

DOI 10.23947/2414-1143-2017-9-1-53-57

UDC 930

ANALYSIS OF POPULATION MORTALITY CAUSES IN REPUBLIC OF NORTH OSSETIA ALANIA

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The article is dedicated to research of the most significant death reasons of the Republic of North Ossetia-Alaniya population, to which one can refer high infant mortality and death growth of oncological diseases. Particularly, it is educed that infant mortality grew in 1,4 times for 2000-2014 in the region. It is shown that infants before one year old die from two groups of reasons in North Ossetia: from congenital anomalies, from individual conditions, appearing in perinatal period, and from the health state of mother, breeding a child. Fixed level is observed according to the first group of indice, but the index of "infant mortality from separate states, appearing in perinatal period" grew in 2,4 times in 2000-2014.

The analysis of adult population mortality educed high and steadily growing intensity of deaths from morbid growths. Death intensity from this reason is generally high in Russian and in all regions of the North-Caucasian federal district, however, the number of registered sick people with firstly made diagnosis of malignant neoplasms grew to 17,1 % for ten years in the Republic of North Ossetia-Alaniya. The conclusion is made about the fact that decrease of mortality level continues to be priority aim of socioeconomic policy of Russian Federation and its regions.

Key words: population mortality, infant mortality, reasons classes of population mortality.

A lot of natural and social factors influence on lifetime and level of population mortality. One can speak about two factor groups from the point of view of system analysis: endogenous, generated by internal development of a human organism, and exogenous, connected with actions of external environment. Considering that the first group represents an objective sphere of medicine, the second group factors become the object of socioeconomic policy of population mortality decrease, to which it is customary to refer: health authorities efficiency, population living standard, society hygiene level, ecological environment influence. Notice that in "pure form" none factor can work – people live in naturally-social environment, where their live depends on the whole complex of factors. One can speak about only degree influence alteration to population mortality of some or other factor in the space and time. Research of dead people distribution by the medical death reason, in other words according to the last diagnosis of the dead person, takes an important place in the modern mortality analysis. The death reason is determined on the basis of medical worker conclusion according to the disease, casualty or any other external influence, served as the death reason. Not always it can be pointed to the one reason of death, that is why the World Health Organization (WHO) recommends to indicate all the diseases and traumas, which brought to or contributed to death.

Writings in the medical death certificates, composed by the doctor according to the disease, casualty, murder, suicide and any other external influence, served as the reason of death are appeared to be the information source about death reasons. Such writings serve as the basis for death reason indication in the death statements. The reason, according to which the death occurs, is confirmed by the corresponding medical organ or doctor. At that the modern death reasons statistics is based on emphasizing of one, leading, or initial death reason. In recent years one can observe the decrease of population death level in the Republic of North Ossetia-Alaniya practically on all basic classes of

death reasons with some waves according to the years that can be estimated as the positive tendency and the most important socioeconomic result(table1).

Table1

Population mortality dynamics in the Republic of North Ossetia-Alaniya according to the basic reason classes of death in 2000-2014
(the number of death people per 100 000 of population)

	Died from all reasons of death	From them by reasons of death						
		some infectious and parasitic diseases	From the tuberculosis	morbidity	circulatory system diseases	respiratory diseases	Digestion diseases	External reasons of death
2000	1234,1	23,9	18,5	158,1	741,5	41,3	69,2	123,8
2005	1230,4	22,7	19,6	160,7	798,0	25,7	80,0	93,3
2010	1088,0	16,9	13,9	158,3	698,3	26,8	70,2	76,0
2014	1072,1	11,2	9,1	166,3	687,6	25,3	60,9	63,6

Source: Statistical yearbook of RNO-Alaniya. Statistics digest. Vladikavkaz 2015. P. 50. <http://osetstat.gks.ru>.

Table2

Infant mortality in the Republic of North Ossetia-Alaniya according to the basic classes of death reasons in 2000-2014

	2000	2005	2010	2014
General number of people				
Died in the age from 1 from all reasons	84	70	77	116
From some infectious and parasitic diseases	17	2	4	2
From respiratory diseases	10	1	7	9
From digestive organ diseases	2	1	6	2
From congenital anomalies (malformations), deformations and chromosomal defections	20	20	19	19
From individual conditions, occurring in perinatal period	31	41	34	75
From external death reasons	3	1	1	5
Per 10000 of new born				
Died in the age of 1 from all the reasons	116,9	88,7	75,0	107,5
From some infectious and parasitic diseases	23,7	2,5	3,9	1,9
From respiratory diseases	13,9	1,3	6,8	8,3
From digestive organ diseases	2,8	1,3	5,8	1,9
From congenital anomalies (malformations), deformations and chromosomal defections	27,9	25,3	18,5	17,6
From individual conditions, occurring in perinatal period	43,2	51,9	33,1	69,5
From external death reasons	4,2	1,3	1,0	4,6

Source: Statistical yearbook of RNO-Alaniya. Statistics digest. Vladikavkaz 2015. P. 50. <http://osetstat.gks.ru>.

As it can be seen from the table 1, for the analyzed period mortality decrease occurs with various tempos according to such basic class reasons as: circulatory system

diseases, some infectious and parasitic diseases, tuberculosis, external reasons of death, respiratory diseases, and digestion diseases. These reasons classes are strongly depended on the population living conditions, from its mode of life, society hygiene culture; in major degree they are determined by behavioral factors, people' attitude to their health. It is worth stopping at the analysis of infant mortality, which grew in the Republic of North Ossetia-Alaniya for the analyzed period in 1,4 times: from 84 of children in 2000 to 116 of children in 2014 (table 2).

As statistical data analysis shows, infants to one year in North Ossetia generally die from two groups of reasons: from congenital anomalies, from individual conditions occurring in perinatal period, and from health condition of the mother, breeding a baby. As one can see from the table 2, the index "infant death from separate conditions, appearing in perinatal period" in 2014 grew in 2,4 times in the Republic of North Ossetia-Alaniya in comparison with 2000. This fact testifies about necessity of intensive development system of diagnostic and general health institutions for the pregnant women with modern medical technologies and apparatus implementation, from one side, from the other side, - about necessity of family planning system advance, as infants mortality, depended on the mother health state, appearing in perinatal period, significantly depends on the woman way of life in the pregnancy period. According to the other mostly widespread reason of infant mortality, mainly connected with life social conditions and health service development, - congenital anomalies – the level of infants' mortality has tendency to constant decrease, though intensity of its influence remains to be rather high. Under the mortality analysis of adult population in the Republic of North Ossetia-Alaniya high and steadily growing death intensity from morbid growths especially disquiets. Mortality intensity from this reason is generally high in Russia and in all regions of North-Caucasian federal region (table 3).

As one can see from the data of table 3, mortality from morbid growths stays at the second place, after the circulatory system diseases in all regions of North-Caucasus.

Table 3

**Mortality according to basic classes of death reasons
in Russian Federation and regions of North Caucasus federal district in 2014**
(the number of died people per 100 000 of population)

	Died from all reason of death	From them by reasons of death						
		Some infectious and parasitic diseases	From them tuberculosis	morbid growths	circulatory system diseases	respiratory system diseases	digestive organ diseases	External reason of death
Russian Federation	1305,8	22,3	10,0	201,9	653,9	54,5	67,2	129,9
North-Caucasian F D	804,8	8,8	6,0	118,2	433,0	34,4	34,7	59,5
Dagestan	553,9	7,0	4,3	70,3	227,3	60,6	22,0	49,6
Ingooshetia	345,9	7,9	4,6	60,2	167,9	7,9	5,9	28,1
Kabardino-	880,8	15,8	11,8	135,4	523,6	30,4	46,0	64,6

Balkaria								
Karachai-Circassian Republic	969,9	6,6	2,3	144,0	547,0	31,5	40,5	84,1
RNO-Alaniya	1072,1	11,2	9,1	166,3	687,6	25,3	60,9	63,6
Chechnia	505,3	7,4	4,6	82,9	281,6	8,2	11,2	22,4
Stavropol Territory	1174,0	9,2	6,8	173,9	657,8	27,5	53,4	86,5

Source: Statistical yearbook of RNO-Alaniya. Statistics digest. Vladikavkaz 2015. P. 50. <http://osetstat.gks.ru>.

Alongside with that intensity of deaths by this reason is strongly differentiated according to the regions. The most part of dead people in the view to one hundred thousand people is fixed in Stavropol Territory – 173,9 of cases. The minimal index is marked in Ingooshetia- 60,2 of cases. The given coefficient is very high in the North Ossetia – 166,3 of cases. In years to come the mortality from oncology in the North Caucasus, most probably, will grow, as, for instance, the number of oncosick people grows rather intensively in the North Ossetia. For the last ten years the number of registered sick people with for the first time in life registered diagnosis of malignant neoplasms increased on 341 person or on 17,1%. Accordingly the general number of patients with malignant neoplasms grew that is obviously can be seen from the data of the table 4.

Table 4

Contingents of patients with malignant neoplasms in Russian federation and regions of the North-Caucasus federal district in 2005–2014

	General number of people			Per 100 000 of population		
	2005	2010	2014	2005	2010	2014
Russian Federation	2386766	2794189	3098855	1679,8	1955,8	2252,7
North-Caucasian FD	86148	121048	135365	1092,6	1282,4	1406,5
Dagestan	12920	17064	21840	479,8	585,5	733,6
Ingooshetia	1454	2827	3903	348,4	682,0	851,3
Kabardino-Balkaria	10837	12347	14182	1251,2	1436,0	1649,9
Karachai-Circassian Republic	5123	5527	7070	1127,2	1157,7	1506,0
RNO-Alaniya	9993	12263	14731	1413,6	1721,2	2090,6
Chechnia	...	16661	14431	...	1306,6	1062,4
Stavropol Territory	45821	54359	59208	1668,1	1951,5	2116,8

Source: Health service in Russia. Statistics digest. M.: 2006, 2011 and 2015. <http://www.gks.ru>

Also the fact is alarm that for the period of 2005–2014 the number of sick people with malignant neoplasms, registered in general health organizations, grew in the Republic of the North Ossetia-Alaniya on 4,7 thous. people, or on 147,4%. In the regions of the North-Caucasus federal district oncosickness rate progresses with higher tempos in Stavropol region and in Ingooshetia. However, the general coefficient of oncosickness in 2,5 times lower, than in the Republic of North Ossetia-Alaniya. For the last 25-30 years in all economically developed countries mortality steadied at the rather low level. It stays to be intensive despite on mortality decrease tendency in Russia and, also in North Ossetia. Consequently, mortality level decrease continues to stay the top target of socioeconomic policy of Russian Federation and its regions.

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January, 28, 2017