AUTOMATED HEALTHCARE SERVICES DELIVERY SYSTEM Jamshidbek Odilov

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Abstract: The healthcare automation system is an innovative solution aimed at accelerating work processes in the medical field, effectively managing them and improving patient care. These systems automate such processes as patient registration, maintaining medical history, transmitting diagnostic results and prescribing medications in healthcare institutions. As a result, patients are provided with fast and high-quality service, opportunities are created to reduce the workload of medical workers and securely store data, and the efficiency of the system increases. However, for the successful implementation of automation, it is necessary to solve a number of problems. This is primarily due to the high technological requirements of the systems and the need for qualified personnel, issues of ensuring data security, as well as the integration of a human approach into automated systems.

Keywords: Automation system, Information technology, Medical data security, Patient registration system, Telemedicine, Medical data transfer, Software, Interface, Automation, Personal medical history.

АВТОМАТИЗИРОВАННАЯ СИСТЕМА ПРЕДОСТАВЛЕНИЯ УСЛУГ ЗДРАВООХРАНЕНИЯ

Аннотация: Система автоматизации здравоохранения - инновационное решение, направленное на ускорение рабочих процессов в медицинской сфере, эффективное управление ими и улучшение ухода за пациентами. Эти системы автоматизируют такие процессы, как регистрация пациентов, ведение истории болезни, передача результатов диагностики и назначение лекарств В учреждениях здравоохранения. В результате пациентам предоставляется быстрое обслуживание, И качественное создаются возможности для снижения нагрузки на медицинских работников и безопасного хранения данных, повышается эффективность работы системы. Однако для успешного внедрения автоматизации необходимо решить ряд проблем. Это обусловлено, прежде всего, высокими технологическими требованиями систем и необходимостью квалифицированного персонала, вопросами обеспечения безопасности данных, а также интеграцией человеческого подхода в автоматизированные системы.

Ключевые слова: Система автоматизации, Информационные технологии, Безопасность медицинских данных, Система регистрации пациентов, Телемедицина, Передача медицинских данных, Программное обеспечение, Интерфейс, Автоматизация, Персональная история болезни.

Introduction

The topic of the automated system of healthcare services is aimed at introducing innovative approaches in the field of modern medicine. This system was created to make the processes of providing services to patients in healthcare institutions more efficient, fast and high-quality. The system helps to automate the work of healthcare organizations, reduce errors, create comfortable conditions for patients, and also optimize the process of providing medical services. With the help of automated systems, the processes of registering patients, maintaining medical histories, prescribing medications, and developing treatment plans are facilitated. This increases the overall efficiency of the healthcare system. Automation also makes it possible to reduce the workload of medical workers and provide highquality services to patients.

Literature analysis and method

The development trends of the information services market and electronic data exchange between enterprises in our country are studied. The characteristics of electronic data exchange systems and the functioning of information systems in the industry are considered. The stages of work in choosing an information system for medical institutions and its implementation are proposed. The main prospects for the development of information technologies in the automation of medical services have been identified. 52 Today, automation and the development of the information society are one of the priority areas of state activity and are of national importance. Information technologies (IT) have been assigned the role of a means of ensuring the openness of public information, effective cooperation between economic agents, cost optimization and rapid decision-making. In recent years, IT has been developing rapidly in all sectors of the national economy. Today, many achievements and newly created technologies in the field of medicine are due to the use of modern information technologies, as well as the role of these technologies in the management process.

Thus, the issues of studying, implementing and using information technologies in the automation of medical processes are relevant. Automation of medical institutions. Patients expect convenience and effective assistance from a visit to the clinic, doctors expect satisfaction with their work and professional growth, and the administration cares about their reputation and rating. Automation in medicine helps achieve all of these goals at the same time.

This means the introduction of software that helps organize the effective work of employees, track attendance, monitor the treatment process, and manage financing. Not only private, but also budgetary medical institutions are actively switching to automation. Problems that automation solves in clinics. Most of them are present in state and private medical institutions. Most of them are associated with the excessive workload of doctors, a large volume of paper documents, and the imperfection of the registry. Clients choose medical centers with the most comfortable conditions and affordable services. The mechanization of medical institutions makes it possible to solve a number of problems qualitatively. Paper document management. All cards, appointments, instructions, examination results are translated into electronic format and are available to any specialist, taking into account his competence.

Queues at the registration desk. The introduction of electronic registration via a website or Internet platform significantly reduces the workload of registrars

and administrators, and patients do not have to come long before the opening and stand in line. Uneven workload of doctors. The administration will be able to monitor the work schedule of specialists in real time. On the monitor screen, you can see which of them has fewer patients, and which ones are regularly overworked. Unlimited reports. It is much more convenient and faster to create them from the program than to manually collect data and fill out forms. Missed appointments. The system of automatic distribution of notifications about upcoming visits will help to keep records so as not to disrupt the sequence and evenly distribute the load. Lack of demand for services.

One of the functions of automation of medical institutions is electronic notification of patients about new services, upcoming vaccinations, medical examinations, promotions and discounts. High maintenance costs. An intelligent CRM system allows you to keep track of all requests and record the results of their consideration. The installation of digital telephony in clinics combined with the automation system guarantees a significant reduction in communication costs. No CRM is suitable for automating healthcare facilities, only one is aimed at providing medical services to citizens. Functions of a medical facility automation system. The quality of solving the following problems depends on the ease of use and scope of tasks solved by medical software: 54 Remote recording. This allows you to avoid long waits for a call to be answered, you can independently choose a specialist, the day and time of his visit.

Information about missed calls. The administrator immediately receives the contact information of the failed client. Electronic card index. The older the patient, the thicker his card. It is sometimes not easy to store and store it, and finding it at the right time is a real problem. The transition to electronic cards significantly simplifies the life and work of doctors. Fast issuance of documents. The doctor only needs to select the desired tab on the monitor, create an extract, epicrisis, conclusion, referral, etc., and send it for printing with one click. Interactive calendar. This helps the medical center administration to create a

schedule, doctors monitor its objectivity, the approach to the holiday, registry offices offer convenient times and avoid duplicate entries.

It is much more convenient and effective to do this using a special program. Targeted offers. The CRM system automatically generates offers for patients, taking into account their gender, age and medical history. In general, automation of medicine at all levels is not only an effective solution to administrative and management tasks, but also a guarantee of convenient and high-quality service. Features of automation in healthcare. One of the main problems of automating medical institutions is not the cost of purchasing software, but preparation for this stage. It is necessary to pre-equip all workplaces with modern computers, provide uninterrupted, high-speed Internet.

After purchasing the program, the next step is to create a comprehensive intranet, distribute access rights and create 55 databases of clients, doctors, references, etc., establish centralized management and implement it for your medical institution. Only then are specialists trained. The doctor should not waste time mastering complex software algorithms. Its task is to provide medical care, and the computer should become a reliable assistant in this matter - a few seconds to activate the necessary lines and buttons, and then a few more minutes to fill out the form. The rest of the time is spent only on examining and communicating with the patient. The smart program provides quick access to the map, previous examinations and appointments. This allows you to quickly get test results from any specialist.

The administration, in turn, can remotely assess the objectivity and correctness of the assignments. Pros and cons of implementing MAS. Centralized automation of the clinic brings significant benefits to its management, registrars and, of course, doctors. Objective calculation of wages, taking into account all individual additional payments and benefits for management, printing of medical records, contracts, consents, epicrisis, daily reports, remote but operational control of the work of branches, monitoring agents and partners, focusing on the efficiency

of each, well-organized business processes, convenient customer service to help patients and employees of the medical center, remote work with any reports, the ability to generate financial, management and marketing reports.

Discussion

The introduction of a healthcare automation system is of great importance in increasing the efficiency of healthcare systems. Automated systems facilitate the work of medical workers, reduce errors in working with patients, and increase overall work efficiency. However, several problems may arise during the implementation of these systems.

First, high-quality software, technical resources, and qualified personnel are required for the full implementation of automation technologies. Such systems often require significant investments, which can sometimes be a significant burden on small or resource-limited healthcare facilities. At the same time, the need to learn new skills and competencies for healthcare workers during the transition to new systems further increases their workload.

Secondly, the security and confidentiality of e-health systems can also be a major problem. Patients' personal data and medical histories are stored electronically, which creates a risk of data misuse or malicious hacking. Therefore, when implementing automated systems, there is a need to ensure data security and improve the skills of doctors in protecting information. Also, in some cases, automated systems cannot fully replace the human factor. In the medical field, a human approach and experience are sometimes needed, since each patient may require an individual approach. For systems to function optimally, the harmony of people and technology is essential.

In addition, one of the biggest advantages of automation in healthcare is the ability to save time and resources. However, as a result of full automation of the system, the personal approach to some services and medical care may decrease. There may also be disadvantages for medical workers in automatically obtaining and using some data. This can lead to the loss of human thinking and experience, which are especially necessary for making the right decisions in complex medical issues.

Conclusion

The automation system of healthcare services is an important technological solution that allows for major revolutionary changes in the field of medicine. Automation helps to improve the quality of medical services, create convenient and fast service opportunities for patients, as well as significantly improve the efficiency of the healthcare system. Through these systems, it will be possible to automate patient registration, medical history storage, quick receipt of test and diagnostic results, prescription of medications, minimizing medical errors, and many other processes. Automation also significantly reduces the workload of healthcare workers, as many operations and data exchanges are automated. This allows staff to communicate directly with patients, better understand their condition, and develop effective treatment plans. These systems, which also help to improve the skills of healthcare workers, provide them with modern tools that can be used to quickly and accurately resolve complex medical issues.

In addition, the introduction of automated systems in healthcare institutions creates opportunities for managing and effectively using resources. With the help of these systems, unnecessary costs in the provision of medical services can be reduced, time spent can be reduced, and the quality of service can be improved. Automation can lead to significant improvements in all stages of the healthcare system, including administrative work, patient care, and qualified consultation processes.

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