AUTOMATION OF MEDICAL WORKPLACES AND INFORMATION TECHNOLOGIES IN SOLVING MEDICAL PROBLEMS

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Abstract. The automation of workplaces in medicine consists of the integration of the treatment structure calculation network of the automated medical information system into a single network. Functionally, they represent all areas of professional, administrative, economic and management activities of the institution.

Keywords: information, medical card, automation, technology, operating system, functional, network, scientific research, scientific and technical.

АВТОМАТИЗАЦИЯ МЕДИЦИНСКИХ РАБОЧИХ МЕСТ И ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В РЕШЕНИИ МЕДИЦИНСКИХ ЗАДАЧ

Аннотация. Автоматизация рабочих мест в медицине заключается в объединении в единую сеть расчетной сети лечебной структуры автоматизированной медицинской информационной системы. Функционально они представляют все направления профессиональной, административно-хозяйственной и управленческой деятельности учреждения.

Ключевые слова: информация, медицинская карта, автоматизация, технология, операционная система, функционал, сеть, научные исследования, научно-технические.

Application and implementation of information technologies in medicine. The main part of the health care system is health care and its following organizational levels:

• state (or regional)

• territorial

• levels of medical institutions (medical preventive levels, research institutes, medical equipment and medicine supply service)

• individual ("doctor-patient" relationship)

Computing techniques are currently being used to classify medical issues. In order to process medical issues on a computer, first of all, it is necessary to formalize the issues and distinguish certain signs. The display of medical data on the computer is carried out in the following 3 stages:

• the initial ones

• intermediate ones

• recent ones.

For example, initial information about the patient is collected as initial information during the diagnostic process. and intermediate data can be the results of laboratory research. The last information can be recommendations for treatment and diagnosis.

This medical information may be of the following types:

• they do not change

• variables

• conditional-invariant

For example, the medical card can be considered as initial information about the patient. Also, passport data can be obtained as fixed data. Information about the state of the disease can be obtained as variables. As a conditional variable, information about the patient's place of residence can be obtained.

Medical information resources can be in the following forms:

• in a passive form (medical books, patient description, audio and video data, images)

• in active form (in the form of electronic information processed on a computer)

Types of medical information. Information stored on a computer is of a certain type. These are called types by another name. Data types can be defined as:

• internal data reflected in computer memory

• a set of values that accept a certain type

• operations and functions of a certain type

Examples of medical disclosures include:

• integers: several discrete numbers (the number of leukocytes in the blood)

• real numbers: variables (can be blood temperature and pressure)

• code: conditional display of several variables (disease)

• symbols:language (text of medical history or documents of monitoring processes)

One of the problems associated with documenting computer data is the accuracy of different types of data. It depends on the level of detailing. For example, if the body weight is 89.12 kg, it should be expressed as 89.1 kg. It will be necessary to process the data. Data processing is the process of transforming and analyzing data to make it understandable to users.

Data processing includes:

• to collect the given data in order to ensure their completeness in order to make a decision

• formalization of data - bringing information from different sources to the same form and expressing it in a short form.

• Filtering of data - reducing information that is not necessary in accepting a solution

• Sorting of givens - Sorting of givens according to identified symptoms

• grouping of data - combining data of the same type for convenient use of data by the identified symptom

• archiving data - organization of data storage in a convenient and light form, in an economical mode

• data protection - a set of measures aimed at preventing their damage during the use and modification of data.

• transmission and reception of information in the processes of information transportation

• replacement of given items - transfer of given items to the same form, translation

Medical information systems processing medical data. Computer processing of medical data requires hardware and software that are part of computing systems.

In the process of information processing, users and computer operating systems differ as follows:

• users

• input data

•front end

• data processing software

• reflect the given

Medical documentation is a system of documents in a certain form based on the established facts (approved by state authorities) in the process of providing medical services to patients.

Most of the medical issues are defined in various documents (for example, medical history, results of laboratory research and their analysis, prescriptions, reports on the activity of a medical institution, etc., medical journals).

After all information about your disease is entered into the computer, a diagnosis is made about your disease and a prescription for drugs is printed using a printing device. You can take a prescription and use another computer to get information about the nearest pharmacy where these drugs can be found.

Sickness certificate at the registry office in hospitals, access to doctors' appointments. Thirdly, it will be necessary to look for drugs prescribed by the doctor in pharmacies. The emergence of computers in hospitals and polyclinics means many things from will change the above problems. Now you will go directly to the doctor. In eddition to the usual medical tools, there is also a computer on his desk: the medical histories of all patients are recorded in his memory.

A computer can do other things in medicine. For example, a tomograph - that is, a mobile machine can obtain complete information about a person voluntary organ, give information about their microscopic defects, foreign stones (for example, a stone in the kidney). In order to quickly process the information transmitted by the tomograph and display it on the screen, it must be connected to a computer.

Scientific and technical progress has a serious impact on all branches of medicine. The quality of treatment and diagnosis has changed, many new methods of prevention of diseases have been created, the variety of biologically active substances in drugs has expanded, new automatic and self-regulating systems of monitoring the organism and life support having appeared.

The possibility of transplanting internal organs and prosthetics was born. The use of modern devices equipped with microelectronics and computers allows deep penetration into the physiological and pathological processes occurring in the human body.

Ensuring the commonality of scientific-technical and socio-ecological policy allows not only the formation of a spiritually mature person, but also creates conditions for the physical improvement of his social development in the current pictures.

So, as medical data, we can get patient's temperature, blood pressure, amount of erythrocytes in blood, and other data obtained as a result of monitoring several patients. Of course, in order to work with these data on a computer, it is necessary to translate their boundaries into computer language.

That is, when creating a model of medical data, we need to give its limits. Thus, medical information is formed through the following 4 elements:

1. Through patient complaints

2. Through medical monitoring parameters (Mn: liver size, heart size, x-ray results, etc.)

3. Through the values of the request parameters (Mn: weight, temperature, workability)

4. Time of medical observation.

But for now, there are contradictions between the social and biological aspects of human activity, leading to conflicting tasks. They consist in the fact that in the process of performing the function of techniques and technologies capable of serving the well-being of people to a high human potential, they have an adverse effect on the natural environment and human health.

The appearance of computers in hospitals and polyclinics will fundamentally change many things, including the above problems. Now you can go directly to the doctor. In addition to the usual medical tools, there is also a computer on his desk: the medical histories of all patients are recorded in his memory. If you have applied before, it will be yours as well. If you are applying for the first time, the doctor will enter all the information about you into the computer right here. After all the information about your disease is entered into the computer, a diagnosis is made about your disease and a prescription for drugs is printed using a printing device. You can take the prescription and use another computer to get information about the nearest pharmacies where these drugs can be found.

- Information about persons, objects, evidence, events, events and processes regardless of their presentation.

- A set of knowledge about objects such as evidence, event, event, subject, process, presentation, which includes concepts with a clear meaning in a specific text,

- Aggregate evidence and data that may be of interest and should be stored and processed.

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