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## NEW OPPORTUNITIES FOR EFFECTIVE MONITORING OF LONG-LIVERS IN UZBEKISTAN

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### Summary

An increase in the contingents of older age groups leads to an increase in the number of citizens in need of an ambiguous solution to medical and medical and social problems, and accordingly requires further improvement of medical care for this category of citizens, ensuring the availability of all its forms. New digital solutions in the field of electronic monitoring using applications can be used to solve this urgent problem.

**Purpose:** to improve the organization of medical care for centenarians by creating an electronic monitoring program.

**Material and methods:** the electronic program "Card of medical monitoring of centenarians" was developed and implemented in 80 centenarians of Uzbekistan.

**Results:** monitoring of 80 centenarians using an electronic map led to the fact that data on the condition of centenarians were systematized, collected together and made it possible to develop a comprehensive treatment and diagnostic approach for the management of people in this category.

**Conclusions:** the electronic map has improved the quality and efficiency of centenarian monitoring.

**Keywords:** centenarians, monitoring, electronic program.

**Introduction.** A decent level of quality of life for an elderly person is a problem, the solution of which will have to be implemented for many more years [5]. The current demographic situation indicates a progressive aging of the population - an increase in the absolute and relative number of people over 75 in the general population. According to the World Health Organization (WHO), in the total population of the planet in 1050, people over 50 years old accounted for 214 million people (50.3%), in 1975 - 350 million people (9%), in 2000 - 590 million (9.8%), and in 2015 1 billion 100 million people. This is more than 15% of the total population of the Earth [1].

Demographic aging is especially noticeable in rural areas, where the elderly and old people make up the majority of the population, and therefore form the main contingent of patients in the treatment and preventive work of an outpatient health care doctor [4]. An increase in the contingents of older age groups leads to an increase in the number of citizens in need of an ambiguous solution to medical and

medical and social problems, and, accordingly, requires further improvement of medical care for this category of citizens, ensuring the availability of all its forms [2].

Care for the Older Generation” (2015) and policy documents adopted by the President, special attention was paid to further improvement of legislation, pension provision, social support, health care, prevention of age-related diseases and sanatorium and recreational activities for the elderly [8, 9].

For persons of this age, polymorbidity is characteristic, when the main systems of the body of an elderly person are affected in the pathological process. One of the significant functions that can be affected in a variety of diseases is visual. Modern sociological research confirms that elderly and senile patients with visual impairment face many social, economic and medical problems. In particular, such people are characterized by such problems as impaired communication with other people, both due to impaired visual sensations, and with changes in the psyche that accompany loss of vision, difficulty in orientation in space, learning, and reduced ability to work [2].

In Uzbekistan, the overall incidence of diseases of the eye and its adnexa in the Republic of Uzbekistan is characterized by an annual progressive growth and for the period 2002-2012. the indicator increased by 52.8%. There are territorial differences in the level of general incidence of diseases of the eye and its adnexa [3]. The main part of the general ophthalmic morbidity is annually formed due to newly emerging diseases. The average long-term level of primary incidence of diseases of the eye and its adnexa in the republic as a whole in 2002-2012 amounted to  $1310.38 \pm 127.23$  per 100,000 population with fluctuations of this indicator from 521.45 to 1655.08 in some years [7].

“Universal Eye Health: A Global Action Plan 2014–2019.” is a WHO initiative that aims to eliminate preventable visual impairment and blindness, as well as a 25 percent reduction in the number of people suffering from visual impairment through improved eye care [11].

Many ophthalmic diseases in centenarians are progressive diseases leading to blindness and disability, which are a medical and social problem. Since they are chronically current diseases, the establishment of this diagnosis necessitates lifelong clinical examination (monitoring) of this group of patients [10].

To date, preventive medical examination and monitoring of the condition of the elderly is one of the main stages in the recovery of the entire population. Monitoring is carried out by systematic monitoring of the condition of individuals, rational treatment of underlying and concomitant diseases, training in self-control methods and fulfillment of medical prescriptions [5]. To ensure the unity and monitoring of the treatment and diagnostic process, it is necessary to create an exchange of adequate and complete information between doctors of medical institutions of various levels of health care, since the existing methods of transmitting information about a patient do not always adequately reflect his condition, are difficult to formalize, and therefore arise a number of serious problems: there is a duplication of a number of services, there is no continuity in treatment and optimization of the management of a



particular patient; statistical processing and assessment of the quality of the presented data is difficult to implement [6] .

New digital solutions in the field of electronic monitoring using applications can be used to solve this urgent problem.

**The purpose of the study** is to improve the organization of medical care for long-livers of Uzbekistan by creating an electronic monitoring program.

**Material and methods.** To improve the quality of medical care for long-livers of Uzbekistan, an electronic program "Medical monitoring card of a long-livers" was developed and implemented in 80 long-livers of Uzbekistan.

The program has sections: the first section of the card is the passport section, where all the basic data about the patient is filled in, this part of the card is filled in by the family doctor or nurse.

In the second section, the family doctor reflects the data of the patient's life history and condition, complaints, risk factors that the patient has (in a separate tab there is a list of risk factors and the main factors of occurrence and progress), concomitant diseases of the body and the organ of vision. Based on the data obtained, the family doctor can determine the risk group for diseases. In addition, the map has a section where examination data and data from laboratory research methods (for concomitant diseases) are stored. There is a tab where a preliminary diagnosis is set (with a date). And also, a section where the family doctor indicates the date and volume of the conversation on a healthy lifestyle, risk factors for the disease and preventive measures, etc.

Next, the family doctor sends the patient to a primary health care specialist (including an ophthalmologist), who examines the patient without duplicating the available data in the card, but takes them into account. The specialist fills in a part of the card with general or special research methods, if necessary, additional research methods and laboratory data (attaches). They fill in the card tab with the established diagnosis: form, stage, compensation, how compensated, comorbidities, complications, etc. All data are presented in a tabular form that is easy to fill in, which reflects the history of the change in diagnosis, this allows you to trace the clinical course of the disease and the adequacy of the doctor's actions. To reflect the full diagnosis, its formation, a separate screen tab has been developed.

If the health care specialist himself is confident in the diagnosis, then he determines the method and regimen of treatment for the patient, the tactics of management, and the timing of re-examinations. Indicates the date and volume of the conversation (on lifestyle correction, informs the patient about his disease, risk factors, methods of treatment, the importance of adherence to the treatment regimen and visiting a doctor, the need for dynamic monitoring, etc.).

If a specialist needs additional research methods to establish a diagnosis and conduct treatment, then the PZZ ophthalmologist sends the patient, along with a card, to advisory centers, polyclinics or a specialized healthcare unit (SPZ) to provide qualified assistance. The map has a tab to indicate which, missing research method needs to be performed (for example, OCT, angiography, etc.). Without duplicating the existing data, additional research methods are carried out, which are also (with the

indication of the date and interpretation of the data) attached to the section of the map reserved for research or laboratory data.

In the institution, the patient is given the necessary diagnostics, the final diagnosis is made, the type and method of the necessary treatment, the timing of its implementation, the regimen, scheme, dosage, etc., are also determined, as well as recommendations for further tactics and timing of observation, if necessary, consultation of related specialists (for which there is a separate tab).

After carrying out all the necessary manipulations, the doctor of the specialized health care unit (SZZ) indicates in the card all the necessary information for the family doctor of the PZZ (what was done, what further tactics, the timing of repeated examinations, types and methods of monitoring functions, etc.). And so continuously, between doctors, there is a monitoring of the patient and the provision of medical care. Thus, all information about the patient is summarized in one card, which makes it possible to avoid duplicating research methods and actions. The map clearly shows the dynamics of the patient management process: when the diagnosis was made, what treatment was carried out, the transition from stage to stage, at what time it was observed, the results of the studies, when he applied to the PZZ, and when to the PZZ, etc. According to the map, it is possible to conduct an expert assessment of the timing of the detection of the disease, the adequacy and timeliness of the treatment and diagnostic process and clinical examination, and the competence of doctors. For the convenience of the user, all data is located on the corresponding sections-tabs, which are combined into a single program. According to the map, it is possible to conduct an expert assessment of the timing of the detection of the disease, the adequacy and timeliness of the treatment and diagnostic process and clinical examination, and the competence of doctors.

**Results and discussion.** An analysis of the introduction of the card over a period of 1 year and an assessment of the quality of monitoring showed that monitoring of 40 long-livers and successive actions between specialists from various levels of healthcare led to the fact that the work of a family doctor and a nurse (patronage) was specified, the actions of a family doctor and narrow specialists were streamlined and coordinated, duplicating methods of research were reduced by 30%, the condition of centenarians improved by 3.5 times in compensation for existing diseases, in 89% it was possible to stop the progression of diseases.

**Conclusion.** The electronic program "Medical monitoring card of a centenarian" allows you to improve the quality of monitoring centenarians, as it summarizes all the information about a centenarian, avoids duplicating methods of research and actions. The map clearly shows the dynamics of the process of managing a centenarian: when the diagnosis was made, what treatment was carried out, the transition from stage to stage, at what time it was observed, the results of the studies, when he applied to the PZZ, and when to the PZZ, etc. The map makes it possible to conduct an expert assessment of the timing of the detection of the disease, the adequacy and timeliness of the treatment and diagnostic process and clinical examination, and the competence of doctors.

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