

## Policy priorities in the health protection sector of a Northern region

*The article is devoted to the modernization of the health of a northern region (the example of the Murmansk Oblast) and the promising directions of implementing its own policies in the health protection sector at a regional level. The article gives the analysis of the medical and demographic situation in the Murmansk Oblast, as well as the main priorities of the modern regional policy in the health protection sector. It identifies the priority directions of the policy in this sector, requiring implementation at federal, regional and local levels.*

*Medical and demographic development, health protection, public policy.*



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The level of population health is one of the most important aspects of the future development for both country as a whole and each region. Numerous external factors influence the level of population health: economic, social, environmental, institutional, constitutional and genetic characteristics, the effectiveness of the health care system. But still now the true role and nature of the interaction between these factors is not completely clear [2]. Differences in the level of health observed between countries and regions, between different groups within the country/region, may suggest that most of the factors that influence health, including lifestyle, environment, public health effectiveness is directly dependent on the overall social, economic and political development, i.e. from how economic welfare is distributed and used [3]. Low levels of health entail reducing opportunities for economic growth and competitiveness of the region's economy, the growing number of social anomalies and social tension.

Medical and demographic situation in the North is due to climatic conditions and specific features as well that make up the overall socio-economic and ecological spheres<sup>1</sup>. All of the northern regions geographically, economically and politically are distant from metropolitan areas, therefore all significant decisions relating to these territories are made in the centers located in more southern regions.

<sup>1</sup> The level of health is directly influenced by environmental conditions. In most northern regions the areas around the concentration of factories, as a rule, are zones of ecological emergency with excess of acceptable standards of air, water and soil pollution. In general, in the northern regions over the past 10 years there is an increase in emissions of pollutants into the air from mobile sources in the whole in northern region by 56.4% (in Russia – 9.6%). The overall ecological status of water bodies is satisfactory, but, for example, in the Murmansk Oblast, the total volume of contaminated waste water the share of passing through a wastewater treatment plant is 81.5%, and purified to normative values – only 5.4%. A major problem is disposal of waste oil, solids, and mercury-containing wastes. Some municipal landfills were organized without consideration of environmental, sanitary and fire regulations.

In addition, most regions of the Russian North are dependent on natural resource exports and government subsidies [4]. However, a significant role of the North for the country, the specific features of these territories, caused by extreme climatic conditions, remoteness from the central regions of the country, single-industry focus, require special government attention, constant consideration of the specifics of the northern territories in the development and implementation of policies in the community health protection.

Despite some positive trends in recent years, medical and demographic situation in the northern regions is characterized by a number of serious problems. Most of the northern regions are characterized by an intensive population decline, which main source is migration decline, and despite the fact that in recent years in most northern regions it has decreased and stabilized, there is still a high outflow of population. With regard to population movement, here, unlike in Russia in general, in most regions there is natality. However, this is mainly due to the increase in crude birth rates, but not reduced mortality. The high level of infant mortality is of particular concern, and in some regions – its growth. The main indicator of life quality – expected life interval of the population – the average for the northern regions lags behind the national average by 2.5 years (only in the Khantia-Mansia and Nenetsia Autonomous Okrugs expected life interval is above the national average) [5]. Of a particular concern is the extremely high sickness rate of alcoholism cases and alcoholic psychosis, which in turn

produces the growth and high rates of mortality from external causes, injuries, poisoning, digestive system diseases. There is a trend of increased mortality from tuberculosis and neoplasms in most northern regions. In general, the health of the population of the northern regions remains low.

The main health problems of the population of the Murmansk Oblast are currently the high level of general morbidity, high mortality rate for all classes of determining factors. The primary indicator of morbidity is above the national average (*tab. 1*). In recent years there has been a steady increase in cardiovascular diseases. In 2009, the total morbidity by coronary heart disease in the region increased by 3.8% and stroke – 18.1% (in 2009 amounted to 5637.8 morbidity cases and 144.8 per 100 thousand inhabitants, respectively [1]). There is an increase of malignant neoplasm cases – for the last five years the figure rose among the male population by 10.4% among women – by 9%. Of a particular concern is the high mortality rate of people of working age, particularly males (death rate of men of working age is approximately 4 times higher than the same of women), which indicates a low level of health of the workforce.

There is the deterioration of social diseases. One of the most serious problems in this area is the prevalence of alcoholism in the region. Despite the fact that in 2009 the prevalence of alcoholism in the Murmansk Oblast was lower than the average for Russia, the incidence rates and prevalence of alcohol psychosis are still higher than the average Russian index (in 2009,

Table 1. Common sickness rate of the population of the Murmansk Oblast (number of cases per 1,000 inhabitants) [1]

Sickness	Territory	Sickness cases		
		2007	2008	2009
Primary	Murmansk Oblast	818.1	816.5	855.0
	RF	771.0	721.7	802.5
Total	Murmansk Oblast	1623.5	1631.4	1696.1
	RF	1544.2	1560.9	1607.2

the prevalence of alcoholic psychosis was 108.1 per 100 thousand inhabitants of the Murmansk Oblast, at 74.0 for the Russian Federation [6]). A similar situation exists on the incidence of drug abuse – indicators are almost twice above average in Russia [7].

Such a medical and demographic situation is largely the result of socio-economic transformations of the 1990s and in the future, the level of health can only deteriorate. And here, one of the most significant problems is the poverty of the population (despite the notable achievements of recent years in overcoming it, the official poverty rate in the region exceeds the national average – 14.7% of the population versus 13.2% in Russia in 2009 [6]). Poverty is a consequence of the low level of health, and its main factor, regardless of the root cause (the amount of income, socio-economic status, living conditions, and education level) [8]. Poverty determines a shorter life expectancy, high infant mortality, low reproductive health care, high risk of communicable and noncommunicable diseases, alcoholism, drug abuse, suicide, etc. [3]

Unemployment, low incomes, lack of personal safety, crime, fear of the future, conflicts at work and family problems, job instability, social disintegration – in the aggregate, this leads to a sharp increase in the manifestations of psychosocial stress conditions. Social ill health produces cardiac diseases, manifests in the growth of social abnormalities and antisocial behavior: drug addiction and alcoholism.

In addition, the problems existing in the health care system do not allow to fully meet the needs of the residents in the effective prevention and treatment of diseases, improving health. Currently, in most of the northern regions there are low levels of accessibility and quality of health care facilities, weak personnel and underdeveloped infrastructure capacity. In addition, the regions of the Russian North are characterized by considerable differentiation of municipalities in terms of health system development.

In the administrative centers of the RF territories and municipalities where economic activity is carried out by corporations with social responsibility, infrastructure indicators, such as the level of personnel and infrastructure provision of medical facilities and the effectiveness of the health care system, correspond to the levels reached in the inhabited regions of Russia. Here, for example, the availability of medical staff in 2009 was: Naryan-Mar – 46.3 persons per 10 thousand inhabitants, Norilsk – 48.5 persons, Murmansk – 80.3, Salekhard – 119.4, Anadyr – 148.1 [9].

For the closed administrative-territorial units (CATU), with yet an acceptable level of personnel and infrastructure provision of medical facilities, problems of its development are increasing. This is mainly a consequence of the municipal reform led to a significant narrowing of the tax base of a closed administrative-territorial unit, and “divarication” of their status: on the one hand, these are territories, performing tasks of national security and supervised by the federal government, on the other – usual urban districts with a standard set of local issues. The level of medical service in CATU is low: in 2008, the number of inhabitants satisfied with the quality of medical service in Severomorsk was 49.4%, in Polarniy – 50.6, in Skalistiy – 51, in Zaozersk – 54, in Ostrovnoy – 55, in Snezhnogorsk – 67% people<sup>2</sup>.

The problem of the low level of health system development is the most acute for settlements with small populations (especially – places of residence of representatives of indigenous peoples), and they are most in the regions of the North. Here the level of accessibility of health facilities is extremely low. Availa-

<sup>2</sup> The data of sociological studies in 2008 for municipalities of the Murmansk Oblast, including CATU Zaozersk, Ostrovnoy, Skalistiy, Snezhnogorsk, Polarniy, Severomorsk, on public satisfaction with the level of accommodation, presented in the report on the results of the research work “Implementation of a sociological research on the study of citizens’ opinion about the level of living comfort in the municipalities of the Murmansk Oblast”, published on the official site of the Murmansk Oblast ([www.gov-murman.ru](http://www.gov-murman.ru)).

bility of medical personnel in most municipalities is 1.5 – 2 times lower than the average for the territory of the Russian Federation, to which they relate. A large part of the medical staff work in regional/municipal centers. For example, in the Nenetsia Autonomous Okrug 126 of 163 doctors work in Naryan-Mar (46.3 per 10 thousand inhabitants in 2009). Accordingly, in the remaining municipalities work only 37 doctors (availability of medical personnel is about 20 per 10 thousand inhabitants, with the average in the Nenetsia Autonomous Okrug – 38.8) [6, 9]. The level of health services quality in most municipalities is estimated by the population as low. In some remote/rural settlements there are no permanent medical facilities and pharmacies. Availability of medical personnel is at a low level, there are no incentives to attract them from other regions. In many settlements there are no facilities for work and accommodation for medical professionals. The material-technical base of medical institutions is extremely weak. Transport accessibility and specialized emergency medical care is low. In general, the large territory of northern Russia is characterized by low availability and quality of health facilities. This situation is mainly the result of the lack of necessary resources for the development of health facilities and the maintaining of them at a minimum, vitally necessary level as well [10].

In recent years in the Murmansk Oblast the potential of the health care system certainly has improved. Due to the implementation of the national project “Health” in 2006 – 2009, medical institutions were equipped with modern equipment, vehicles were carried out works on construction, reconstruction, etc. However, despite this, at present, almost half (49%) health facilities are out capital and ongoing repairs. Most first-aid stations and clinics are located in unsuitable for health care buildings built in 1930 – 1950’s with 100% wear, some of them are in buildings with stove heating, where there is no centralized water supply and sewerage [1].

The serious problem is understaffing of health facilities in the Murmansk Oblast. Medical staff deficit in 2009 was 38% (953 physicians), which is due to the absence of a medical school in the Murmansk Oblast, and working incentives to attract professionals from other regions to work as well. To the most degree understaffing concerns such areas as cardiology, oncology, drug and alcohol abuse, pre-trial psychiatry. In a number of municipalities in the region (Kandalaksha, Kola, Lovozero, Pechenga, Olenegorsk) rates of cardiologists are not manned at all, in Murmansk 3 doctors work at 9.75 rates. The coefficient of part-time oncologists is 2.3, neurologists – 1.7. With the exception of Murmansk, in all health institutions of municipalities in the region specialists of drug treatment services are not enough.

The Murmansk Oblast, as well as for the northern regions in general, is characterized by high inter-municipal differentiation of personnel and infrastructure provision of health institutes. Thus, in the Kola district of the Murmansk Oblast provision in physicians is only 20.5 people per 10 thousand inhabitants, in Tersk – 22.2, in Lovozero and Pechenga districts is about 23, and in Kovdor – 24 people per 10 thousand inhabitants [11-13]. Inter-municipal differentiation of this indicator is almost 4 times. A similar situation exists for the provision with public nurses, hospital beds: thus, if the nurse provision in Murmansk in 2009 was 157.4 per 10 thousand inhabitants, in the Kola district – only 55.5; hospital beds – 142.2 per 10 thousand inhabitants in Murmansk against 54.0 in the Tersk district [9, 11-13].

The government of the Oblast together with the heads of municipal formations developed activities to attract physicians to the region (it was provided the payment of a lump sum of 6 salaries and additional sum – 200 thousand rubles, monthly premiums – 20% within 3 years after graduation, accommodation provided by the employer), but staffing problems remain unsolved.



Inadequate medical staffing, along with the lack of necessary equipment produce the problem of low availability of certain types of medical treatment (CT and magnetic resonance imaging, vascular ultrasound, echocardiography, etc.).

Remain unresolved problems of financing the provision of health care to the residents of the region within the Territorial program of state guarantees for free medical care – lack of the program in 2009 amounted to 39.6% in 2010 – 33.6%.

However, health system capacity of the Murmansk Oblast in generally is higher than the average for Russia, but only at the expense of high level in Murmansk and Kirovsk. While in most municipalities health system capacity is low. This indicates a very low level of access to health care. A large proportion of the inhabitants of the Oblast evaluate the availability of health services as low: according to opinion surveys, only 30.4% [1] of the respondents in the Murmansk Oblast were satisfied with the availability of medical services.

In many municipal formations of the Oblast provision with physicians and nurses, hospital beds is at a low level, it is still difficult to obtain certain types of specialized medical care. Many medical institutions due to lack of resources, level of training of health workers on modern approaches to diagnosis, treatment and prevention of diseases can not provide adequate access to and quality of diagnostic and medical care. There are no regulations aimed at creating conditions for healthy living, providing comprehensive nature of the activities of all sectors of society in order to improve health [7].

At present, the region implements the long-term target program “Modernization of the health of the Murmansk Oblast” for 2011 – 2012. The main objectives of the program are: 1) ensuring access to quality medical care to the population of the Murmansk Oblast and 2) creation of conditions for the efficient organization of medical care and use of health resources [1].

However, within the framework of implementation of the Program was provided a significant reduction in the availability of quality health care, because it assumes a significant reduction in the network of health institutions from 59 facilities (21 governmental and 38 municipal) in 2010, to 35 (35 public health institutions and 15 their affiliates) by 2013.

It is planned to create three inter-municipal centers of specialized medical care in Kandalaksha (for residents of the Tersk and the Kandalaksha districts), in the cities of Kirovsk-Apatity and Monchegorsk (for residents of the Kovdor, Lovozero districts and Olenegorsk). In these centers most of the departments and agencies are expected to be moved, while in other localities will be provided, in general, the basic types of medical care. As a result, the availability of specialized medical care for the residents of most settlements of the Murmansk Oblast will be much worse. This will involve, firstly, a significant deterioration of transport accessibility (for example, the distance between Kovdor and Monchegorsk is 184 km.) Secondly – with an even greater decline in availability of medical personnel and hospital beds.

For example, the organization of inter-municipal center in Kandalaksha it is planned to reduce beds by 11%, in the Tersk district – by 48, in the Zelenoborsk affiliate – by 69%. A similar reduction will affect the health institutions in creating the Monchegorsk and Apatity-Kirov inter-municipal centers: in Monchegorsk it is planned to reduce beds by 12%, in the Olenegorsk affiliate – by 17, in Kovdor – by 40, in Lovozero – by 34, in the Apatity affiliate – by 42%. The reduction will affect only a little number of beds in Kirovsk, where it will be reduced only by 1.7% [1]. Also there will be the change of the medical care structure to the reduction of hospital and ambulance services (*tab. 2*).

Table 2. Organization of medical care in the inter-municipal centers of the Murmansk Oblast [1]

Indicator	Inter-municipal center of Kandalaksha		Inter-municipal center of Monchegorsk		Inter-municipal center of Apatity- Kirovsk	
	01.01.2010	01.01.2013	01.01.2010	01.01.2013	01.01.2010	01.01.2013
Number of beds	378	307	831	660	624	473
Volume of hospital medical assistance (bed/days per 1 inhabitant)	1.6	1.3	2.2	1.8	2.1	1.7
Volume of outpatient and hospital medical assistance (visits per 1 inhabitant)	6.64	8.58	8.46	9.45	7.87	8.52
Volume of hospital-substitute medical assistance (patient / days per 1 inhabitant)	0.29	0.53	0.36	0.66	0,32	0.51
Volume of emergency med. assistance (calls per 1 inhabitant)	0.37	0.35	0.36	0.34	0.33	0.32

As a result, these transformations will have extremely negative impact on the quality of medical care, timely diagnosis of diseases, etc., and, in general, the level of health of the population of the Murmansk Oblast. The current level of health system development, not allowing to realize its compensation function (which is a prerequisite for reducing the quality of human potential, has no positive effect on the preservation of existing human resources, etc.), only worsens. Availability of health services will be reduced significantly.

At the present time it is vital to form and implement both state/national policy on health protection and own active regional policy. There are basic conditions that will ensure the effectiveness of policy implementation in the health protection sector. Firstly, human capital should be seen as the goal of social development, and not as a means of solving social and economic problems [14]. Secondly, the formation and implementation of policies in the health sector should be focused on patterns of development of the social system in relation to public health, not to the assessment of the influence of individual factors on human health. Thirdly, the problems solution must be comprehensive, covering all sub-systems of the region in public health protection system, and not be just limited by the activity of health care institutions.

In general, the policy in the health protection sector should be understood not only as a series of measures to improve the health of residents, but also as a process of formation and development of life, labor and reproductive capacity of the population with an adequate intake of human potential and the desire to create optimal living conditions (environment, economy and social conditions). Policies in the health protection sector need to be considered as a set of targeted activities conducted by public authorities, including the definition of priorities and policies, the nature of the formation of resources and the steps involved in achieving these goals, ensuring the development. From this point of view the systematic policy in the health protection sector should be expressed in the interaction of public and private sectors, regional authorities, health authorities, media, etc. In addition, it is necessary to expand capabilities of individuals and encourage them to take positive, health-promoting their own decisions on issues such as tobacco use, excessive alcohol consumption, unhealthy diet, unsafe sex, etc. Cross-sectoral policies in the health protection sector of the population (as reflecting the activity of the whole society) should be focused on public health criteria. A major factor in the implementation of the policy in the public health protection should be just the health care system.

The aim of the policy in the health protection sector must be increase in the level of health through modernization of the health care system including ensuring high standards of the quality and accessibility of health care.

In order to provide for the health system of the northern regions of Russia, including the Murmansk Oblast, it is necessary to solve the following problems:

At the federal level:

- to strengthen significantly the measures of state regulation and protectionism in the development of the health system of the northern regions of the Russian Federation aimed at total quality increase and accessibility of health services, a significant increase in public satisfaction with the quality and accessibility of such services;

- to ensure the implementation of the differentiated state policy in this area, taking into account the specific features of the northern regions (including low financial resources, weak personnel and infrastructure capacity, the remoteness of most settlements from major centers, demographic characteristics, etc.);

- to develop and implement special measures of state subsidiary support, providing a new development level of health facilities of remote rural settlements, small towns, closed administrative-territorial units, including the creation and development of modern medical facilities, transportation infrastructure, to achieve the highest quality standards and a significant increase in the availability of health services;

- under formation within the framework of federal targeted programs aimed at the development of health services in small towns, closed administrative-territorial units, remote and rural settlements of the northern territories of Russia, to exclude the obligatoriness of application of the principle of parity co-financing from the federation to which these settlements are territorially related;

- under the development of regulatory indicators of personnel and infrastructure provision of health facilities to take into account the need to apply higher values in the Far North and equivalent areas.

At the regional and local levels:

- to ensure the free provision of state-guaranteed volume of medical services to all residents regardless of social status and place of residence, to develop and implement programs aimed at the creation and development of modern, meeting high requirements, medical facilities in remote, rural settlements and small towns, CATU; to achieve the highest quality standards of health care services; to promote the development of mechanisms of social partnership of government, business and society in health protection sector, improving health and environmental issues;

- to provide a significant increase in access to quality health care services rendered to the population; to provide conditions for the organization of primary, emergency and specialized medical care, conditions for improving the diagnosis and prevention of diseases; to improve the organizational and economic potential of health care system, including the development of a system of health care management, focused on fundamental improvement of the quality of medical care and efficient use of health resources;

- to promote the conditions for securing highly qualified personnel, including on the basis of a significant increase and a fundamental change in people's living conditions and wages increase of all groups of health professionals to the average for the region's economy; to increase staff capacity of health care institutions, including implementation of programs to target training of medical personnel from the local population, including representatives of indigenous peoples;

- to provide a new level of the development of the material and technical base of health care institutions aimed at improving the

total quality and accessibility of health services; to provide health care facilities with the latest medical equipment, medicines, etc.; to implement the strategic management techniques and methods of analysis of economic efficiency of medical programs and technologies in health care institutions;

■ to promote the formation of an effective system of prevention of risk factors for health problems, particularly alcohol and drug abuse, promote healthy and safe environment, quality and safety of consumer products and services, reduce the number of jobs in hazardous working conditions, etc.

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