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Original article

# Analysis of Health and Demographic Data of the Rural Population of the Aiyrtau District

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#### **Abstract**

The task of restructuring the network of medical organizations, taking into account regional characteristics, in order to ensure maximum accessibility of medical care, fell into the national project "Quality and affordable healthcare for every citizen "Healthy Nation".

**The purpose of the study**: to assess the availability of medical care for the rural population based on the analysis of medical and demographic indicators of the Aiyrtau district.

**Methods.** In this study, in order to analyze the medical and demographic situation of the rural population of the Aiyrtau district, as well as to determine the accessibility of the healthcare system for the rural population, statistical data, accounting and reporting documentation of medical organizations were studied. Demographic indicators, morbidity rates, the number of medical institutions in the region, the equipment of medical organizations, the provision of medical workers, etc. were analyzed.

Results. Medical and demographic indicators do not reach republican values. The overall mortality rate (15.87 per 1000 people) is 1.6 times higher than in the republic (9.53 per 1000 population). The birth rate (12.27 per 1000 population) is 1.9 times lower than the republican level (23.41 per 1000 population). Over the past 5 years (from 2017 to 2021), the birth rate in the region has decreased by 6.4% from 13.11 to 12.27 per 1000 population (Kazakhstan - a decrease of 7.5%). When studying the mortality rates of the population, a similar situation is observed, when in 2021 there was an increase to 15.07, and in 2022 it decreased by 10.6% to 13.46 per 1000 population. The total number of diseases was 23710, the leading position, as well as throughout the country, is occupied by respiratory diseases - 9519 (40.1%), followed by diseases of the circulatory system - 5348 (22.5%), endocrine diseases - 1844 (8%), followed by diseases of the digestive system - 880 (5.1%), neoplasms - 522, infectious and parasitic diseases - 427, injuries, poisoning - 422 (2.7%) and congenital anomalies (malformations), deformities and chromosomal disorders - 188 (1.79%). The healthcare system of the region is represented by 19 hospitals, 63 outpatient organizations (58 outpatient clinics, 5 outpatient clinics, including AIDS center, regional dentistry, etc.), 41 feldsher-obstetric and 403 medical centers. The bed fund of state medical organizations is 3223 beds. The district hospital with a polyclinic and a hospital is equipped with 85 beds for a round-the-clock stay and 31 beds for a day stay, it has 10 medical outpatient clinics, 3 feldsher-obstetric stations, 46 medical stations.

Conclusions. The results of the study show that the incidence among the rural population remains high. The main problems of the rural healthcare system, which significantly affect the availability of medical care for the rural population, are undeveloped infrastructure, underequipped medical organizations, which in turn leads to low detection of pathology, late diagnosis and treatment. There is also a shortage of personnel, especially a shortage of narrow specialists, which leads to low availability of specialized medical care.

Keywords: availability of medical care, rural population, medical and demographic indicators, healthcare organization.

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## Introduction

The task of restructuring the network of medical organizations, taking into account regional characteristics, in order to ensure maximum accessibility of medical care, fell into the national project "Quality and affordable healthcare for every citizen" Healthy Nation "(hereinafter referred to as the national project), approved by the Decree of the Government of the Republic of Kazakhstan dated October 12, 2021 No. 725 [1]. So, for example, the first indicator of direction 1 "Affordable and high-quality medical care" of task 1 "Ensuring wide coverage of health services" is the coverage of rural settlements with primary health care and consultative and diagnostic care.

Increasing the availability of medical care is especially important for the rural population living in remote and hard-to-reach areas, because, as a rule, rural medical institutions are less equipped with the necessary resources than urban ones, which further leads to a deterioration in the health of rural citizens, a decrease in life expectancy in the countryside, high morbidity of the population and a decrease in their productivity [2,3].

One of the priority goals of the state at present is to improve the quality of life and accessibility of medical care to the population living in remote rural settlements, this is especially true in the context of modernizing the healthcare system by creating an effective model for providing medical care.

The availability of medical care is controlled by health services and regulated by national regulations

## Materials and methods

Various methods can be used to analyze the demographic and health data of the rural population, including the collection of data on morbidity and mortality, conducting surveys and studies on lifestyle, physical activity and nutrition of rural residents.

In this study, in order to analyze the medical and demographic situation of the rural population of the Aiyrtau district, as well as to determine the accessibility of the healthcare system for the rural population, statistical data, accounting and reporting documentation of medical organizations were studied. Demographic indicators, morbidity rates, the number

## **Results**

The North Kazakhstan region is one of the densely populated regions of the Republic and has its own characteristics in the healthcare system.

We have studied the medical and demographic data of the Aiyrtau district of the North Kazakhstan region. Medical and demographic indicators do not reach republican values. The overall mortality rate (15.87 per 1000 population) is 1.6 times higher than in the republic (9.53 per 1000 population). The birth rate (12.27 per 1000 population) is 1.9 times lower than the republican level (23.41 per 1000 population). Over the past 5 years (from 2017 to 2021), the birth rate in the region has decreased by 6.4% from 13.11 to 12.27 per 1000 population (Kazakhstan - a decrease of 7.5%).

Over the past 5 years, the overall mortality rate has increased by 34% from 11.84 per 1000 population in 2017 to 15.87 per 1000 population in 2021 (2017 - 11.84; 2018 - 11.79; 2019 - 12.13, 2020 - 13.75, 2021 - 15.87). The high mortality rate is due to the high population

(NLA) [4,5]. The availability of medical services is the most important condition for providing medical care to the population in all countries of the world, reflecting both the economic capabilities of the state as a whole and the capabilities of a particular person [6,7].

In the Republic of Kazakhstan, the population has been growing in recent years. So, by the end of 2020, the population of Kazakhstan totaled more than 18 million people, of which 58.16% of the total population is the urban population, 41.84% of the total population is the rural population. According to the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, at the end of 2017-2020, there are 7660 rural settlements in the country with a population of about 7697.4 million people [8]. And despite the fact that 42% of the population lives in rural areas, there is a huge difference in the availability of medical services between urban and rural residents, which leads to inequality and injustice in the provision of health services to the population. Eliminating these inequalities requires a systematic national response. Given the share of the rural population, it is important to preserve rural health care, so the reform is aimed primarily at increasing the availability of medical and social care in rural medical institutions.

The purpose of this study was to assess the availability of medical care for the rural population based on an analysis of the medical and demographic indicators of the Aiyrtau region.

of medical institutions in the region, the equipment of medical organizations, the provision of medical workers, etc. were analyzed.

To achieve the goal, we carried out statistical and analytical methods. This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. We analyzed the medical and demographic indicators of the health status of the rural population, as well as the indicators of the healthcare system of the Aiyrtau district hospital for 2020, 2021, and also for 2022.

aging index (for 2021, the number of residents over 65 years old per 100 children from 0 to 15 years old was 62.9, which is 2.4 times higher than the level of the Republic of Kazakhstan).

The outflow of the young working-age population, the decrease in the number of women of childbearing age (over the past 5 years, there has been a decrease in the number of women of childbearing age by 9163 from 136400 women in 2017 to 127237 women in 2021) entails a decrease in the birth rate.

According to the Department of Statistics of the North Kazakhstan region, the main demographic indicators are represented by the following vital movement coefficients per 1000 population (Table 1).

Table 1 - Natural movement coefficients per 1000 population

	Fertility			Mortality			Natural growth		
Name of institution	2020	2021	2022	2020	2021	2022	2020	2021	2022
Aiyrtau District Hospital	12.76	13.19	11.04	14.00	15.07	13.46	-1.25	-1.88	-2.42

According to the data obtained in table No. 1, the birth rate for the period 2020 - 2022. peaked in 2021 at 13.19 per 1000 population, but decreased by 16.3% in 2022 to 11.04 per 1000 population.

When studying the mortality rates of the population, a similar situation is observed, when in 2021 there was an increase to 15.07, and in 2022 it decreased by 10.6% to 13.46 per 1000 population.

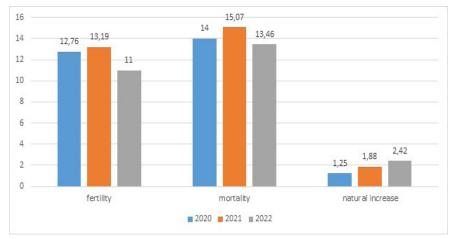


Figure 1 - Indicators of the vital movement of the population per 1000 people of the Aiyrtau region

Thus, in the dynamics of natural population growth, there is an increase in the negative direction from -1.25 to -2.42.

The infant mortality rate in 2022 compared to 2020 decreased by 4.9% from 8.87 to 8.43 per 1000 live births, but exceeded the figure for 2021 by 92.9%. One of the causes of infant mortality in 2020-2021 are congenital malformations (CM) - 50%, asphyxia of the newborn (in 2020) and nuclear neonatal jaundice (in 2021) - 50% each, respectively. For the period 2020 - 2022 1 maternal death was admitted (2021).

The indicator of general morbidity is one of the main indicators of the health of the population and represents the ratio of the number of cases to the total number of the population, expressed as a percentage or per 1000 people.

Indicators of the general morbidity of the rural population of the Aiyrtau district for 12 months of 2022 are presented in detail in Table 2.

Table 2 - Indicators of the general morbidity of the rural population of the Aiyrtau district for 12 months of 2022

Name of classes and individual diseases	12 months 2022, abs.	%	of them diagnosed for the first time in their lives, abs. (%)	Incidence per 100 000 population
Total	23710	100	13607 (57.4)	73757.2
Infectious and parasitic diseases	427	2.9	384 (89.9)	1328.3
Neoplasms	522	3.5	367 (70.3)	1623.8
Endocrine diseases, nutritional and metabolic disorders, total	1844	8	344 (18.6)	5736.3
Diseases of the circulatory system, total	5378	23	902 (16.8)	16729.9
Respiratory diseases, total	9519	41.1	8317 (87.4)	29611.7
Diseases of the digestive system, total	880	5.1	332 (37.7)	2737.5
Congenital anomalies (malformations), deformities and chromosomal abnormalities, total	188	1.79	13 (6.9)	584.8
Injuries and poisoning, total	422	2.7	422 (100)	1312.7

The total number of diseases was 23710, the leading position, as well as throughout the country, is occupied by respiratory diseases - 9519 (40.1%), followed by diseases of the circulatory system - 5348 (22.5), endocrine diseases - 1844 (8%), followed by diseases of the digestive system - 880 (5.1%), neoplasms

- 522, infectious and parasitic diseases - 427, injuries, poisoning - 422 (2.7%) and congenital anomalies (malformations), deformities and chromosomal disorders - 188 (1.79%).

Table 3 - Incidence rates of the rural population of the Aiyrtau district by contingent for 2021-2022

Contingent	12 months 2021, abs.	12 months 2021 per 1000 population	12 months 2022, abs.	12 months 2022 per 1000 population	Dynamics of indicators
Total overall morbidity	24942	772.8	23710	737.6	-35.2 (4.5%)
Incl. adult	16839	521.7	16367	509.1	-12.6 (2.4%)
Incl. teenage	855	26.5	741	23.1	-3.4 (12.8%)
Incl. children's	7248	224.5	6602	205.4	-19.1 (8.5%)
Primary incidence	15283	473.5	13607	423.3	-50.2 (10.6%)
Incl. adult	8501	263.4	7787	242.2	-21.2 (8.0%)
Including teenage	648	20.1	533	16.6	-3.5 (17.4%)
Incl. children's	6134	190.0	5287	164.5	-25.5 (13.4%)

General morbidity rate for 12 months of 2022 including among the adult population by 2.4%, children compared to 12 months. 2021 decreased by 4.5%, from 0 to 14 years old by 8.5%, adolescents by 17.4%.

Table 4 - The structure of mortality of the rural population of the Aiyrtau region by nosology

Nosology	2020		2021		2022	
	Abs.	Index	Abs.	Index	Abs.	Index
Diseases of the circulatory system	78	216.17	70	197.78	50	147.73
Malignant neoplasms	45	124.71	44	124.32	44	130.01
Injury and poisoning	58	160.74	42	118.67	39	115.23
Respiratory diseases	77	213.40	83	234.51	58	171.37
Infectious diseases	1	2.77	1	2.83	2	5.91
Diseases of the digestive system	28	77.60	36	101.72	35	103.41
Other reasons	208	576.45	219	618.78	205	605.71

In the structure of mortality in 2021-2022 mortality from diseases of the respiratory system remains in first place - 13.3% (2021 - 15.8%) with a

downward trend, in second place from diseases of the circulatory system - 11.5% (2021 - 13.3%), in third place from malignant diseases - 10.1% (2021 - 8.4%).

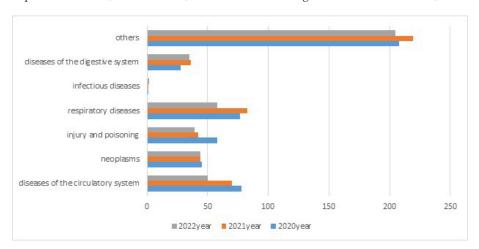


Figure 2 - The structure of mortality of the rural population of the Aiyrtau region by nosology

Mortality among the working-age population decreased from 32.3% of the total number of deaths in 2020 to 25.1% in 2022 (21.4% in 2021). The structure of mortality by nosology provides information on the causes of death of people in a particular region or country.

The healthcare system of the region is represented by 19 hospitals, 63 outpatient organizations (58 outpatient clinics, 5 outpatient clinics, including AIDS center, regional dentistry, etc.), 41 feldsher-obstetric

and 403 medical centers. The bed fund of state medical organizations is 3223 beds.

The number of medical and preventive organizations in the Aiyrtau district as of 01/01/2023 is 60 healthcare facilities and is represented by the following medical organizations (Table 5).

Table 5 - Number of organizations by name for the period from 2020-2022	Table 5 - Number	of organizations b	v name for the	period from 2020-2022
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Name of institution	Number of organizations			
rame of institution	2020	2021	2022	
District hospital	1	1	1	
Medical outpatient clinic	10	10	10	
Feldsher-obstetric station	3	3	3	
Medical center	52	46	46	
Total	66	60	60	

The district hospital with a polyclinic and a hospital is equipped with 85 beds for a round-the-clock stay and 31 beds for a day stay, it has 10 medical outpatient clinics, 3 feldsher-obstetric stations, 46 medical stations.

As Table 2 shows, over the past 2 years there has been a stable trend in the number of medical organizations in the context of the structure, where 77% are medical centers and 17% are outpatient clinics.

An analysis was also made of the following indicators of the health care system of the Aiyrtau district:

- polyclinic capacity 600 visits per shift;
- $^{\circ}$  number of hospital beds  $^{\circ}$  85 round-the-clock and 31 day beds;
  - number of medical points 46.

In addition, there are 16 rural settlements without a medical organization, in which the population is less than 50 people in the following subjects - Krasnogorka, Galitsino, Mezhduozernoe, Akshok, Krasnovo village, Koskol village, Botai village, Beautiful village, Ugolki village, Zhumyshchi village, Sholakozek village, Kolesnikovka village, Orlinogorskoye village, Petropavlovka village, Karlovka, village, Sartubek.

According to the portal "Register of attached population" as of 01/01/2023, we received the following data on the number of people served - the total population is - 32.147, including children under 14 years old - 6.491, adolescents from 15 to 17 years old - 941, adults - 247.715, women - 15.943, including those of childbearing age - 6.178. Graphically, the data is displayed in Figure 3.

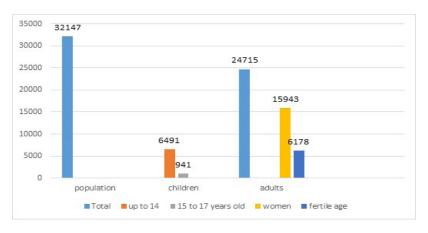


Figure 3 - Population served

Based on the presented data, the following facts can be analyzed:

- the total population as of 01/01/2023 is 32.147 people;
- the proportion of children under 14 years of age in the total population is approximately 20%, and the proportion of adolescents from 15 to 17 years of age is less than 3%;
- most of the population are adults, their number is about 77% of the total;
- among women, the proportion of those who are of childbearing age is approximately 39% of the total number of women in the city.

According to Table 6, the sex and age structure of the attached population is presented - this is information about how many people of different ages and genders are on medical care in a particular medical organization.

There are only 21 medical stations in the Aiyrtau regional hospital:

- 17 general practice sites with a population of 1.618 people in one site;
- $\mbox{-}\mbox{-}\mbox{3}$  pediatric sites with a population of 1.127 people in one site;
- 1 therapeutic area with a population of 1.307 people.

Age	Total	Men	Women
Total	32147	16204	15943
Total children, of which	7432	3804	3628
0-1 years	230	115	115
1-4 years	1491	749	742
5-9 years old	2268	1161	1107
10-14 years old	2502	1281	1221
Children 0-14	6491	3306	3185
15-17 years old	941	498	443
Total adults, of which:	24715	12400	12315
18-19 years old	329	201	128
20-29 years old	2908	1622	1286
30-39 years old	4645	2631	2014
40-49 years old	4814	2509	2305
50-59 years old	4797	2433	2364
60-69 years old	4494	2076	2418
70 years and older	2728	928	1800

Table 6 - Gender and age structure of the attached population as of 01/01/2023

The total area of the Aiyrtau regional hospital is 10177.6 sq.m. There are six departments in the hospital of the Aiyrtau district hospital - therapeutic - 42 beds / beds (38 beds for therapeutic, 4 beds for palliative care), surgical - 14 beds / beds (13 - surgical

for adults, 1 - otolaryngological for adults), pediatric - 10 beds / places, maternity - 8 beds / places according to the profile except for the pathology of pregnancy, gynecological - 5 beds / places, infectious - 6 beds / places (4 - infectious for adults, 2 - infectious for children).

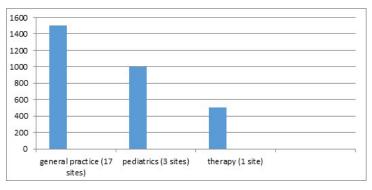


Figure 4 - Population by area

The material and technical base is represented by the following picture: in 2020, a mobile medical complex (MMC) was purchased; in 2021, 2 units of UAZ ambulance vehicles were purchased, 1 Mercedes was handed over from the DEMC, Petropavlovsk. In 2022, among the medical equipment, a Holter monitoring system, an incubator for newborns, an ECHF for the operating unit, an operating table, a shadowless lamp, a set of surgical instruments, a cabinet for storing sterile endoscopes, and an endoscope washing machine were purchased.

In Aiyrtau DH there are 58 doctors (9 of them are on maternity leave) and 230 paramedical workers (22 are on maternity leave).

In 2022, 8 doctors arrived: 1 pediatrician, 1 surgeon, 1 dentist, 4 general practitioners, 1

### **Discussion**

When studying medical and demographic indicators, we identified the following trends - medical and demographic indicators do not reach republican values, so the total mortality of the Aiyrtau region was higher than in the whole country, and the birth rate was 1.9 times lower than the republican level.

anesthesiologist-resuscitator. 6 doctors left. Currently, there is a shortage in the following specialties: traumatologist, surgeon, ultrasound doctor, cardiologist, ophthalmologist, general practitioner.

The need for general practitioners: 1 - medical outpatient clinic in village Arykbalyk, 1 - medical outpatient clinic in Karasevka. The need for paramedical personnel is 11 units: Antonovskaya's medical outpatient clinic -1 laboratory assistant; Kazan's medical outpatient clinic - 1 laboratory assistant, 1 paramedic; Gusakovskaya's medical outpatient clinic -1 paramedic, 1 midwife, 1 laboratory assistant; Arykbalyk's medical outpatient clinic -1-midwife, 1-nurse; Imantau's medical outpatient clinic -1 laboratory assistant, Syrymbet's medical outpatient clinic -1 midwife, 1 nurse.

Infant mortality rates also decreased, the analysis revealed that the leading cause of infant mortality were congenital malformations, newborn asphyxia.

Morbidity rates did not differ from the republican indicators, thus such diseases as diseases of the respiratory system, diseases of the heart and circulatory system, endocrine diseases and neoplasms came to the forefront. According to similar nosologies, the places were distributed in the structure of mortality of the rural population, and in general there was no difference from the indicators throughout the country.

Medical posts in rural areas play an important role in ensuring the availability of primary health care to residents of rural areas, which is confirmed by a number of similar studies [9]. These organizations allow residents of rural areas to receive medical care without having to travel to the area or visit doctors in private clinics, which can be problematic due to long distances and lack of vehicles, especially under weather conditions in the northern part of Kazakhstan.

Thus, health centers in rural areas not only provide medical care, but are also an important factor in maintaining the health and preventing diseases of the population of rural areas.

The main share of the attached population of the Aiyrtau district is the adult population of working age (from 30 to 59 years old) - 76%, 50.5% of men and 49.5% of women are located almost in equal shares by gender, including 19 women of childbearing age. % of the total population, children make up 20%, among them children under the age of 3.5% and adolescents make up 2.9% of the total population. The population of senile age from 70 and above is 8.6%.

Additionally, you can analyze trends in the population and its structure in dynamics, as well as compare these data with other indicators, such as the

## Conclusions

The results of the study show that the incidence among the rural population remains high. The main problems of the rural healthcare system, which significantly affect the availability of medical care for the rural population, are undeveloped infrastructure, under-equipped medical organizations, which in turn leads to low detection of pathology, late diagnosis and treatment. There is also a shortage of personnel, especially a shortage of narrow specialists, which leads to low availability of specialized medical care.

<u>Conflict of interest.</u> The authors have declared that there are no conflicts of interest.

employment structure of the population, the level of education, social and economic indicators, in order to get a better idea of the general situation in the city and identify possible problem areas. areas.

As a result of the data obtained, it is noted that in terms of gender, there are more men than women by 1%. There is a uniform distribution of numbers by age, which corresponds to the stationary type of age structure.

The information obtained can also help in planning preventive activities and health programs that will be targeted at specific age and gender groups of the population. For example, if a high percentage of elderly people is found in a medical organization, then it is possible to organize preventive measures aimed at preventing chronic diseases characteristic of this age group.

Thus, the sex and age structure of the attached population provides important information about the needs of the population in medical care and can help in setting priorities in a medical organization.

There is a shortage of medical workers of narrow specialties in the district, which primarily leads to low availability of medical care, namely specialized medical care, and as evidenced by a number of other studies [10].

The health care system in rural areas may face a number of problems in the field of human resources, which may have a negative impact on the quality of medical care, the availability of services and the level of health of the population.

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Contribution of authors. E.F. – Collection and preparation of data, primary processing of the material and their verification. E.A. – Statistical processing and analysis of the material, writing the text of the article (material and methods, results). E.F., E.A. – Writing the text of the article (introduction, discussion). E.F. – Concept, design and control of the study, approval of the final version of the article. All authors approved the final version of the manuscript.

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## Айыртау ауданы ауыл тұрғындарының денсаулық және демографиялық мәліметтерін талдау

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### Түйіндеме

Медициналық көмектің барынша қолжетімділігін қамтамасыз ету мақсатында өңірлік ерекшеліктерді ескере отырып, медициналық ұйымдар желісін қайта құрылымдау міндеті «Салауатты ұлт» әрбір азаматқа сапалы және қолжетімді денсаулық сақтау» ұлттық жобасына жүктелді.

Зерттеудің мақсаты: Айыртау ауданының медициналық-демографиялық көрсеткіштерін талдау негізінде ауыл тұрғындарына медициналық көмектің қолжетімділігін бағалау.

Әдістері. Бұл зерттеуде Айыртау ауданы ұрғындарының медициналық-демографиялық жағдайын талдау, сонымен қатар ауыл тұрғындары үшін денсаулық сақтау жүйесінің қолжетімділігін анықтау мақсатында статистикалық мәліметтер, есепке алу және есеп беру медициналық ұйымдардың құжаттамасы зерттелді. Демографиялық көрсеткіштер, аурушаңдық деңгейі, облыстағы емдеу мекемелерінің саны, медициналық ұйымдардың жабдықталуы, медицина қызметкерлерімен қамтамасыз етілуі және т.б.

Нәтижелері. Медициналық-демографиялық көрсеткіштер республикалық мәнге жетпейді. Жалпы өлім көрсеткіші (1000 тұрғынға шаққанда 15,87) республикадағыдан 1,6 есе жоғары (1000 тұрғынға шаққанда 9,53). Туу коэффициенті (1000 тұрғынға шаққанда 12,27) республикалық деңгейден 1,9 есе төмен (1000 тұрғынға шаққанда 23,41). Соңғы 5 жылда (2017 жылдан 2021 жылға дейін) облыста туу көрсеткіші 1000 халыққа шаққанда 6,4%-ға 13,11-ден 12,27-ге дейін төмендеді (Қазақстанда – 7,5%-ға төмендеді).

Халықтың өлім-жітім көрсеткіштерін зерделеу кезінде 2021 жылы 15,07-ге дейін өсу байқалса, 2022 жылы 1000 тұрғынға шаққанда 13,46-ға дейін 10,6%-ға төмендеген кезде ұқсас жағдай байқалады. Аурулардың жалпы саны 23710 құрады, республика бойынша алдыңғы орында респираторлық аурулар – 9519 (40,1%), қан айналымы жүйесі аурулары – 5348 (22,5%), эндокриндік аурулар – 1844 (8) %), одан кейін ас қорыту жүйесі аурулары – 880 (5,1%), ісік аурулары – 522, инфекциялық және паразитарлық аурулар – 427, жарақаттар, уланулар – 422 (2,7%) және туа біткен ауытқулар (деформациялар), деформациялар және хромосомалық бұзылулар – 188. (1,79%).

Қорытынды. Зерттеу нәтижелері ауыл тұрғындары арасында аурушаңдық жоғары деңгейде қалып отырғанын көрсетеді. Ауыл тұрғындарына медициналық көмектің қолжетімділігіне елеулі әсер ететін ауылдық денсаулық сақтау жүйесінің негізгі проблемалары инфрақұрылымның дамымағаны, медициналық ұйымдардың жеткіліксіз жабдықталуы болып табылады, бұл өз кезегінде патологияны анықтау көрсеткіштерінің төмендеуі, диагностика мен емдеуді кешіктіруге әкеледі. Сондай-ақ маман тапшылығы, әсіресе арнайы мамандардың тапшылығы мамандандырылған медициналық көмектің қолжетімділігінің төмендеуіне әкеледі.

Түйін сөздер: медициналық көмектің қолжетімділігі, ауыл тұрғындары, медициналық-демографиялық көрсеткіштер, денсаулық сақтауды ұйымдастыру.

# Анализ медико-демографических данных сельского населения Айыртауского района

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#### Резюме

Задача реструктуризации сети медицинских организаций с учетом региональных особенностей с целью обеспечения максимальной доступности медицинской помощи легла в национальный проект «Качественное и доступное здравоохранение для каждого гражданина «Здоровая нация».

Цель исследования: оценить доступность медицинской помощи для сельского населения на основе анализа медикодемографических показателей Айыртауского района.

Методы. В данном исследовании для анализа медико-демографической ситуации сельского населения Айыртауского района, а также для оценки доступности услуг системы здравоохранения сельскому населению были изучены статистические данные, учетно-отчетная документация медицинских организаций. Были проанализированы демографические показатели, показатели заболеваемости, количество медицинских учреждений в районе, оснащенность медицинских организаций, обеспеченность медицинскими работниками и т.д.

Результаты. Медико-демографические показатели не достигают республиканских значений. Общая смертность (15,87 на 1000 человек) выше, чем в республике, в 1,6 раза (9,53 на 1000 населения). Рождаемость (12,27 на 1000 населения) ниже республиканского уровня в 1,9 раза (23,41 на 1000 населения). За последние 5 лет (с 2017 по 2021 годы) рождаемость в регионе снизилась на 6,4% с 13,11 до 12,27 на 1000 населения (РК – снижение на 7,5%).

При изучении показателей смертности населения наблюдается аналогичная ситуация, когда в 2021 году произошел рост до 15,07, а в 2022 году снизился до 13,46 на 1000 населения (на 10,6%). Всего число заболеваний составило – 23710, лидирующую позицию, как и по всей стране занимают болезни органов дыхания – 9519 (40,1%), после занимают болезни системы кровообращения – 5348 (22,5%), эндокринные болезни – 1844 (8%), далее расположились болезни органов пищеварения – 880 (5,1%), новообразования – 522, инфекционные и паразитарные болезни – 427, травмы, отравления – 422 (2,7%) и врожденные аномалии (пороки развития), деформации и хромосомные нарушения – 188 (1,79%).

Выводы. Результаты исследования показывают, заболеваемость среди сельского населения остается высокой. Основными проблемами системы сельского здравоохранения, которые существенно влияют на доступность медицинской помощи для сельского населения являются – неразвитая инфрастурктура, недооснащенность медицинских организаций, которое в свою очередь приводит к низкой выявляемости патологии, несвоевременной постановке диагноза и назначения лечения. Таже наблюдается дефицит кадров, особенно отмечается нехватка узких специалистов, что приводит к низкой доступности специализированной медицинской помощи.

Ключевые слова: доступность медицинской помощи, сельское население, медико-демографические показатели, организация здравоохранения.