бойынша неғұрлым жиі кездесетін кәсіби жұқпалы аурулар, таралуы бойынша екінші орында құлақтың кәсіби аурулары, одан кейінгі орында тыныс алу органдарының кәсіби аурулары. 2007-2016 жылдар аралығында орташа көп жас көрсеткіштерін талдау барысында Алматы қаласында кәсіби аурулардың арасынан биологиялық факторлардың әсерінен туындаған аурулар тобы неғұрлым жиі кезедесетіні, физикалық факторлардың әсерінен туындаған аурулар сирек кездесетіні анықталды.

Түйін сөздер: кәсіби аурушаңдық, ретроспективті талдау, орташа көп жас көрсеткіштері

Summary

A retrospective analysis of the prevalence of occupational diseases over the last 10 years (2007-2016). in Almaty. In Almaty, the most frequent according to ICD-10 infectious disease professional on the second place on prevalence are professional diseases of the ear, followed by diseases of the respiratory system. In the analysis of the average annual figures for the 2007-2016 revealed that in Almaty among the occupational diseases most frequently encountered group of diseases caused by biological factors, less disease caused by exposure to physical factors.

Key words: occupational diseases, retrospective analysis, the average long-term indicators

ANALYSIS of MEDICO-DEMOGRAPHIC PROCESSES AMONG the POPULATION of PAVLODAR REGION

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The article presents health and demographic situation in the city of Aksu in Pavlodar region. Elucidated the population dynamics, fertility, mortality (total, infant, maternal) and the natural increase during the 5-year period. Comparative analysis of average values and their dynamics.

*Keywords***:** population, fertility, mortality

As you know, the processes of formation of health of the population reflect the General trends in socio-economic development of the state. Demographic and health indicators most fully accumulate the full range of impact on the health status of the

population socioeconomic, behavioral, genetic, climatic and environmental origin. The negative impact of the environment in the face of massive technogenic load is reflected in the deterioration of demographic indicators, reducing functionality and the body's defenses, increased morbidity and mortality [1,2].

The territory of the Pavlodar region of Kazakhstan during carrying out of nuclear tests at the Semipalatinsk nuclear test site was subjected to radioactive contamination and a population of multiple acute and chronic combined external and internal irradiation in the range of medium and small doses. The demographic structure of the population of these territories are persons of working age who are descendants of different generations of people exposed to direct radiation [3].

Objective: to perform medico-demographic situation the total population in the studied districts of Pavlodar region

Materials and methods. Intense were analyzed multiyear demographic indicators of fertility, mortality, natural increase and infant mortality rates for 2011-2015 for the city of Aksu in Pavlodar region in comparison with the levels in the country. Sources of information data were obtained from the national center for e-health and statistics Department in Pavlodar oblast. Statistical processing of the obtained results was performed using software Statistica-10.

The results and discussion. Based on the analysis of official materials on the administrative territories of Pavlodar region was the characteristic of the demographic and health status of the population for 2011-2015.

The analysis of statistical data showed that during from 2011 to 2015, the population of the Republic of Kazakhstan is stable, although unexpressed (6%)tended to increase. A slight increase in population was observed in Pavlodar oblast (by 1.4%). The population in the analyzed regions are presented in table 1.

Table 1 - Average (2011-15). the population density in the regions studied

Regions	Population density, persons/km2	The population abs.the number	Area km2
RK	6,5±0,1	17043,7	2612998
Pavlodarskaya.	6,0±0,01	751,4	124800
Aksu	8,6±0,01	69,4	8089,66
Maiskii region	0,6±0,01	11,6	18100

When analyzing data on the average fertility levels for the period 2011-2015, in the Republic of Kazakhstan and the regions studied were the following indicators: the average birth rate in Kazakhstan amounted to 22.8±0,2‰, (95% CI=at 22.6-22.9 cm), which corresponds to the average level on a scale of who (figure 1).

Pavlodar region (of 6.0 people per 1 square km) and the city of Aksu Pavlodar region (of 8.6 people per 1 km2) can be regarded as a "densely populated area" closer to the average national level.

One of the main indicators of the demographic situation is the population size. The analysis of statistical data showed that during from 2011 to 2015, the population of the Republic of Kazakhstan is stable, although unexpressed (6%) tended to increase. A slight increase in population was observed in Pavlodar oblast (by 1.4%), and Aksu (2%).

In the Republic of Kazakhstan during the study period, an increase in the negative balance in migration with the exception of 2011, where the balance was positive. In Pavlodar region, the outflow of the population in the dynamics of a few decreased the number of negative balance. In Aksu positive migration balance in 2011 (150) was replaced in 2013. The migration situation is characterized by the predominance of the number of departures over arrivals (-463). For the analyzed period, in the city of Aksu in Pavlodar region was approximately equal gender ratio.

When analyzing data on the average fertility levels for the period 2011-2015, in the Republic of Kazakhstan and the regions studied were the following indicators: the average birth rate in Kazakhstan amounted to $22.8 \pm 0,2‰$, (95% CI=at 22.6-22.9 cm), which corresponds to the average level on a scale of who (figure 1).

In Pavlodar region, the birth rate was $17.2 \pm 0,2‰$, (95% CI=17,0-17,4), in Aksu - $17,3 \pm 0,2‰$, (95% CI=16,8-17,8), and in May area of $19.1 \pm 1,2‰$, (95% CI=17,8-20,3), compared with the Republic was below. During the 5-year period in the Pavlodar region, fertility decline has been 2.7%, in Aksu - 9,2%, and in May area Vice versa increase in the birth rate was 12.7%.
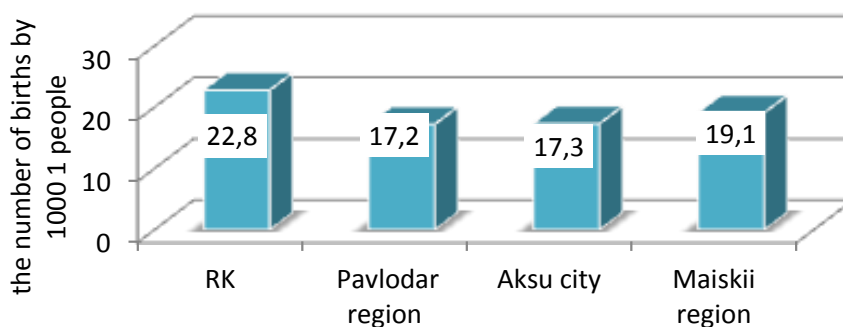
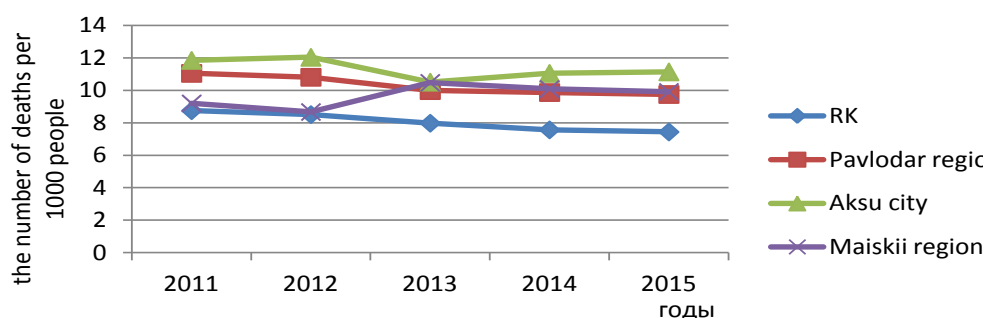**Figure 1 - fertility rates in the regions studied for the period 2011-2015**

The main indicator of medico-demographic processes of the company is the mortality, which reflect many aspects. The average overall mortality rate for the analyzed region (2011-2015) presented in figure 2.
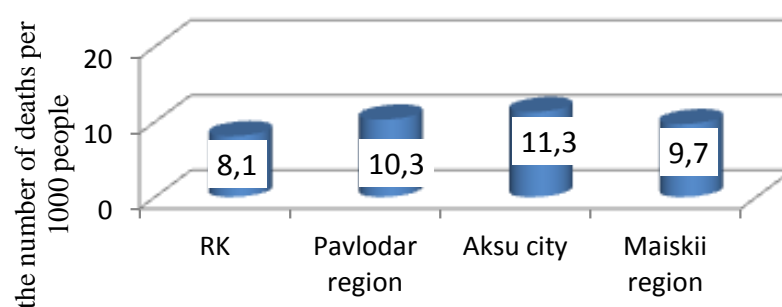
Figure 2 - mortality rates in the studied areas for the period 2011-2015

Average values of total mortality for 2011-2015 in the Republic of Kazakhstan amounted to 8.1±0,4‰ (95% CI=7,6-8,5‰), according to the who scale corresponds to below average. In comparison to the national indicator of mortality in Pavlodar region was higher 27,2% (10,3±0,4‰, 95% DI=9,8-10,8‰), and in Aksu – 39,5% (11,3±0,5‰, 95% DI=the 10.8 and 11.8‰), compared to the region, the mortality rate was 9.7±0.5‰ (95% CI=9.1-10.2‰) in the May district, 9.7% higher. In General, the mortality rate decreased by 14.6% in the Republic.

The average five-year (2011-2015) indicators of total mortality in the studied regions indicate mainly the presence of reduction and stabilization in their dynamics. Dynamics of total mortality in the regions studied over the period of 2011-2015 is presented in figure 3. The coefficient of General mortality in the Republic of Kazakhstan continuously decreased from 8.7‰ in 2011 to 7.5‰ in 2015. Throughout the study period, the overall mortality rate in the Pavlodar region decreased by 11.8%, in the city of Aksu is 6%. The highest mortality rate in the city of Aksu were registered in 2012 (12,0‰), the lowest in 2013 (10,5‰), then the dynamics of the mortality there was a trend towards a slight increase.

Figure 3 - mortality rates in the regions studied for 2011-2015

The change of the total population, primarily influenced by natural growth, formed under the influence of changes in fertility and mortality. Dynamics of natural population growth in Kazakhstan has a positive growth trend over the period 2011 to 2015. The highest rate of natural population increase over a 5-year period was in the ROK to 14.7‰. In the regions studied, the rates of natural increase were significantly below the national level. In Pavlodar region (6,9‰, 95% CI=6.5 to 7.4‰), the increase was 12%. An indicator of the level of natural increase May area grew by 19.2% (9,4‰, 95% CI= 8,5-10,5‰). The lowest figure is observed in Aksu (6,0‰, 95% CI=5.4 to a 6.6‰). The dynamics of the ratio of fertility rates and mortality rates (per 1000 population) are presented in table 2.

Table 2 - demographic and Health indicators of natural movement of population for the period 2011-2015 (in ‰)

Regions	2011	2012	2013	2014	2015	The average for the 5 years
RK	22,5/8,7	22,7/8,5	22,7/7,9	23,1/7,6	22,7/7,5	22,8/8,1
	+13,8	+14.2	+14,8	+15,5	+15,2	+14,7
Pavlodar	17,3/11,1	17,2/10,8	17,4/10,0	17,3/9,9	16,8/9,7	17,2/10,3
	+6,2	+6,4	+7,4	+7,4	+7,1	+6,9
Aksu city	18,4/11,8	16,9/12,0	17,3/10,5	17,3/11,0	16,7/11,1	17,3/11,3
	6,6	4,9	6,8	+7,3	+5,6	+6,0
Maiskii region	17,0/9,2	18,5/8,7	21,5/10,4	19,3/10,1	19,2/9,9	19,1/9,7
	+7,8	+9,8	+11,1	+9,2	+9,3	+9,4

According to who recommendations, infant mortality is among the main indicators of not only health, but also the overall living standards of the population. Reduction of infant mortality contributes to the growth of the life expectancy of the population. Infant mortality is a sensitive indicator of ecological trouble.

Analysis of the averages of infant mortality in the Republic of Kazakhstan showed that the infant mortality rate on average for 5 years was 11.8±1,7‰ (95% CI=9,9-13,6‰). In Pavlodar oblast the infant mortality rate was below the national level of 20.3% 9,4±1,8‰ (95% CI=7,4-11,3‰), and in Aksu city, the infant mortality rate was 29.6% lower than the Republican rate at 8.3±2,6‰ (95% CI=5.4 to 11,1‰).

Dynamics of infant mortality in the regions studied over the period of 2011-2015 is presented in figure 4. Starting in 2011, the infant mortality rate was observed with a decreasing trend. So, in Kazakhstan, the infant mortality rate has been reduced, by 2015, 37%, in Pavlodar region by 48%.
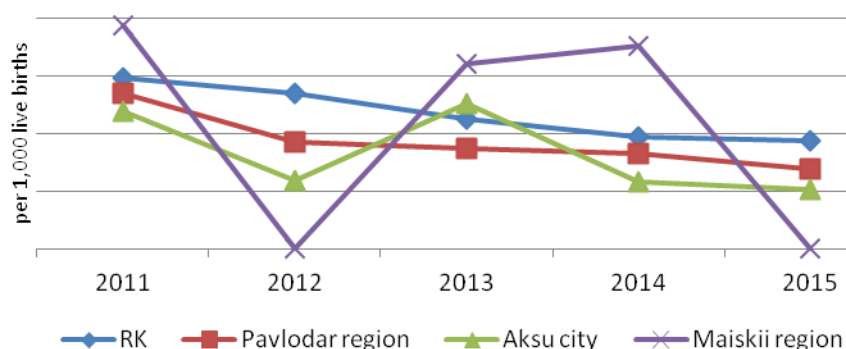
Figure 4 - the Dynamics of infant mortality in the regions studied over the period 2011-2015

The highest rate of infant mortality was erected in Aksu in 2013, a decrease of between 12.6‰ in 2011. to 5.1‰ in 2015. In May area, the infant mortality rate in 2012 and 2015 are not registered.

The most important indicator of quality and level of organization of health protection of mother and child is maternal mortality. Credability. the maternal mortality rate in Kazakhstan amounted to 13.6 per 100 thousand live births (95% CI=11.9 to 15.3 per). By 2015, experienced a decline in maternal mortality 26.4% . In Pavlodar region credability was higher than the national average value for 3% (14,0±2,50/0000, 95% DI=of 11.3 to 16.7). In Aksu during the study period, maternal mortality was not registered except in 2012 (16,60/0000). The maternal mortality rate in Kazakhstan was high in 2011 (17,40/0000). with further reduction by 2015 by 26.4%.

Thus, the analysis of demographic indicators in the studied regions showed a decline in fertility, which may be due to the weak social protection of families with children; the lack of economic stability in life; physiological ailments of women; unfavourable ecological situation in the region. Noted stabilization of mortality or its slight decrease. Natural growth rates in the study region was below the national level, perhaps through a chronic negative balance of migration. While in city Aksu noted the decrease in infant mortality and lack of maternal mortality, except in 2012. Regional gender characteristics have not been identified.

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Тұжырым

Мақалада Павлодар облысының Ақсу қаласындағы медициналық-демографиялық жағдайы туралы баяндалады. Халық санының динамикасы, туу деңгейі, өлім-жітім (жалпы, бала, ана) және табиғи өсім. Орташа мәндерді салыстырмалы талдау және олардың 5 жылдық кезеңдегі динамикасы жүргізілді.

Түйінді сөздер: тұрғындар, халық саны, туу, өлім-жітім

Резюме

В статье представлена медико-демографическая ситуация в г.Аксу Павлодарской области. Выяснена динамика численности, рождаемости, смертности (общая, младенческая, материнская) и естественного прироста за 5-летний период. Проведен сравнительный анализ средних величин и их динамики.

Ключевые слова: население, численность, рождаемость, смертность

СОСТОЯНИЕ ВЕГЕТАТИВНОГО ГОМЕОСТАЗА И ПСИХОЛОГИЧЕСКОГО СТАТУСА НАСЕЛЕНИЯ п.МАЙСКИЙ СЕМИПАЛАТИНСКОГО РЕГИОНА

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Проведена комплексная оценка вариабельности сердечного ритма и психофизиологические обследования у лиц, проживающих в условиях воздействия неблагоприятных факторов окружающей среды. Среди обследо-