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PROMISING DEVELOPMENT OF MEDICAL EQUIPMENT TECHNOLOGY

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Abstract:

The development of information technologies in each country depends on the level of the economy and the availability of resources of each country, but despite the fact that these areas are well developed in Uzbekistan, the country is not a leader in creating information and communication technologies. Uzbekistan is actively taking measures to develop this sphere.

Keywords: Information Technology, Numerical Control, Programming, Machine Tools, Error, Tool, Process Optimization

Information technologies are increasingly integrated into all areas of our daily lives. Information technologies are now used everywhere. It is clear that such an important area of human life as healthcare cannot be left out [1]. The latest digital developments have a positive impact on the development of the most promising methods of organizing medical care for the population around the world. At the same time, effective IT infrastructure development is becoming increasingly important. Many countries have been actively using innovations in the medical field for a long time. Among them:

- teleconsultations of patients and staff;
- remote recording of physiological parameters;
- sharing patient data between different institutions;
- real-time monitoring of surgical procedures, etc.

All this became possible thanks to the introduction of IT in medicine, which allowed bringing its informatization to a new level and had a beneficial effect on improving the provision of medical care to the population. New software products that make a significant contribution to the development of medical high technologies are being actively developed. The widespread use of laser micro-processing technologies in industrial production is due to the possibility of precision processing of various materials [2].

Currently, Uzbekistan is actively taking various actions to develop information technologies. Today, health and medical issues are more acute than ever in our country. The development of medicine and related industries directly depends on the development of a number of innovative areas. Each person's life path intersects to one degree or another with the doctors to whom we trust our health and life. But the image of a medical professional and medicine in general has been undergoing major changes recently, and this is largely due to the development of information technology. Modern technologies are replacing outdated ones in a wide range of applications. The main directions of technological development in medicine are::

- Diagnostic technologies
- Disease prevention technologies
- Technologies for localization of disease foci
- Technologies of conservative medicine
- Surgical intervention technologies
- Medical equipment manufacturing technologies
- Pharmacological production technologies
- Information technologies for working with the public
- Local medical support technologies
- Resuscitation technologies
- Emergency medical supply technologies
- Alternative medicine technologies
- Technologies of children's medicine
- Technologies of anti-epidemic support for the population, as well as a number of other more detailed areas.

Currently, three-dimensional models of objects are widely used in various fields of human activity - in science and technology, medicine, virtual reality systems, education and art [3]. Medicine is a historically conservative field of human activity. However, even in this direction, progress has now reached a leading position in terms of the pace of

development. New equipment is being put into service for doctors in large clinics and regions. Communication systems, the Internet and satellite channels allow consultations to be conducted even in the most remote places of the country. Around the world, doctors and specialists in the medical industry are consolidating to improve the effectiveness of the fight against viruses and other serious diseases of our time. Innovations in the medical industry are considered highly profitable and bring a huge income with proper implementation. Or maybe just such ideas will help implement some mechanisms that improve the process of diagnosis and treatment, save the lives and health of many patients, and in addition, they will also bring developers a considerable income. Information technologies can be successfully applied in various areas of modern medicine. For example, in the field of patient safety, modern automated systems can strengthen quality and safety control of medicines and medical services, and reduce the likelihood of high risk of infection. medical errors, provide emergency services with rapid communication and access to vital patient information. Modern technological solutions can provide free access to health services regardless of the patient's place of residence, significantly increase the availability of high-tech medical services and medical expertise. In addition, without ICT, it is almost impossible to solve the problem of ensuring public access to reliable medical information. We are talking about the publication of administrative regulations for the provision of public services in the healthcare sector; the creation of information centers and "hotlines" for the population; medical information resources on the Internet, including for target groups of the population; certification of private medical information resources on the Internet; informing the population about the quality of medical services provided by private organizations; publication of information about the centers of donor materials. Information technologies can also be used in the prevention of diseases and other life-threatening conditions. This can be achieved by monitoring, analyzing and predicting the epidemiological situation in the country. in the country; creation of interdepartmental systems for ensuring veterinary, phytosanitary, radiological, environmental and other types of control; development of programs for working with the population and employers aimed at preventing diseases. IT is also indispensable in terms of improving the skills of medical personnel. Creation of a single healthcare information space will allow establishing accounting, licensing and certification processes in the field of medicine, as well as the process of collecting and processing statistical data; control mutual settlements between health care institutions and insurance companies, as well as financing in the field of social security of citizens; introduce electronic document management and streamline the exchange of information between departments. Employees of the healthcare system will have the opportunity to write out referrals for laboratory examinations in online mode, the results of which will also be returned in electronic form; provide necessary statements to patients in electronic form; write out electronic prescriptions and promptly identify existing contraindications; conduct remote consultations and consultations. They should be widely distributed plastic cards, electronic wristbands in hospitals, electronic medical records. It will be possible to implement standard integrated applications for medical institutions and browsers for patient access. One of the primary tasks is to create automated systems for storing and accessing graphic information (X-ray, tomogram, ECG, etc.) and information about the availability of donor material, as well as providing services for interpreting survey results and organizing an electronic queue for donor material. However, despite the fact that currently the basic principles of e-health have already been approved, the concept of its construction is not sufficiently developed and is not being implemented, and the regulatory framework is practically non-existent. Studying the levels of development of information technologies abroad, there is a great motivation and desire to improve the medicine of Uzbekistan, using the most modern methods of registering and using information data. For example, the healthcare system is already planning to fully automate not only administrative, but also clinical processes. Also, in the coming years, a "Patient's Personal Account" will be available, through which you can get information about health services.

The patient's personal account is designed for convenient access to electronic services of a medical organization. You can order an electronic service both for yourself and for your family: parents and children. To order services for your family members, contact the local doctor who will register your family relations in the system. We offer you to use all the features of the portal available to registered users. Doctors ' work schedules: View the work schedules of doctors connected to our system of medical organizations in your region and make an appointment. Make an appointment: You don't need to visit the clinic to make an appointment or call the reception desk by phone. Make an appointment from the comfort of your home/office. Call a doctor at home: You can register a doctor's home call at any time that is convenient for you. The doctor will come to you on his next working day. Medicine Search: Find pharmacies where you can find the medicines you need. View the price and determine the location by address [5].

Recipes: Forget about paper recipes that are lost or forgotten at home. You can always view your prescriptions in your personal account. Medical Archive: Upload and save photos of your medical documents, laboratory results, and files containing medical information that is important for you and your health.

Observation diary: Keep a diary of observations of your health indicators, considering the dynamics of changes in these indicators [4].

Lab Test results: View the results of laboratory tests immediately after the results are generated by the laboratory staff. My Referrals: View your referrals for hospital admissions. You can also view directions for services, consultations, and so on...Health passport: An electronic health passport is structured information about your health, medical history, research results, diagnoses, etc.

Web survey: The web survey helps healthcare organizations conduct surveys among their patients. Sick leave: Why visit a polyclinic after recovery just to collect your sick leave? Track the statuses of open sick lists and download closed sick lists. Sphere healthcare today is at the forefront of digitalization: new services are being created, processes are

being automated, and medical services are being converted to electronic form. The main goal of all improvements is to make the user's life easier.

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