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PRACA POGLĄDOWA
REVIEW ARTICLE

INTEGRATED ESTIMATION OF THE DEMOGRAPHIC SITUATION IN UKRAINE – FORECAST FOR THE FUTURE

KOMPLEKSOWA OCENA SYTUACJI DEMOGRAFICZNEJ NA UKRAINIE – PROGNOZA NA PRZYSZŁOŚĆ

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ABSTRACT

Introduction: The demographic situation in the country is largely due to the state of the economy and reflects the medical and social conditions of the population, which in turn testify to the state of the economy, the health care system, education, culture, and other factors.

The aim: Analysis and comparison of the demographic situation in Ukraine with the EU countries, forecast for the future.

Materials and methods: The statistical materials of the Center for Medical Statistics of the Ministry of Health of Ukraine 2012-2016 were processed. A medical-statistical analysis of the system's performance indicators for the five components carried out; an assessment of the performance of the health system according to the WHO approach with certain modifications used.

Review: Having analyzed the statistics of the last years in Ukraine, the birth rate in 2017 decreased as compared to 2016, in January-April 2017 there was a natural decrease in the population, while migration processes in Ukraine exceeded immigration beyond its borders. In connection with the antiterrorist operation in the east of the country and the beginning of active hostilities in the region, the population was significantly reduced to 43 million people. Life expectancy has also changed, and today the average life expectancy in Ukraine is 71 years (66 years are men, 75 are women).

Conclusions: It is necessary to concentrate efforts on solving current problems - economic birth control, adequate social protection of families with children and the elderly, promoting a healthy lifestyle, ensuring the availability of quality medical care and education, which in turn will ensure an increase in the duration of a full active life.

KEY WORDS: demographic situation, demographic crisis, mortality, fertility, integral evaluation of indicators, average expected life expectancy

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INTRODUCTION

The population of the country is a component of the state, a pledge of security, the basis of social development in general. According to the Ministry of Health, the demographic situation in Ukraine is deteriorating every year, depopulation occurs, and, consequently, the production forces are reduced quantitatively.

In conditions of stable unhurried development, the main method of foreseeing a relatively near future is extrapolation of existing trends. In the era of reforms, forecasts become extremely difficult, although the demand for them is dramatically increasing. What will happen in a year, ten, and fifty? We are trying to detail what kind of changes will occur in the demographic situation of the country because of a radical change in the social and economic situation.

In recent decades, most countries in the world are trying to assess and strengthen their health systems to increase the positive impact on public health. The starting point for improving the health system at various levels is the assessment of its current state, the analysis of effectiveness and effectiveness. The report of the World Health Organization (WHO) proposed measures and methodology for compar-

ative evaluation of health systems. These measures reflect progress in achieving the three fundamental goals of health systems: 1) improving the health status of the population (both in terms of level and social equity); 2) observing the principle of equity in the allocation of financial resources, providing protection against financial risk; 3) increasing the sensitivity of the system to the expectations of the population in matters not related to health.

However, the need for an evaluation of activities to determine the extent to which the various links and the overall system is reaching the end results is rapidly growing because of the need to meet the population's needs for affordable medical care in conditions of limited funding and lack of resources. Therefore, the development of a system of balanced indicators that allow us to comprehensively evaluate the effectiveness of the health care system and further optimize medical care is extremely urgent in modern conditions.

The main reason for the aggravation of the demographic crisis in Ukraine is a decrease to the critical level of the birth rate. Only half of the population necessary for reproduction provided by the current demographic state indicates. To

Table I. The main demographic indicators for Ukraine

Nº	Demographic index	2012	2013	2014	2015	2016
1.	Number of of the population (yew): - Total	45633	45553	45426	42929	42760
	- men	20976	20962	20918	19787	19717
	- women	24476	24409	24327	22971	22872
2.	Demographic burden per 1000 persons	421	425	432	443	452
3.	Number of live births (yew)	520705	503657	465882	411781	379089
4.	Number of deceased (yew)	663139	662368	465882	594796	583642
5.	Natural increase	-142434	-158711	-66414	-183015	-186612
	Average life expectancy:	71,15	71,37	71,37	71,38	70,33
6.	- men	66,11	66,34	66,25	66,37	64,56
	- women	76,02	76,22	76,37	76,25	76,11
7.	Mortality of children under one year: - boys	2496	2309	2124	1896	1689
	- girls	1875	1721	1532	1422	1311
8.	Maternal mortality	65	68	71	62	59
9.	Migration movement of the population: - arrived	726226	675942	542506	533278	51178
	- retired	664382	644029	519914	519045	52469
	- migration increase	61844	31913	22592	14233	10643

date, Ukraine has already crossed the border of the decline in the birth rate, which is the irreversible destruction of the country's demographic potential, which leads to a loss of conditions for the restoration of the population. The process of reducing fertility caused in modern conditions is of a global nature and by a number of economic, social, and biological causes.

Comparison of statistical indicators with other countries shows that according to the main indicators of natural changes in the population - fertility, mortality, natural increase - Ukraine is not only after the countries of the West, but also the republics of the former USSR. In terms of fertility, it occupies the penultimate place among them and the countries of Europe, the death rate of the population is the second among the countries of the continent, according to the level of child mortality, its indicators are among the top ten indicators for European countries, by the expected life expectancy (67 years) - one hundred and ninth place In the world, when in 1994 occupied the eighty seventh place.

THE AIM

The aim of writing the article was to analyze the current state of the demographic situation in Ukraine and the factors influencing it, comparing the demographic situation of our country with the EU countries and considering a conceptual forecast for the future.

MATERIALS AND METHODS

In our work, the statistical materials of the Center for Medical Statistics of the Ministry of Health of Ukraine 2012–2016 were processed; literary and scientific sources analyzed in accordance with the methods for evaluating the performance of health systems.

Accordingly, for the purpose of research it is necessary to solve the following tasks:

- study of existing methods for assessing the performance of the health care system, an analysis of their compliance with modern requirements and information support capabilities for determining a set of performance indicators;
- study of a set of indicators of the effectiveness of the health care system in Ukraine on the preservation and promotion of health;
- investigating factors that hamper the development of the health care system and the rationale for improving the performance of the future health care system.

To calculate the performance indicators of the national system, we used statistical information and data from a number of studies. The medical-statistical analysis carried out of the system's effectiveness indicators in five components: the level of health, the scale of health inequalities, and the degree of sensitivity of the system to the expectations of the population, the fairness of the burden of spending on health and the structural effectiveness of the system.

For the calculations, the evaluation of the health system

performance used according to the WHO approach with certain modifications, additions and clarifications, based on the capabilities and needs of the national health system.

The main demographic indicators for Ukraine presented for the last 5 years in Table I.

REVIEW

The state of the Ukrainian health system can be characterized as a crisis, based on its most important result of activity - public health indicators, primarily due to the high level of overall mortality (16.3 per 1000 population) and low life expectancy at birth. The demographic crisis has observed around the world in recent decades. Annual population decline occurs in many countries. Governments of some countries, taking into account such a negative trend, are pursuing an appropriate migration policy, seeking compensation for losses from migrants. However, the indigenous population in them is declining. This is practically all European states, as well as the United States, Russia, Japan and a number of other countries.

The reason for the population decline in the world was a significant decline in the birth rate, which began in the 1950s and 1960s. Now the population continues to grow only in the states of Africa and Asia (the highest rates are in India and China), which is caused by the traditions that still exist, as well as the poverty and illiteracy of a significant part of the people.

The first national All-Ukrainian Population Census took place in Ukraine on December 5, 2001 (the previous one held in 1989). According to this census, the population of Ukraine was 48 million 457 000 people. This figure was significantly less than in 1989 - 51 million 452 thousand people. These data indicate the continuation of a rapid fall in the birth rate in Ukraine. During the period between the two censuses, the total population of Ukraine decreased by 3291.2 thousand people, or by 6.3%. The largest population in Ukraine was recorded in early 1993 - 52 244.1 thousand people. Since that time and until December 5, 2001, demographic losses amounted to 3,787.0 thousand people; 72% of these losses is a natural decline in the population. According to the census, from 1989 to 2001, part of the urban residents almost did not change, more than two thirds of the population of Ukraine lives in urban areas.

Although in recent years the rates of maternal and child mortality in Ukraine have improved due to the introduction of modern perinatal technologies, in particular obstetric care with the participation of family members, the demadication of childbirth, etc., the expected life expectancy is lower than that registered in the early 90s and is 70.33 years (men - 64.56, women - 76.11). All this takes place against the background of a significant improvement in health and a reduction in the mortality rate in most of the developed countries of the world and leads to a significant gap in the magnitude of life expectancy in Ukraine and European countries (Table II).

If we analyze in more detail the statistics of recent years in Ukraine, the birth rate in January-April 2017, according

to the State Statistics Service, was 116,907 children, while in the same period in 2016 this figure was 128530 children. In January-April 2017, there was a natural decrease in the population by 85,387 people, whereas in January-April 2016 this figure was 74,379 people. At the same time, the number of those who came to the country exceeded the number of those who left the country for 2612 people in January-April this year, for the same period in 2016, when this figure was 6,256 people.

The population of Ukraine at the end of 2016 was 42 million 584.5 thousand people, which, according to the State Statistics Service of Ukraine, 176 thousand people less than it was at the end of 2015. In the spring of 2014, after the annexation of the Crimea and the formation of an anti-terrorist operation zone in the east of the country in connection with the beginning of active military operations in the region, the population of Ukraine adjusted and significantly reduced to 43 million from 45 million people. In the future, this indicator decreases from month to month.

The life expectancy has also changed; today the average life expectancy in Ukraine is 71 years (66 years - men, 75 - women). According to this indicator, Ukraine ranks 52nd among the countries of the world. The overall mortality rate has increased in all areas, especially in agricultural areas, where the share of elderly people in the population is twice that in cities. To make the population the same as in 1991, it is necessary to raise the birth rate to 2.2-2.3 children per both parents. Today, this figure in Ukraine is almost half, what it was in 1990 and is 1.1 children per family. Coming out of this population decreases annually by almost 350 thousand people.

In demographic terms, Ukraine has become one of the worst countries in the world. First of all, it is caused by an ineffective policy towards the least protected segments of the population. The decrease in the birth rate led to the fact that today about 30% of the population is people who get retired (people more than 65). For 14 million retirees there are 18 million working people, of which only 7 million are in the material sphere of production. If this trend continues, then there is a real threat that by 2025 the population of Ukraine will decrease to 25-30 million. Under such circumstances, population preservation should be the main demographic strategy of the state today.

DISCUSSION

The demographic situation in Ukraine is characterized not only by depopulation it has acquired the properties of an acute demographic crisis, the main signs of which are unfavorable changes not only in quantity but also in the health of the population[8]. A modern demographic situation can be defined as a crisis situation precisely because depopulation is accompanied by a significant deterioration in people's health, which is manifested in a decrease in the average life expectancy. The tendency of significant deterioration in the health of children and adolescents is progressing [10]. The problem of improving the health of the population today has become a problem of its elementary preservation.

Table II. Expected duration of life in Ukraine and some EU countries.

Country	Populationsize (million)	Average life expectancy		Total fertility rate
		men	women	
Ukraine	42,8	66,2	76,4	1,50
Austria	8,7	79,1	84,0	1,47
Italy	60,7	80,7	85,6	1,37
Germany	82,2	78,7	83,6	1,47
Poland	38,0	73,7	81,7	1,32
Romania	19,8	71,4	78,7	1,52
Slovakia	5,4	73,3	80,5	1,37
Hungary	9,8	72,3	79,4	1,44
France	66,7	79,5	86,0	2,01
Czech Republic	10,6	75,8	82,0	1,53

Radioactive and technogenic pollution of the atmosphere, soils, and reservoirs in most areas leads to mutations and damage to genes. The consequence of this is a decrease in the birth rate, an increase in deformity among newborns, the spread of hereditary diseases and the like. Ecological safety of the population remains catastrophic. Atmospheric pollution adversely affects every third inhabitant of Ukraine, and 28% in general breathe air, dangerous to life. According to the Ministry of Health of Ukraine for 2017, cardiovascular diseases cause almost 67% of all deaths of Ukrainians [9]. The prevalence of diseases among the population over the past 10 years has grown by 38%.

There are prerequisites for reducing morbidity and disability, some increase in life expectancy, which, however, do not lead to fundamental changes in the quality of health, to a transition from a rather backward to a more modern model of health. This option is possible with a significant increase in living standards, improving the environmental situation, when viewing the ideology of the Ukrainian health care system and increasing its funding by 40-50%.

In order to solve the critical demographic situation in the country, in our opinion, are: encouraging the population to create two- and three-child families through propaganda and material incentives; prohibition of abortion; transfer of state attention to two- and three-child families, and not to large families, as the main regulator of the demographic situation; improvement of the economic state of the state, since the impoverishment of the majority of the population adversely affects the demographic situation; decrease in the death rate of newborns (now the birth rate in Ukraine and Japan is almost the same - 11.5 children per 1000 inhabitants, but in Japan, the death rate of children is 6.2% per 1000 inhabitants, and in Ukraine - 13.4%) [7].

In addition, demographic problems require the development of a scientifically based comprehensive program to overcome the demographic crisis that would cover not only the issues of simple reproduction of the population, but also its development in a broad social context [2]. It is necessary to develop a modern ideology of the demographic development of Ukraine, it is necessary to strengthen

scientific developments in the field of demographic and gender studies, and their financial support.

In matters of family policy and fertility, the main goal is the formation of a system of personal and public values aimed at creating a family with two children, strengthening and enhancing its educational potential as the main environment for the reproduction of the population [6]. The objects of direct attention of the state should be young families and families with children. In the field of improving health, reducing mortality and increasing the life expectancy of the population, measures are needed to improve the quality of life, prevent harmful and dangerous production factors, improve the sanitary, epidemiological, and environmental situation, reform the health care system, and stimulate positive changes in people's behavior and way of life.

CONCLUSIONS

Thus, in modern conditions, when the population of Ukraine continues to be in a state of uncertainty, the evaluation of effectiveness plays a significant role in the progressive development of the health care system, because an undeveloped, unjustified economic strategy at the state level will lead to an even greater demographic crisis.

In order to improve the demographic situation, the state needs to direct socio-economic policies to address the most acute problems: stimulating fertility, increasing medical care, enhancing protection and remuneration, improving living conditions and introducing a healthy lifestyle, and creating a broad network of state and non-government social services.

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