the human mind by a computer or machine, simply put, artificial intelligence is a technology aimed at making computers think like humans and find solutions. Big Data is the term used to refer to flows of more than 100 gigabytes of data per day. Later, due to the sharp increase in information, this concept began to gain a wider scope. The term is commonly used to refer to large amounts of data on the terabyte, exabyte, and petabyte scale. Advantages of new technologies Many countries are now taking advantage of artificial intelligence in many areas such as health, transportation, defense and national security. Research by consulting firm Pricewaterhouse Coopers shows that global artificial intelligence is expected to contribute $15.7 billion trillion to the world economy by 2030. This will increase the world GDP by 26%. Finding accurate information from a stack of documents is like looking for a needle in a haystack. In fact, using algorithms, it is possible to create artificial intelligence-supported systems that can identify unusual records in large amounts of

data. The use of artificial intelligence-enabled robots to automate repetitive tasks helps professionals reduce paperwork, while increasing transparency helps reduce the burden of human labor in the automated service delivery process. Data is the most important factor in the digital age. Big Data technology is of great importance in collecting them and drawing conclusions based on studies. It is also often used to refer to predictive analytics of weighted data or other methods of extracting value from data. Revenues from Big Data technologies are growing year by year. It was 189.1 billion dollars in 2019, and it is expected to reach 274.3 billion dollars in 2022. In countries such as the USA and Australia, special state programs for the development and financing of large-scale data technologies have been developed.

Electronic Information Systems

Electronic data systems speed up processing in medical facilities by automating the process of storing, managing and sharing patient data. These systems not only ensure the safe storage of data, but also increase the consistency of the treatment process. At the same time, through EIS, medical personnel can constantly monitor the condition of patients and provide prompt medical care.

Telemedicine:

Telemedicine and telemedicine technologies play an important role in the implementation of remote medical services. These technologies facilitate remote communication between patients and doctors. Patients will be able to consult a doctor and monitor their condition without leaving their homes. This not only saves time, but also improves the quality of medical services.

Robot Assistants and Automatic Systems:Robotic assistants and automatic systems are important in improving the efficiency of medical facilities. With the help of these technologies, it is possible to automate simple and complex surgical procedures, improve patient care and efficiently organize the work process. Robots increase efficiency by accurately and accurately performing patient procedures and reducing staff workload.

Data Governance and Security: Data management systems can ensure consistent management and security of data flow in medical facilities. With these systems, healthcare professionals can quickly access patient information and keep the information secure. At the same time, with the help of information management systems, communication between medical personnel improves and the efficiency of processes increases.

Legal and Ethical Issues: Legal and ethical issues are also important in the use of digital technologies. When using digital technologies in medical institutions, it is necessary to keep data safe, protect personal information and comply with legal requirements. It is also required to obtain patient consent and ensure confidentiality in the storage of their information.

Analysis of Samples Used: In the article, it is necessary to analyze the successful examples of the use of digital technologies in Uzbekistan and other countries and study their impact on efficiency. Through these analyses, useful proposals and strategic plans for medical institutions can be developed.

The use of digital technologies in medical institutions is important in the development of modern medicine and increasing its efficiency. Electronic data systems , telemedicine, robotic assistants, and automated systems enable faster and more accurate medical procedures. With the help of these technologies, communication between patients and doctors is improved, the quality of treatment increases, and the efficiency of the work process increases significantly.

Data management and security play a major role in the continuous operation of medical facilities and the safe keeping of patient data. Compliance with legal and ethical issues in the use of digital technologies is also important, as it helps to protect patient data and regulate the operations of medical institutions.

By analyzing successful examples of the use of digital technologies in Uzbekistan and other countries, useful proposals and strategic plans can be developed to increase efficiency in medical institutions. As

a result, digital technologies will become an important tool for increasing the efficiency of medical institutions, improving the quality of treatment and developing the field of modern medicine.

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