

IMPORTANCE OF INFORMATION TECHNOLOGIES IN PRESERVING HEALTH

¹Ermetov E. Ya., ²Yakhshiboyeva D.E., ³Maxsudov V.G., ⁴Yakhshiboyev R.E.

^{1,2,3}Tashkent medical academy

⁴TUIT after named Muhammad al-Khwarizmi

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Abstract. *In modern life, information technology penetrates into all spheres of our lives. As a result, high-quality IT services have become very important today. One of such areas is telemedicine. Telemedicine allows for providing remote medical assistance and monitoring patients' health through online consultations. The development of this field requires the application of modern high-tech solutions. In this regard, the created consortium develops the main technological standards and contributes to the development of the medical industry. Innovative products and solutions are created with the support of the state to maintain health and ensure order in this area.*

Keywords: *healthcare, medicine, IT, medical consultations, telemedicine.*

INTRODUCTION

Information technology is being widely used everywhere now. It is clear that it is not possible to neglect the important aspect of human life such as preserving health. The latest digital developments are helping to establish effective methods for providing medical assistance to the population around the world. In addition, building an IT infrastructure effectively is also crucial. Many countries have been actively utilizing innovations in the field of medicine for a long time. Among them are:

- Teleconsultations with patients and medical staff;
- Remote monitoring of physiological parameters;
- Obtaining patient information between different healthcare facilities;
- Monitoring injuries in real-time, and so on.

All of this has led to the introduction of new stages in healthcare information dissemination and improved delivery of medical assistance to the public, thanks to the positive impact of IT. The healthcare industry is now adding a significant part of the development of high-tech innovations, and new software programs that help advance healthcare technologies are being created and implemented.

Maintaining public health has become one of the most important duties of today, and modern medical information systems are constantly being developed to help medical institutions operate more efficiently and effectively. The current state of medical information systems is evolving rapidly, and as a result, the government is placing greater emphasis on promoting the field of healthcare information technology. The allocation of financial resources towards the development of new medical technologies is having a positive impact on the completion of ongoing services.

In the first place, developers are creating unified systems that optimize the functioning of this software for clinics, which improves the overall efficiency of the system. Ongoing developments provide medical professionals with an opportunity to use all of the available IT tools in their practice.

In our country, there is an urgent need to introduce innovative solutions to healthcare to keep pace with current changes in healthcare technologies. Therefore, the issue of ensuring the most effective protection of medical information is of particular importance. Accordingly, new systems are being developed that block external threats and ensure the security of medical information.

THE ROLE OF IT IN HEALTH CARE

It takes a lot of measures to inform healthcare providers of the latest scientific and technological advances in preserving health. This clinic helps prepare and enhance the skills of medical staff. With the help of medical information technologies, it is possible to obtain and learn about the latest discoveries that assist healthcare providers in performing their work better. This is especially important for medical personnel working in rural areas [1-4].

In terms of specialists' encouragement, introducing innovations to healthcare is quickly and easily implemented. The interface of medical services is accessible to users, and this assists healthcare staff in quickly incorporating new technologies. In addition, it helps manufacturers of software products understand the vulnerable aspects of utilizing software products.

After completing a short training course, healthcare professionals carry out the following:

- Work on local and global computer networks;
- Utilize information resources;
- Use data systems and databases;
- Conduct videoconferences.

The creation of a national telemedicine system for preserving health is necessary. Solving this complex problem improves the quality of medical assistance at a considerable level and optimizes its cost. That is, healthcare providers do not need to allocate funds for travel expenses since they can participate from a distance.

World experience indicates that introducing information technologies to healthcare not only enhances the quality of healthcare services but also accelerates the skills of medical staff and reduces medical costs for patients. Modern software products revolutionize clinic work from the ground up, enabling medical staff to take a new approach to patient diagnosis and treatment, monitor patients, and store medical records digitally [5-8].

The use of modern IT enables healthcare providers to pay close attention to the health of patients. Electronic medical records have replaced paper-based information and help save time by filling out medical questionnaires. As a result, more time can be spent examining patients. All information about patients is provided in a single electronic document, which is available to all hospital staff. The results of medical examinations and treatments are entered into the electronic medical record. This helps other doctors evaluate the quality of care provided to patients and identify any incorrect diagnoses or treatments.

In addition, the use of information technology in healthcare provides doctors with the opportunity to consult with patients online. This expands access to medical services for people living in remote areas. In other words, it is possible to receive quality medical assistance from a distance. Moreover, it provides an opportunity to help people in emergency situations or those in remote areas [9-12].

Patients and doctors don't have to travel long distances for consultations and advice. With the help of IT specialists, a specialist can evaluate the condition of a patient who contacts them and become familiar with all the results of their examinations. These methods of mutual influence

will not only benefit patients with physiological problems, but also those who need the help of a psychologist or psychiatrist. Audio-visual communication creates convenient opportunities to establish necessary communication between doctors and patients and provide the necessary medical assistance.

If we talk about the advantages of using information technology in maintaining health, it can be said that it provides a great opportunity for innovation in providing medical services to almost all aspects. It enables the positive impact of providing medical services to all areas. Traveling for long periods of time to attend courses, seminars, and other events is unnecessary, and it provides assistance in studying remotely from afar. In addition, it provides a way for medical professionals to stay up-to-date with the latest news and to quickly learn about all the latest news in the field of health [13-17].

Beyond that, this clinic provides the opportunity for effective management of hospitals or clinics. It automates the management of many medical systems, working with personnel, scheduling, budgeting, inventory management, and other tasks. It provides an opportunity for the medical institution to cooperate more effectively with the mandatory health insurance scheme and local government agencies to ensure the preservation of health. Medical information technologies optimize the movements of doctors and services such as registries, quick medical assistance, and other services.

It is also necessary to provide assistance in developing a scheme for ensuring polyclinics or hospitals with medicines. With their help, it is possible to compile a list of revenue and expenditure operations, monitor fund balances, formalize applications for the provision of medical supplies, monitor the use of medical supplies, and issue overdue medical supplies from the account, as well as compile reports and submit them to relevant authorities [18].

CONCLUSION

In addition to the above, innovative digital technologies are actively used in the field of medical education. Distance learning courses provide the opportunity to train quality students from afar. Modern developments in IT allow medical specialists to find their own way in medicine and participate in the presentations of recognized specialists. It can be concluded that information technologies are widely used in medicine and are becoming an integral part of it.

REFERENCES

1. Яхшибоев Р.Я., Яхшибоева Д.Э., Эрметов Э.Я., Базарбаев М.И. Разработка модели распознавания графических объектов на основе метода «Transfer learning» для диагностики в сфере здравоохранения. 2023/1/5.
2. Яхшибоев Р.Я., Базарбаев М.И., Эрметов Э.Я. Применение нейронных сетей для диагностики медицинских заболеваний. 2023/1/5
3. Maxsudov V. G, Ermetov E. Ya. Tibbiy xizmat ko'rsatishda axborot tizimining ahamiyati. 2023/1/5
4. Яхшибоева Д.Э., Эрметов Э.Я., Яхшибоев Р.Э. Развитие цифровых технологии в медицине. Journal of new century innovations. 2023/1/5. С.100-107.
5. F.F.Isaev, J.T.Abdurazzoqov, E. Ya. Ermetov, U. Q. Safarov, S.F.Normamatov. Tibbiy qurimalarni kompyuter texnologiyalari yordamida modellashtirish. Innovation in technology and scienceeducation. 2023. Б.112-119

6. Maxsudov Valijon Gafurjonovich, Ermetov Erkinbay Yaxshibayevich. Tibbiy xizmat ko'rsatishda axborot tizimining ahamiyati. 2023/1/5
7. Яхшибоева Д.Э., Эрметов Э.Я., Яхшибоев Р.Э. Перспективы информационно-цифровых технологий в медицине. ZAMONAVIY KLINIK LABORATOR TASHXISI DOLZARB MUAMMOLARI xalqaro ilmiy-amaliy anjuman. 2022/12/27. С.193-194.
8. Тухтаходжаева Ф.Ш. Махсудов В.Г., Эрметов Э.Я. Значение информационных систем в здравоохранении. Журнал медицина и инновации (Jurnal of Medecine and innovations). 2022/2/25. С. 177-181
9. Bazarbayev M.I., Maxsudov V.G., Ermetov E.Ya. Klinik laboratoriya tekshiruvlarda molekulyar diagnostikaning ahamiyati. zamonaviy klinik laborator tashxisi dolzarb muammolari . 2022/12/27. Б.13-17.
10. Bazarbaev M.I., Tulaboyev A.K., Ermetov E.Ya., Sayfullayeva D.I., Abduganieva Sh.X., Isamuxamedov D.N. Tibbiyotda axborot texnologiyalari. Darslik. 2018. С. 351.
11. Базарбаев М.И, Эрметов Э.Я, Сайфуллаева Д.И. Таълимда ахборот технологиялари. Дарслик. 2018. 525 б.
12. Эрметова С.И. Эрметов Э.Я., Икрамов У., Каримов Х.А., Мастибеков Н. Прикладные программы, обеспечивающие обучение на расстоянии. Масофадан ўқитиш техника ва технологияси. Халқаро илмий-амалий конференция. 2002/5/13. Б.183.
13. Эрметова С.И. Икрамов У., Каримов Х.А., Эрметов Э.Я., Мастибеков Н. Информатика ва компьютер технологияси фани бўйича масофадан ўқитиш учун қўлланиладиган дастурий тўплам. Масофадан ўқитиш техника ва технологияси. Халқаро илмий-амалий конференция. 2002/5/13. Б.182-183
14. Yakhshiboyev R. E., Kudratillaev M. B., Siddikov B. N. FORSCHUNG VON INNOVATIVER AUSRÜSTUNG FÜR DIE DIAGNOSE VON MAGEN-DARM-ERKRANKUNGEN //International Bulletin of Applied Science and Technology. – 2023. – Т. 3. – №. 3. – С. 100-105.
15. Кудратиллаев М. Б. ПРИМЕНЕНИЯ ТЕХНОЛОГИЙ 5G В СОВРЕМЕННОЙ МИРОВОЙ МЕДИЦИНЕ //Международный научный форум. – 2022. – Т. 1. – С. 915-917.
16. Kudratillaev M. B., Yakhshiboev R. E. ANALYSIS OF INNOVATIVE EQUIPMENT FOR THE DIAGNOSIS OF GASTROENTEROLOGICAL DISEASES //Open Access Repository. – 2023. – Т. 4. – №. 03. – С. 13-23.
17. Kudratillaev M. B. SU Pulatov PROSPECTS FOR THE DEVELOPMENT OF FIFTH-GENERATION NETWORKS (5G) IN UZBEKISTAN //Recent advances in intelligent information and communication technology".—Tashkent: Tashkent University of Information Technologies named after Muhammad al-Khwarizmi. – 2022. – С. 393-397.
18. Кудратиллаев М. Б. ТЕХНОЛОГИЯ ПЯТОГО ПОКОЛЕНИЯ (5G) КАК ШИРОКИЙ СПЕКТР РАЗВИТИЯ ЦИФРОВОЙ ЭКОНОМИКИ УЗБЕКИСТАНА. ОСНОВНЫЕ НАПРАВЛЕНИЯ НА ПУТИ ЦИФРОВИЗАЦИИ ЭКОНОМИКИ //МАТЕРИАЛЫ МЕЖДУНАРОДНОЙ НАУЧНО-ПРАКТИЧЕСКОЙ КОНФЕРЕНЦИИ «XIV ТОРАЙГЫРОВСКИЕ ЧТЕНИЯ. – 2022. – С. 384-388.