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ORGANIZATION OF OPHTHALMOLOGICAL ASSISTANCE TO THE PEOPLE OF EASTERN KAZAKHSTAN REGION

Abstract. The article analyzes the provision with ophthalmologists in the Republic of Kazakhstan and the East-Kazakhstan region (hereinafter – EKR). The relevance of the study is determined by the high prevalence of eye diseases and its adjuvant, decreased visual acuity and increased visibility impairment among the population of the country. The purpose of the study is to analyze the provision of personnel in urban and rural areas of the Republic of Kazakhstan and the EKR. Statistical methods of research based on the study of the provision of personnel at the level of primary health care are used. The result of the study is the justification of the need to improve the provision of personnel with ophthalmic services, especially in rural areas and for the children's population.

Keywords: the availability of ophthalmologists, the incidence of the eye.

Relevance of the topic research. In the Republic of Kazakhstan, as in the OECD countries, work is underway to implement the WHO Plan for "Universal Access to Eyes health: the Global Action Plan for 2014-2019". According to WHO estimates, in 2010 there were 285 million visually impaired people in the world, of whom 39 million were blind. At the same time, 75% of all cases of visual impairment and blindness are preventable. The two main causes of visual impairment in the world are not corrected refractive errors (42%) and cataracts (33%) [1]. The total and primary incidence of ocular pathology in the Republic of Kazakhstan according to the Ministry of healthcare of the Republic of Kazakhstan is increasing and amounted to 5806.0 per 100 thousand population in 2016. About 1 million people of the Republic of Kazakhstan with various pathologies of the vision organ are registered annually (5, 6% of the total population of the country). There is a high primary incidence among children and adolescents (from 0-14 years old, 3131.9 per 100 thousand of the corresponding population) in the Republic of Kazakhstan [2]. The actuality of the study is related not only to the growing incidence and decreased vision among the population of the Republic of Kazakhstan, but also to the increase in vision impairment, the main causes of which are refractive errors, glaucoma, eye injury, diabetic retinopathy, cataracts, age-related macular degeneration.

Purpose of the study. Carry out a comparative analysis of the availability of ophthalmologists and eye diseases and its adjuvant in the population of the East Kazakhstan region and other regions of the Republic of Kazakhstan.

Methods of research. Statistical analysis of data on staffing and morbidity of the population of the Republic of Kazakhstan and regions of the diseases of the eye and its adjuvant. The material of the study was the Statistical Digest "Health of the Population" for 2011-2017. Also, the report uses the data of "Eye Microsurgery", LLP in Ust-Kamenogorsk for 2015-2017.

Results of the study. In the general structure of the incidence of the disease in the Republic of Kazakhstan, eye disease ranks 5th after respiratory diseases (29372.5 per 100,000 population), cardiovascular (15,473.4 per 100,000 population), digestive (8802.1 per 100,000 population) and the genitourinary system (8784.0 per 100 thousand population) [3].

The overall incidence of ocular pathology is increasing and amounted to 5806.0 per 100 thousand population in 2016 [3]. Annually about 1 million inhabitants of the Republic of Kazakhstan with various pathologies of the organ of vision are registered (5, 6% of the total population of the country). The primary incidence of glaucoma in the Republic of Kazakhstan increased from 70.8 per 100,000 in 2011 to 83.6 in 2012 (an increase of 18%), and to 124.0 in 2016, due to increased detection of pathology in screening [4, 5].

In the framework of the guaranteed amount of free medical care (GAFMC), ophthalmic care is provided to the population, including the socially vulnerable and poor, at no cost and includes both primary and specialized and highly specialized ophthalmologic care [7]. Care for the protection of the eyes of the population lies at all levels of the medical service. In the EKR centers of organizational and methodological work is the ophthalmological center of LLP "Eye Microsurgery" located in Ust-Kamenogorsk.

Analysis of staffing in the dynamics in accordance with the data of Table 1 (from 2010-2016) indicates a significant deterioration of the situation with ophthalmologists in the practical health care of the RK, so if in 2010 the security was in general (city and village) 0.8, then in subsequent years - also - 0.8 per 10 thousand of the population. In urban areas, 1.3 per 10 000 population, in 2011 - 1.2 per 10 000 population, in 2015 - 0.8, in 2016 0.9 for the RK, that is, there is a decrease in the number of ophthalmologists in public health services, especially in PHC.

Table 1 – Data on the availability of ophthalmologists in the dynamics of the RK and EKR for 10 000 population (2010-2016)

	2010			2011			2013			2014			2015			2016		
	A	C	V	A	C	V	A	C	V	A	C	V	A	C	V	A	C	V
RK	0,8	1,3	0,2	0,8	1,2	0,2	0,8	1,3	0,2	1	1,3	0,2	0,8	1,3	0,2	0,9	1,4	0,2
EKR	0,9	1,2	0,4	0,9	1,2	0,4	0,9	1,2	0,3	1	1,3	0,3	0,9	1,2	0,3	0,9	1,3	0,3
A – all; C – city; V – village.																		

According to the data presented in table 2, it follows that ophthalmologists were provided with 3.0 per 10,000 population in Almaty in 2016), in Astana - 2.0, on average in the RK - 0.9 per 10 thousand of the population. It should be noted that there is a significant difference (7 times) in the provision of ophthalmologists for urban (1.4) and rural areas (0.2). Only the East Kazakhstan region (0.9 per 10,000 population) achieved a higher level of coverage by ophthalmologists, however, low levels of ophthalmology coverage were noted in Almaty region (0.3 per 10,000 population), in Kostanai region (0.4), in Kyzylorda region (0.5), South Kazakhstan region (0.5). A little higher level of coverage by ophthalmologists in Akmola, Mangistau regions (0.6 per 10 thousand of the population), and in Atyrau, West Kazakhstan region, Pavlodar, North Kazakhstan region ophthalmology coverage was 0.7 per 10 thousand of the population. In Aktobe and Karaganda regions, the provision was 0.8 per 10 thousand of the population. In the analysis of urban and rural areas, low levels of coverage by ophthalmologists (fluctuations from 0.1 in the South Kazakhstan region, Zhambyl region, Mangistau region, to 0.2 in the North Kazakhstan region, Kostanai, Karaganda, Atyrau, Aktobe regions) should be noted. In East Kazakhstan regions the coverage was 0.3 per 10 thousand of population, which is 3 times lower than the urban area.

The incidence of ophthalmic diseases in the average for the Republic of Kazakhstan was 2465.5 per 100 thousand of the population. When compared with the average prevailing incidence rate in 2016, the lowest rates were registered in the Atyrau region (1692.2 per 100,000 population), and a higher level in the Kyzylorda region (3663.6 per 100,000 population), in the Almaty region (3183.8 per 100 thousand population), Astana city (3153.9 per 100 thousand population). In the East Kazakhstan region, the incidence was 2661.3 per 100 thousand of the population, which is higher than the prevailing level in the RK.

Table 3 presents data on the availability of ophthalmologists for rural district clinics in the East Kazakhstan region. The total number of the population was 679782 people in 2017 for rural district clinics, in accordance with the order of the Ministry of Healthcare of the Republic of Kazakhstan No. 238 (2010), with a population of this number, the estimated number of ophthalmologists should be 45.32 staff,