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Health care modernization assessed by population and health workers

At present, the reduction in the quantity and quality of human resources poses a serious threat to society. In order to improve the quality and availability of health services and promote public health, the Healthcare Modernization Programme is being implemented. The paper highlights the main problems of the healthcare system and contains the assessments of the modernization programme by the Vologda Oblast population and healthcare workers.

Public health, healthcare modernization, satisfaction with health services, assessment of conducted reforms.



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The studies on the implementation of targeted health care programmes at the regional and federal levels are relevant due to the existence of consistent negative trends in demographic development of Russia's territories and the necessity to enhance the efficiency of spending the funds allocated to health sector.

The analysis of changes in public health and demographic trends helps to understand the necessity of reforms aimed at preserving the population size and its qualitative characteristics, primarily, its health.

The population of the Vologda Oblast has decreased by 11% for the last two decades (amounting to nearly 1.2 million people in 2011), that exceeds the rate of decline in Russia as a whole (3.3%). Having similar trends in **fertility** rates (which do not provide even the substitution of parental cohorts by new generations)¹, the natural decline of the Vologda Oblast population 3 times exceeds the national average due to higher mortality rates (*tab. 1*).

Among mortality factors, 59% account for cardiovascular diseases, 14% – for neoplasms, 11% – for accidents, injuries and poisoning [1].

Analysis of sex and age ratios revealed the following patterns. Russia is characterized by high infant mortality. Although, recently, there have been some positive changes in the dynamics of **infant mortality** (reduction from 17.4 cases per 1000 live births in 1995 to 7 cases in 2011)², the situation cannot be considered satisfactory, since the level of infant mortality is 1.5 times higher than in the developed countries of Europe³ (*fig. 1*).

High mortality of able-bodied population is another problem of the current demographic situation in Russia. According to the World Health Organization, in 2009 this indicator amounted to 269 people per 1000 population in Russia, while in Switzerland and Italy – 58 and 59 people, respectively, in Norway and Sweden – 61 and 67 people, in Germany, Austria, and Greece – 76 people, in France – 85 people [9].

At the same time, the state of health is deteriorating due to the increase in combined morbidity and the spread of chronic diseases. Thus, for the 1995–2011 period, the level of primary morbidity in the Vologda Oblast

Table 1. Natural population movement in the Vologda Oblast and the Russian Federation

Year	Population, thousand people		Crude birth rate, ‰		Crude death rate, ‰		Rate of natural decrease (increase), ‰	
	Russian Federation	Vologda Oblast	Russian Federation	Vologda Oblast	Russian Federation	Vologda Oblast	Russian Federation	Vologda Oblast
1995	148 514.7	1 349.7	9.3	8.7	15.0	16.4	-5.7	-7.7
2000	148 459.9	1 299.6	8.7	8.8	15.3	16.0	-6.6	-7.2
2005	143 474.2	1 245.5	10.2	10.5	16.1	18.8	-5.9	-8.3
2010	141 914.5	1 213.7	12.5	12.5	14.2	16.8	-1.7	-4.3
2011	142 865.4	1 201.2	12.6	13.0	13.5	15.7	-0.9	-2.7

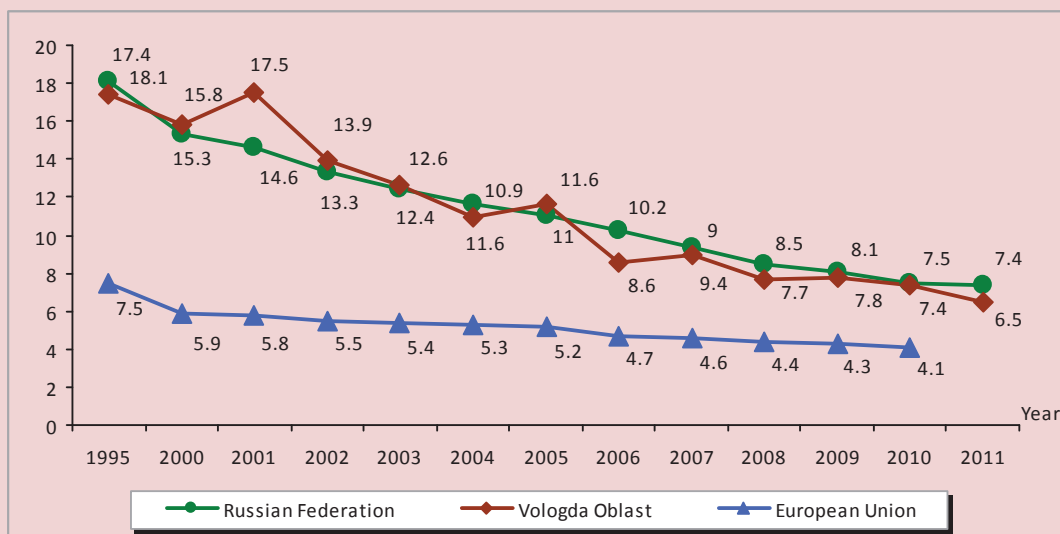
Sources: Federal State Statistics Service. Available at: <http://www.gks.ru/dbscripts/Cbsd/DBlnet.cgi?pl=2415019>; Demographic yearbook of the Vologda Oblast: statistical abstract. Vologda: Vologdastat, 2012; Russia in figures. 2012: statistical abstract. Moscow: Rosstat, 2012.

¹ The simple replacement of generations requires approximately 2.1 – 2.15 births per woman of childbearing age. In fact, in 2009, the total fertility rate in the Vologda Oblast and Russia was 1.5 (source: Dobrokhleb V.G. Dynamics and structure of Russia's population in the future. Economic and social changes: facts, trends, forecast. 2010. No. 4. P. 62-70).

² This indicator corresponds to the critical threshold value, set by the WHO Regional Office for Europe, namely, 10 cases per 1000 live births.

³ In 2010, the minimum values of infant mortality were noted in Cyprus – 2.24 (per 1000 live births), in Finland – 2.26, Sweden – 2.54, Czech Republic – 2.67, Luxembourg – 2.72; the maximum values – in Lithuania (4.29), Poland (4.98), Latvia (5.72).

Figure 1. Infant mortality (per 1000 live births)



Sources: Demographic yearbook of Russia. 2001, 2009. Statistical abstract. Moscow: Rosstat, 2002, 2010, 2011.; European health for all database. World Health Organization. Available at: <http://data.euro.who.int/hfad/>

Figure 2. Dynamics of primary morbidity in the Vologda Oblast and the Russian Federation (number of people whose illness was diagnosed for the first time; per 1000 population)



Source: Health care in Russia. 2009: statistical abstract. Moscow: Rosstat, 2010.; Morbidity rate of Russia's population in 2011. Part 1. Statistical abstract. Moscow: Roszdrav, 2012.

increased by 19% and amounted to 882 incidents per 1000 people. At the same time, there has been an excess of primary morbidity in relation to the national average (797 incidents; *fig. 2*). The constant growth of population's

morbidity, can be explained, on the one hand, by a more efficient detectability of diseases, on the other hand – by the deterioration of population's health and the inefficiency of diseases prevention and treatment measures.

This situation poses an actual threat to the formation of high-quality labor resources in the short and long term, and makes high demands to the health care system as an institute of health promotion. Meanwhile, one should take into account the scarcity of financial resources allocated to the social sphere in the Russian Federation, including the health care system.

Russia lags behind the Western European countries rather significantly by the level of **health care financing**. Even in the period of the 2008 crisis, total expenditures on health in the Russian Federation amounted to 5.4% of GDP, while in the European countries this figure was 8 – 11% (fig. 3). Public expenditures on the sphere are also substantially lower: for example,

their share in Russia’s GDP amounted to 3.7% in 2010. The shortage of health care funding is characteristic for the majority of Russia’s regions.

According to the WHO guidelines, the rate of public spending on health care should be not less than 5% of the country’s GDP. Despite the fact, that the general expenses for Russia’s health care formally meet the established standard, the expert opinions on their estimations differ. Some believe that the allocated funds are not enough, because a significant part of the total expenses are formed by the expenses of the population, rather than the state; others emphasize that received public funds should be used more efficiently [2].

Figure 3. Total expenses on health care in different countries in 2000 and 2008, in % of GDP



Source: World health statistics. Geneva: WHO, 2011.

Limited financing caused a number of acute problems that have a direct impact on health care efficiency, as well as on the availability and quality of services provided to the population.

1. Shortage of qualified medical staff. In the Vologda Oblast for the 2000 – 2011 period, the provision of population with doctors of all specialties has increased by 2%, and the provision of population with paramedical personnel has decreased by 5%. However, the number of doctors in the region is considerably lower than in Russia as a whole (*tab. 2*).

According to the Vologda Oblast Department of Health, at the beginning of 2012, health care institutions were staffed with doctors by 87.5%, with paramedical personnel by 93.2%. The absence of higher medical educational institutions in the Oblast is one of the reasons for the shortage of doctors. Therefore, to solve the human resources problem, the Oblast Department of Health cooperates with medical

academies and universities of Yaroslavl, Saint Petersburg, Arkhangelsk, Ivanovo, Kirov and Tver. In addition, a draft project of the departmental target programme ‘Personnel of the Vologda Oblast health care system for 2013 – 2015’ has been developed.

2. Low level of remuneration in the health sector. Despite its significant growth, its level is 30% lower than for the economy as a whole (*tab. 3*).

3. Significant depreciation of high-tech medical equipment and a shortage of premises for primary health care facilities. This problem is especially acute in the cities of Vologda and Cherepovets. So, in Vologda, adults and children’s polyclinics occupy one and the same building (budgetary healthcare institution Vologda municipal polyclinic No. 3, budgetary healthcare institution Vologda municipal polyclinic No. 4), which hampers the provision of services to the ever growing population.

Table 2. Provision of population with doctors and paramedical personnel, people per 10000 population

Territory	Year						Rank in RF in 2011
	2000	2005	2008	2009	2010	2011	
<i>Provision of population with doctors of all specialties, people per 10000 population</i>							
Russian Federation	46.8	48.8	49.6	50.1	50.1	51.2	
Vologda Oblast	34.1	35.3	36.1	35.5	34.6	34.8	76
<i>Provision of population with paramedical personnel, people per 10000 population</i>							
Russian Federation	107.6	107.7	105.9	106.2	105.6	107.0	
Vologda Oblast	120.2	119.7	119.2	116.5	115.9	114.4	40

Sources: Demographic yearbook of the Vologda Oblast: statistical abstract. Vologda: Vologdastat, 2012; Russia in figures. 2012: stat. coll. Moscow: Rosstat, 2012; Socio-economic indicators of the Russian Federation in 1991 – 2011 (supplement to the statistical digest ‘Statistical yearbook of Russia. 2012’) Available at: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1270707126016

Table 3. The average monthly nominal accrued wages of employees in the system of health care and social services

Territory	Year							
	2000	2005	2006	2007	2008	2009	2010	2011
<i>Average monthly nominal accrued wages of employees in the system of health care and social services, rubles</i>								
Russian Federation	1333.3	5905.6	8060	10037	13049	14820	15724	17545
Vologda Oblast	1842	6408	7612	9519	12627	12181	12934	14411
<i>Ratio of nominal accrued wages in the health care system to that of the economy as a whole, %</i>								
Russian Federation	60.0	69.0	75.8	73.8	75.5	79.5	75.0	75.1
Vologda Oblast	71.9	72.6	71.4	73.7	78.4	73.5	69.8	71.2

Sources: Federal State Statistics Service. Available at: <http://www.gks.ru>; Labour and employment in Russia. 2011: statistical abstract. Rosstat, 2012; Labour and employment in the Vologda Oblast: 2007 – 2011: statistical abstract.. Vologdastat, 2012.

In order to solve the existing health problems and improve the demographic situation, the Vologda Oblast Health Care Modernization Programme in 2011 – 2012 has been developed (hereinafter – the Modernization Programme) under the Federal Law ‘On compulsory medical insurance in the Russian Federation’ No. 326-FZ dated November 29, 2010 (Chapter 11, Article 50).

The Programme was aimed at improving the quality and availability of medical aid provided to the Vologda Oblast population. The Programme contains three main objectives: 1) upgrading and modernization of state and municipal health care facilities and infrastructure; 2) introduction of modern information systems; 3) introduction of the

standards of medical care, enhancement of the availability of outpatient medical care, including that provided by medical specialists (*tab. 4*).

The total volume of funding allocated to the Modernization Programme for 2011 – 2012 amounted to 5 billion rubles, including from the federal budget – 2.6 billion rubles (52%). The Vologda Oblast received an additional sum of 678.7 million rubles from the federal budget in 2011 for the successful implementation of the Programme (*tab. 5*). The Modernization Programme was funded mainly by the Federal Compulsory Medical Insurance Fund (FCMIF): the expenses amounted to 84% of the total volume of expenses, and the budget funds accounted for only 12%.

Table 4. Objectives and a list of activities planned in the framework of the Vologda Oblast Health Care Modernization Programme for 2011 – 2012

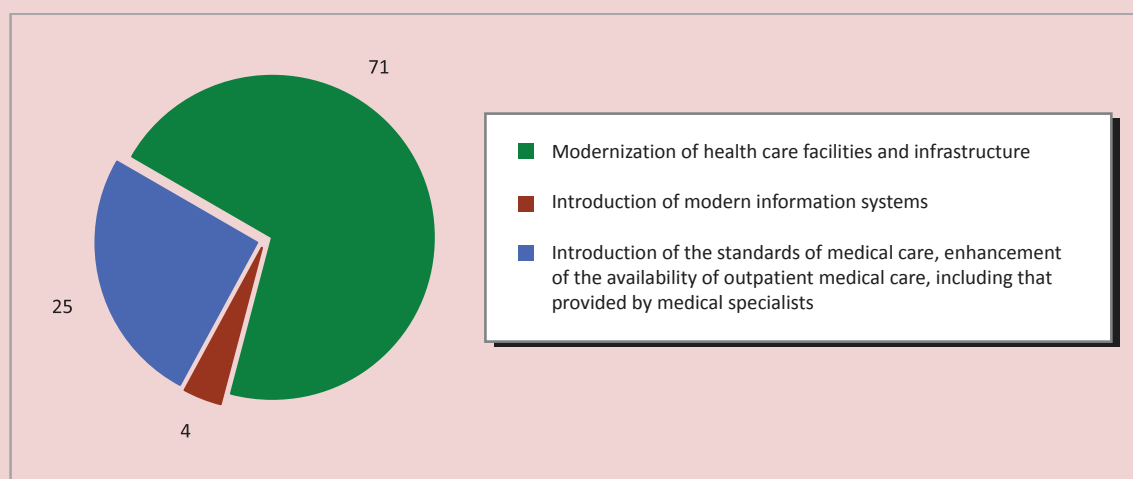
No.	Objectives	Activities in the framework of the objectives
1.	Upgrading and modernization of state and municipal health care facilities and infrastructure	<ul style="list-style-type: none"> - reform of health infrastructure, bringing it in accordance with the oblast population structure, with the oblast structure of morbidity and mortality, reforms of the network and structure of health care institutions in accordance with the number of health institutions of the oblast in accordance with the adopted classification, including medical organizations of other forms of ownership and departmental identity; - provision of duty-dispatcher services with computers and provision of ambulances with equipment on the basis of GLONASS or GLONASS/GPS technology; - carrying out extensive and current repair; - completion of the ongoing construction of the objects.
2.	introduction of modern information systems in health care	<ul style="list-style-type: none"> - patient-specific record-keeping of medical services, introduction of electronic medical cards; - booking an appointment with the doctor online; - exchange of telemedical data, introduction of electronic document flow; - introduction of the unified register of health care workers; - introduction of electronic passports of medical institutions; - introduction of passports of the Vologda Oblast health care system.
3.	Introduction of the standards of medical care, enhancement of the availability of outpatient medical care, including that provided by medical specialists	<ul style="list-style-type: none"> - gradual transition to the provision of health care services in accordance with the medical care standards, established by the Ministry of Health and Social Development of Russia; - gradual transition by 2013 to the inclusion of expenses on communication, transport, communal and maintenance services, etc. into the tariffs on medical services paid at the expense of compulsory medical insurance; - prophylactic medical examination of 14-year-old adolescents; - staffing of organizations with medical specialists and paramedical personnel, providing outpatient medical care; - provision of outpatient medical care, including by medical specialists, in accordance with the standards, including provision with medicine and expendables necessary for carrying out diagnostics and treatment; - introduction of the result-oriented system of labour remuneration of medical specialists and paramedical personnel, providing outpatient medical care.
Source: ‘On the Vologda Oblast Health Care Modernization Programme in 2011 – 2012’: Decree of the Vologda Oblast Government No. 183 dated March 03, 2011.		

Table 5. Financial support of the Vologda Oblast Health Care Modernization Programme in 2011 – 2012, million rubles

Section of the Programme	Total amount of funding including additional funding	Including the funds of		
		Federal CMIF	budget	Territorial CMIF
Upgrading and modernization of health care facilities and infrastructure	3520.7	2953.9	566.8	0
Informatization	189.6	174.7	14.9	0
Standardization and availability of medical services	1264.2	1044.8	6.5	212.9
Total	4794.5	4173.4	588.2	212.9

Source: Public report on the performance results of the Vologda Oblast Department of Health for 2012. Vologda, 2013.

Figure 4. Expenses on the implementation of the Vologda Oblast Health Care Modernization Programme in 2011 – 2012 by its sections (in % of the total expenses)



Source: Public report on the performance results of the Vologda Oblast Department of Health for 2012. Vologda, 2013.

In the framework of the Health Care Modernization Programme, most part of the funds was spent on the upgrading and modernization of health care facilities (71% of total expenditures), 25% was spent on the standardization and availability of medical services, 4% – on informatization (*fig. 4*).

Population's estimates of the availability and quality of medical services can help to reveal the changes in the health care system. According to sociological studies, about 70% of the Vologda Oblast population request medical assistance annually, including over 20% - once in three months and more frequently.

In 2012, 42% of the Oblast residents were fully and mostly satisfied with the availability of medical care, 35% were partially satisfied, 23% were not satisfied with it⁴. In general, this corresponds to the level of 2008.

⁴ ISEDТ RAS carries out the annual survey, beginning from 1999 in April – May in Vologda, Cherepovets and eight districts of the Vologda Oblast. The sample size is 1500 respondents. Representativeness of the purposeful and quota sample is provided by the following conditions: the proportion of the urban and rural population, the proportion of the residents of various types of settlements (rural settlements, small and medium-sized towns), the proportion of the age and gender structure of the oblast adult population. The sampling error does not exceed 3%. SPSS and Excel were used for the data processing.

Table 6. Negative aspects in the activities of the Vologda Oblast health care institutions (% of the number of citizens, who requested medical assistance in health care facilities and chose the answer option: 'partially satisfactory', 'mainly unsatisfactory', 'completely unsatisfactory')

Negative aspect	2002 – 2006	2008	2010	2012
Inability to get an appointment with a doctor at a convenient time, big queues	58.1	56.7	59.4	49.7
Absence of necessary specialists	-	24.9	34.8	34.3
Careless treatment on the part of medical personnel	-	18.0	24.2	23.5
Rudeness of medical personnel and disrespectful treatment of patients	15.2	11.5	12.5	18.3
Lack of information on the work of specialists	21.0	14.7	23.5	18.2
Necessity to pay for the medical services that are to be provided free of charge	16.9	9.9	14.5	17.2

According to the analysis of the time series, the reforms carried out in the health care sphere had a positive impact on the organization of work in health care institutions. However, almost half of the Oblast population point out such negative phenomena, as queues in medical institutions and the inability to get an appointment with a doctor at a convenient time (*tab. 6*). The issue concerning the shortage of medical personnel also remains unsettled, as health care institutions need to be staffed with qualified specialists (34% in 2012). The problem of medical ethics, in particular, a careless and disrespectful treatment of patients is also quite urgent, according to people's estimates (18% of the population).

In addition, the population is dissatisfied with the remoteness of medical institutions from the place of their residence (10 – 13% in large cities and 22% in rural areas); the unsatisfactory level of the specialists' qualification (42%) and the poor quality of medical equipment (36%).

Assessing the changes in the health care system over the last 5 years (*tab. 7*), urban residents point out a marked improvement in the equipment of medical institutions (37%). In general, urban residents noted a certain improvement in the quality and availability of medical services; as for rural residents, the share of answers 'deteriorated' prevails over the share of answers 'improved' for the vast majority of points characterizing health care services. It should be emphasized that a significant part of

the respondents (up to 20%) do not point out any changes in health care for the period under consideration.

Thus, in their answers concerning the quality and availability of medical services, the residents give different estimations of the Programme implementation results, which is explained by the short period of its realization.

The cooperation between software developers and medical professional community concerning objectives, tasks and implementation of activities stipulated by the programmes should become an important direction of social policy in the sphere of health care. The implementation efficiency of the current policy depends on the participants' noticing and understanding of the ongoing transformations. Therefore, in our opinion, it would be relevant and timely to analyze the medical employees' awareness of the objectives, tasks and implementation of the Vologda Oblast Health Care Modernization Programme in 2011 – 2012.

For this purpose, a questionnaire survey of the personnel of the oblast health care facilities⁵ was conducted in the course of the research. The majority of respondents (82%) are doctors, 13% – heads of departments, 4% – administrative personnel, less than 1% – nurses and employees of support services (accounting, personnel department, etc.).

⁵ The survey was conducted in July 2012 in Vologda, Cherepovets and district centres of the oblast. Sample size was 656 respondents working in the Vologda Oblast health care institutions. SPSS and Excel were used for the data processing.

Table 7. Distribution of answers to the question: 'How has the availability and quality of health services changed over the last 5 years?' (in % of number of respondents)

Answer option	Vologda	Cherepovets	Districts	Oblast
Technical equipment				
Improved	36.9	37.4	11.0	22.9
Not changed	32.5	32.9	42.8	38.3
Deteriorated	8.4	9.3	18.8	14.3
It's difficult to answer	22.2	20.4	27.3	24.5
Availability of medical services				
Improved	19.7	21.1	7.0	13.2
Not changed	55.2	56.0	52.1	53.7
Deteriorated	12.3	16.1	21.8	18.6
It's difficult to answer	12.8	6.8	19.1	14.4
Quality of services				
Improved	20.2	16.6	5.4	11.0
Not changed	44.8	47.7	46.1	46.4
Deteriorated	16.7	22.9	26.5	23.9
It's difficult to answer	18.2	12.8	22.0	18.6
Qualification of medical personnel				
Improved	17.2	15.3	5.8	10.4
Not changed	47.3	53.3	48.6	49.8
Deteriorated	19.2	16.6	22.5	20.2
It's difficult to answer	16.3	14.8	23.1	19.5
Staffing				
Improved	19.2	14.3	5.1	10.0
Not changed	32.5	40.5	41.0	39.5
Deteriorated	26.6	26.9	29.6	28.3
It's difficult to answer	21.7	18.3	24.3	22.1

The distribution of employees of health facilities in five-year groups of work experience (not more than 5 years, from 10 to 15 years from 15 to 20 years, etc.) is uniform (from 12 to 17%), 5% of respondents have working experience of over 35 years.

The majority (72%) of respondents are well informed about the implementation of the Health Care Modernization Programme in the Oblast, 26% only 'heard' about it, 2% proved to know nothing about it. 52% of employees evaluated the effects from the implementation of the Modernization Programme in their health care institution as 'positive', 40% stated that it had 'no significant impact'; 4% gave a negative assessment (*fig. 5*).

An interesting relationship has been revealed between the degree of awareness of employees of medical institutions concerning the Pro-

gramme implementation and their estimation of its influence on the development of the facility where they work. Thus, 64% of employees, who are well-informed about the realization of the Modernization Programme, claim that the situation in the hospitals has improved, and 28% hasn't noticed any significant improvement (*tab. 8*). At the same time, 64% of the respondents among those who have not heard about the ongoing changes, consider, that the Programme has 'no significant impact on the situation in the health care institution where I work', and 14% pointed out that it 'negatively affects the existing state of affairs in the health care institution where I work'. This supports the hypothesis that the efficiency of reforms implementation depends on the extent, to which the participants of the process are aware of them and included in the implementation of innovations.

Figure 5. Distribution of answers to the question concerning the impact of the Vologda Oblast Health Care Modernization Programme on the development of health care facilities (% of the number of respondents)

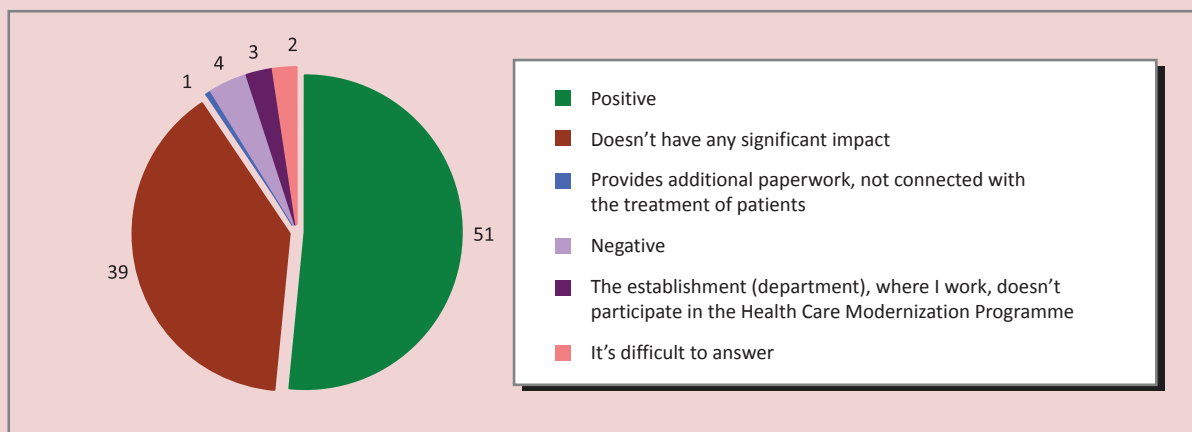


Table 8. Relationship between the degree of awareness of employees concerning the implementation of the Health Care Modernization Programme and their estimation of its influence on the development of the health care facility (in % of number of respondents)

Answers to the question: 'In your opinion, does the Health Care Modernization Programme have an impact on the institution where you work?'	Answers to the question: 'Do you know that the Health Care Modernization Programme is being implemented in the Vologda Oblast?'		
	Yes, I am well aware of it	I have heard about it	No, I am not aware of it
Has a positive impact on the situation in the health care institution where I work	64.3	20.3	7.1
Has no significant impact on the situation in the health care institution where I work	28.3	66.3	64.3
Negatively affects the existing state of affairs in the health care institution where I work	3.2	4.7	14.3
It's difficult to answer	1.9	3.5	7.1
The establishment (department), where I work, doesn't participate in the Health Care Modernization Programme	1.5	5.2	7.1
Provides additional paperwork, not connected with the treatment of patients	0.9	0.0	0.0

Source: survey of the employees of health care facilities on the Health Care Modernization Programme, 2012.

The Modernization Programme is also aimed at **introducing the standards of medical care**, which stipulated the increase of remuneration in the health care system. According to the results of the survey, only 12% of respondents noted a significant increase in wages, almost a half of respondents (47%) pointed out a slight increase, one-third (31%) said it remained at the same level (*tab. 9*). It is the employees of municipal rather than rural health care institutions who noted the increase of remuneration to a greater extent.

According to the personnel of health care institutions, wages increase in the framework of the Modernization Programme happened due to the increase of funding (as 40% of respondents noted) and also due to the increase in the workload of the staff (27%).

The next aspect of the Modernization Programme was **the upgrading of health care facilities and infrastructure**. During the implementation of the Programme in the Vologda Oblast, 210 facilities (departments, rooms in medical institutions) in 66 health

Table 9. Territorial distribution of the evaluation of the impact of the Modernization Programme on the changes in remuneration (in % of number of respondents)

Respondents' assessment of the impact of the Modernization Programme on the changes in remuneration	Settlement		
	City/town	District centre	Rural area
Wages increased considerably	11.4	16.9	0.0
Wages increased, but not significantly	45.9	50.3	50.0
Wages remained the same	31.3	28.2	50.0
Wages decreased	3.4	1.5	0.0
Depends on the position (doctor, nurse, medical attendants)	0.4	0.0	0.0
The institution, where I work, doesn't implement this direction	6.0	2.1	0.0
It's difficult to answer	1.6	1.0	0.0

Source: survey of the employees of health care facilities on the Health Care Modernization Programme, 2012.

care facilities have been repaired, 662 units of medical equipment, including 66 transport vehicles have been purchased. All ambulances and duty-dispatcher services have been equipped with GLONASS navigation system for choosing the optimal route to the patient's location [5].

Despite the bulk of work done, not all the health care facilities had an opportunity to participate in the implementation of the Modernization Programme, in particular, the institutions providing specialized medical care (T.B. prophylactic centres, psychoneurological, narcological prophylactic centres), secondary medical schools, child care centres, etc.

In the course of the survey, the personnel of medical institutions answered the question: 'Have you noticed that the medical institution, in which you work, is receiving new equipment, and extensive repairs are being carried out there?'. The analysis of the survey results proved that almost a half (43%) of respondents answered in the affirmative, 26% haven't noticed any changes. As for rural areas, more respondents point out extensive repairs (71%) than the purchase of new equipment (7%; *tab. 10*). Over a half (63%) of respondents living in district centres noted the implementation of both directions of the Programme, whereas urban residents were more critical: 33% of respondents didn't notice any changes; 35% noted extensive repairs and the purchase of new equipment, 16% noted only extensive repairs.

The third direction, contained in the Modernization Programme, is **the introduction of modern information technologies in health care** (in particular, booking an appointment with a doctor online). According to the survey, more than a half (64%) of surveyed personnel of health care facilities stated that this direction of modernization has not been realized to the fullest.

Health care workers were encouraged to express their suggestions on the Health Care Modernization Programme implemented in the Vologda Oblast. The most popular (16%) proposal was to continue the implementation of the Programme in the health care facilities that are already participating in it and to launch the Programme in other ones (*tab. 11*). Only 11% of respondents pointed out the necessity of wages increase, 3% suggested that the volume of reporting documentation should be reduced.

Despite the fact that only 30% of the health care personnel expressed their **suggestions concerning the Modernization Programme**, we consider that the Vologda Oblast Department of Health should take their opinion into account while developing further activities in the framework of the programmes implemented in the region. So the following proposals are viewed as important: 'a doctor's salary should not depend on the performance of the whole department', 'the needs of health care facilities should be taken into account in the implementation of the Programme directions',

Table 10. Distribution of answers to the question: 'Have you noticed that the medical institution in which you are working, is receiving new equipment, and extensive repairs are being carried out there?', territorial distribution (in % of number of respondents)

Answer option	Settlement		
	City/town	District centre	Rural area
New equipment is being purchased and installed, and extensive repairs are being carried out	34.7	63.1	7.1
Extensive repairs of facilities are being carried out	16.3	20.0	71.4
New equipment is being purchased and installed	9.6	6.2	7.1
Extensive repairs are being carried out, but their quality is not satisfactory and the timing is not observed	1.1	1.5	0.0
New equipment is being purchased and installed, but it doesn't comply with all the necessary requirements	0.7	0.5	0.0
I haven't noticed any changes (there are no such changes in the framework of the Programme)	33.3	9.7	14.3
The institution doesn't implement this direction	3.8	0.0	0.0
Current repairs are being carried out	1.8	0.5	0.0

Source: survey of the employees of health care facilities on the Health Care Modernization Programme, 2012.

Table 11. Distribution of suggestions of health care workers concerning the Vologda Oblast Healthcare Modernization Programme (in % of number of respondents)

Answer option	Share of workers who proposed the activity, %
<i>Suggestions concerning the current activities of the Programme (39.3%)</i>	
Further implementation of the Programme directions (in the health facilities already participating in the Programme) and the launch of the Programme in other ones	16.3
Increase in wages and salaries	11.4
Reduction in the volume of documentation	3.4
Reduction of workload	2.4
Introduction of a greater number of standards	2.0
Extensive use of internet technologies (online consultations for patients, distance training of medical personnel)	1.5
Elimination of dependence of a doctor's salary on the fulfillment of the plan of his/her visits to the patients (replacement for its dependence on the quality of medical care, the number of recovered patients or the improvement in the patients' health condition)	1.5
Elimination of the dependence of a doctor's salary on the performance of the whole department	0.5
Enhancement of control (increase in the number of inspections by superior bodies)	0.3
<i>Suggestions concerning new directions to be included into the Modernization Programme (16.4%)</i>	
Development of measures aimed at the attraction and retaining of the staff (provision with housing, health resort treatment, enhancement of medical workers' prestige in the society, etc.)	7.3
Inclusion of other services and departments of medical institutions into the Modernization Programme	6.6
Consideration of the needs of health care institutions in the Programme implementation	0.9
Encouragement of patients to undergo preventive treatment	0.8
Modernization of inpatient care (e.g. bedspace shouldn't be reduced, therapeutic and protective regimen for patients should be introduced)	0.6
Elimination of services not related to the provision of medical care in health care facilities	0.2
The Programme is inefficient, useless	3.5
Share of those, who didn't put forward any suggestions	70.0

Note: the sum of answers doesn't make 100%, because several respondents could point out the same direction.
Source: survey of the employees of health care facilities on the Health Care Modernization Programme, 2012.

‘in-patient treatment should be upgraded (for example, bedspace shouldn’t be reduced, therapeutic and protective regimen for patients should be introduced).

Thus, the research has shown that for the Health Care Modernization Programme implementation period, population’s assessments of the availability of medical services have not changed. Urban residents pointed out the improvement in the health services more often. For example, according to their estimates, the technical equipment of medical institutions has improved significantly (37%); positive changes have occurred in the organization of work of health care institutions (the share of population, who are tired of queues and the inability to get an appointment with a doctor at a convenient time, has reduced from 59% to 50%).

Medical workers, as an interested party, i.e. the executors of the project, are better informed about the essence of the reforms, but their assessments are ambiguous. 52% of employees stated that the changes in the activities of health facilities in the course of the Programme implementation were positive; 40% responded that it has ‘no significant impact’.

In conclusion, we should note that positive trends in the activities of the Vologda Oblast health care institutions should be promoted and the modernization of the regional health care system should carry on. For enhancing the efficiency of implemented programmes, it is necessary to conduct the monitoring of statistical and financial indicators and the assessments of ongoing changes by the population and health care employees.

References

1. Demographic yearbook of the Vologda Oblast: statistical abstract. Vologda: Vologdastat, 2012.
2. Kalashnikov K.N., Shabunova A.A., Duganov M.D. Organizational and economic factors of the regional health system management: monograph. Vologda: ISEDT RAS, 2012.
3. On the Health Care Modernization Programme in the Vologda Oblast in 2011 – 2012: Decree of the Vologda Oblast Government No. 183 dated March 04, 2011.
4. Official website of the Federal State Statistics Service. Available at: <http://www.gks.ru>
5. Public report on the performance of the Vologda Oblast Department of Health for 2012. Vologda, 2013.
6. Shabunova A.A., Shakhotko L.P., Bobrova A.G., Malanicheva N.A. Able-bodied population mortality in Russia and Belarus as a threat to the demographic development of the territories. Economic and social changes: facts, trends, forecast. 2012. No. 2(20). P. 72-82.
7. Ulumbekova G.E. Health care in Russia. What is to be done: scientific substantiation of the Health Care Development Strategy of the Russian Federation up to 2020. Moscow: GEOTAR-Media, 2010.
8. Shabunova A.A. Public health in Russia: state and dynamics. Vologda: ISEDT RAS, 2010.
9. World health statistics. Geneva: WHO, 2011.