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Analysis of the Prevalence of Socially Significant Non-communicable Diseases in the Russian Federation at the Present Stage

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Abstract--- *Socially significant diseases represent enormous damage to society associated with high morbidity, temporary disability, disability, and mortality. An integrated approach to the treatment of patients with this group of diseases requires huge costs for diagnosis, rehabilitation, prevention of premature mortality, social support for patients, as well as preventive measures against crime (drug and alcohol abuse). The aim of the study was to analyze the epidemiological situation on the prevalence of socially significant noncommunicable diseases. The methods of analytical processing of official statistics (www.Gsk.ru) were used in the present study. It is established that the priority solution to the problem of social diseases is the prevention of risk factors of their development with the implementation of modern technologies of prevention. This will allow for purposeful and successful use of economic and medical resources for primary prevention of socially significant diseases and improvement of the population.*

Keywords--- *Socially Significant Diseases, Risk Factors, Preventive Medical Examination, Formation of a Healthy Lifestyle.*

I. INTRODUCTION

Presently, in the Russia Federation, the epidemiologic situation remains unfavorable due to an increase in the rate of non-communicable social diseases. Socially significant diseases (social diseases) are diseases that are characterized by a high morbidity rate. These diseases are significant for society and threat a great number of people. Epidemiologic observations provided grounds for making a list of socially significant diseases. The criteria of inclusion into this group of diseases are defined in the Federal Law 323 "Public health protection" dated 09.11.11 that include a high rate of primary disablement and morbidity rate and a decrease in the life expectancy. This list includes diseases that are characterized by an elevated level of blood pressure, diabetes mellitus, neoplasms, the disease caused by HIV, tuberculosis, hepatitis, sexually transmitted infections, mental and behavioral disorders.

According to the Federal target-oriented program "Prevention and treatment of socially significant diseases (2007-2012)", patients with these diseases require more medical help as their condition worsens and complications develop [1,2,3,4,5]. Treatment of such patients requires additional costs and improvement of material and technical basis in medical institutions. Socially significant diseases represent a great burden for the society associated with a

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temporary or permanent loss of working ability. In general, around 15% of the world population have different disabilities (i.e. out of more than 1 billion people, 110-190 million people have significant limitations in different spheres of life). The data presented in the WHO report in 2011 "Disabilities in the world" [6,7,8,9,10] was sparse. In Russia, 16.4% of the population had some disability and the number of lost employable years (Years Lived with Disability) was 10 per 100 people in 2014. Disabilities among the employable population is a critical aspect in the demographical development in Russia. In some subjects of the Russian Federation, the demographical situation requires immediate measures.

The morbidity rate of the population provides the basis for planning the healthcare service recourses in different types of medical help. The increase in the general morbidity rate in 2013-2014 in the Russian Federation (excluding the Crimea Federal District) was 14.8%. In 2014, in the Russian Federation (excluding the Crimea Federal District), the general morbidity rate was 160,911.3 per 100,000 people (including the Crimea Federal District – 160,670.3 per 100,000 people).

In 2017, the growth of the general morbidity rate in the Russian Federation (excluding the Crimea Federal District) was 3.0% in comparison with 2013. On the one hand, the morbidity rate represents the spread of the pathology among the population, and on the other hand, the availability of medical care. Thus, an increase in the morbidity rate among the population (both general and specific to a certain class of diseases) should not be considered as a strictly negative event.

In comparison with 2013, in 2017, there was an increase in the morbidity rate of the diseases of endocrine system, eating disorders, metabolic disorders (+21.4%), neoplasms (+14.8%), diseases of musculoskeletal system and connective tissue (+8.5%), diseases of the genitourinary system (+7.5%), congenital abnormalities, deformities and chromosomal disorders (+6.2%), diseases of the ear and mastoid process (+6.1%), diseases of nervous and digestive systems (+5.0%), diseases of respiratory system (+4.7%), diseases of the circulatory system (+3.6%). The rate of registration of symptoms, signs, and deviations revealed in clinical and laboratory studies decreased (-62.5%), as well as the rate of mental and behavioral disorders (-11.1%) [11,12,13,14,15].

The analysis and evaluation of economic damage due to the disabilities of the employable population are acute at the modern stage of the realization of federal programs on the improvement of the health status of employable population and stabilization of the demographical situation in the country. All the above-mentioned facts indicate the relevance and necessity in the profound study of the problem of socially significant diseases.

Primary features of socially significant diseases include:

- Large scale, i.e. a high rate of morbidity among the population, including a significant ratio of unrevealed patients in the society;
- A high rate of the annual increase in the number of patients. Diseases from this group spread quite fast;
- Limitation of patient's abilities in the society;
- Danger to the surrounding people;
- Infectious and non-infectious character.

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It is evident that the majority of socially significant diseases are associated with each other and the development of one disease can contribute to the development of others. All the mentioned socially significant diseases have risk factors and factors of protection. The awareness about these factors can play an important role in the organization of preventive measures. Risk factors are associated with a high possibility of the development, higher degree of severity or long-term morbidity of the disease [16,17,18,19,20,21,22].

II. MATERIALS AND METHODS

The authors used content-analysis and methods of standardization. The statistical analysis of the morbidity rate of the diseases in Russia was performed based on the data provided by the Ministry of Healthcare of the Russian Federation (Open access statistical data for 2014-2017, https://www.rosminzdrav.ru/).

III. RESULTS

Protective factors (PF) are the conditions that increase human resistance to risk factors (RF) and diseases. They are defined as factors that modify, improve or change the human reaction to some environmental RF that contribute to the development of adaptive abilities disorders. Thus, the main aim of practical healthcare on the prevention of socially significant diseases is the prevention of RF that promote diseases development. The number of RF is great and is increasing annually [3].

The main RF is health impairing behavior; its impact is around 50% of all the factors. The rest 50% is occupied by genetic, environmental, and medical factors.

At the same time, according to the WHO, few people in Russia prefer a healthy lifestyle:

Not less than 62% of men and 15% of women smoke. In general, cigarettes consumption is around 15 packs per person per month.

70% of men and 47% abuse alcohol. Alcohol consumption of pure spirit in the Russian Federation is one of the highest in Europe (13.5 L per capita per year).

20% of men and 25% of women are overweight.

38% of boys and 59% of girls are not involved in sport.

RF contribute greatly to the development of cardiovascular diseases (CVD) that have an epidemic character. CVD is one of the most acute issues in scientific medicine and practical healthcare in the second part of XX and the beginning of XXI centuries. According to the population studies, a significant part of the adult population (around 40% in Russia) has an elevated blood pressure (BP). Elevated BP is an independent risk factor of the development of CVD like ischemic heart disease (IHD), myocardial infarction (MI), chronic heart failure (CHF), cerebral stroke, and their unfavorable events. There is a linear dependence between the level of BP and the rate of complications. A decrease in BP resulted from the treatment is associated with a proportional decrease in the rate of CVD and mortality rate regardless of the initial level of BP. However, the adequate control of BP is achieved in 30-50% of patients in countries with a high level of healthcare development, in Russia – in 24% of patients [5, 6]. In 2011 [7], there were 14% of patients with CVD out of the total amount of registered patients.

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Still, not long ago, their share was around 10% (10.5% in 2017, 9.2% in 2010 and 2015). From 2014 to 2018, the most significant increase in the registered primarily morbidity (by 53%) was observed in this class of the diseases [7].

CVD significantly worsen the quality of life and lead to disabilities being one of its main causes. Thus, among the population aged 18 years old and more who were registered with disabilities for the first time, in 39.5%, the disability was caused by CVD. Along with this, the social significance of CVD is determined not only by their rate but by their severity. Hypertensive disease (HD) and ischemic heart disease (IHD) occupy the 2nd place among the death causes in the majority of economically developed countries, including Russia [5, 8]. Annually, 1.2 million people die from MI, cerebral stroke and kidney failure in Russia. Among them, 150,000 people are younger than 60. It is 55% of the total mortality rate. In Russia, this parameter is 2-4 times higher than in Western European countries, USA, Canada, and Australia. CVD are the main causes of temporary loss of working ability. They occupy the 1st place among the causes of disabilities and early mortality (supermortality) [2]. Along with this, during the past 40 years, the structure of CVD in childhood and adolescence underwent significant changes. The ratio of CVD of non-rheumatic origin increased. According to the population studies performed in the RF, arterial hypertension (AH) among children and adolescents was observed regardless of age and chosen criteria in 2.4-18%. There was some evidence obtained on the real influence of essential AH that develops in adolescent and young age on the prognosis of CVD and mortality [4, 5].

Thus, a profound examination of adolescents to reveal AH and timely treatment are essential for the primary prevention of CVD. Presently, the main RF are established for CVD and diabetes mellitus (DM) for people who live in the XXI century.

It should be taken into account that a combination of RF of CVD significantly increases the mortality rate from MI. It is minimal in non-smokers without AH and elevated levels of cholesterol in the blood. When the level of cholesterol increases, the morbidity increases by 2 times. In combination with a high level of BP, it increases by 7 times. In combination with glucose impairment and elevated content of triglycerides, it increases by 15 times. The risk of the repeated MI in patients that had MI in the anamnesis increased by 15 times [9].

Diabetes mellitus (DM) is a dangerous disease which spread acquired the epidemic scale. Thus, according to the International Diabetes Federation, in 47 European countries, there are 52.8 million people with DM aged 20-79 years old.

In the RF, there are more than 3.1 million patients with DM; 2,822,634 of them have DM type 2. However, the data of the control epidemiologic studies conducted by the Federal State Institution Rosmedtechnologii showed that the actual morbidity rate of DM is around 9 million people. The morbidity rate of DM type 2 increases with age and equals to 8% in patients older than 60 years old. DM is a colossal RF from cardiovascular diseases.

The dynamics of the morbidity rate by the main classes is presented in Figure 1.

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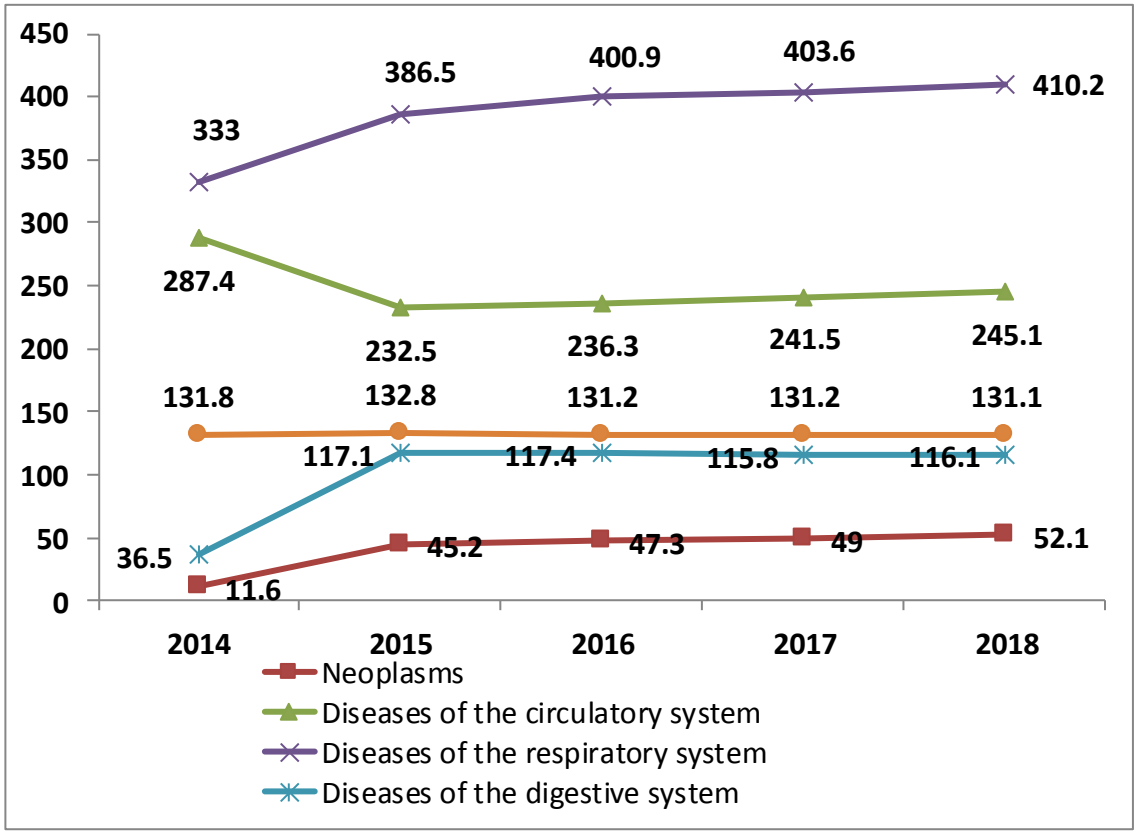

Figure 1: Dynamics of the Morbidity Date in Russia by the Main Classes of Diseases in 2014-2018 (%)

IV. Discussion

The results of the EuroHeart survey showed that among patients with acute MI, 60% had carbohydrate metabolism impairments and every 4th patient had DM type 2. The results of epidemiologic studies showed that, presently, DM is 1 of 10 main causes of mortality. But by 2020, DM type 2 and the caused complications can become the main issue in healthcare in all the regions. The situation is aggravated by the fact that in 90% of cases, DM type 2 is associated with obesity. I degree of obesity increases the risk of DM development by 3 times, II degree – by 5 times, and III degree – by 10 times. According to the WHO, these two pathologies are taken as noninfectious epidemics due to their wide spread. The role of RF is significant in the development of such socially significant diseases as oncologic ones and tuberculosis [11, 12].

Oncologic pathology is constantly increasing. The mortality rate is lower only than in patients with CVD. In 2017, there were 7,189,286 oncological patients registered (4,897.2 per 100,000 population). The number of patients with the primarily diagnosed oncologic disease was 1,258.1; the annual mortality rate was 27.4 per 100,000 of patients [13].

Despite the development of specialized modern oncologic centers, severe forms of the diseases (III-IV stages) are observed in up to 50% of patients, while initial stages are revealed only in 10-15% of patients. This provides a constant growth of the share of patients with disabilities due to malignant neoplasms (up to 20.5%).

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According to the WHO, the main RF to the development of malignant tumors:

- Urbanization.
- Bad ecology.
- Health-detrimental behavior, in particular, improper eating behavior.

It was established that excessive body weight and dietary factor are RF for the development of breast, gastric and intestinal cancer. These particular localizations occupy a leading place in oncology. The study that included vegetarian men that did not smoke and did not consume alcohol showed that that the increase in the body mass index was associated with an increase in the general mortality rate, IHD, cerebral stroke, and oncologic diseases.

Mental and behavioral disorders. A serious threat to the social welfare of people is represented by mental disorders. Presently, the WHO reports a tendency towards an increase in the rate of mental disorders. Around a quarter of the population in the developed and developing countries suffer from certain mental disorders in different periods of their lives. Presently, there are 120 million people with depression and 37 million people with Alzheimer disease registered in the world. Around 50 million people suffer from epilepsy and 24 million – from schizophrenia. In Russia, in 2017, 6,145,884 people with mental disorders applied for medical help to psychoneurological institutions (4,186.4 per 100,000 people). The number of patients with primarily diagnosed mental disorders was 70,263, the morbidity rate was 49.2 per 100,000 people [13].

The number of disabled people due to mental disorders is increasing. More than half of them are patients of employable age. According to the medical statistics, from 2000s, the RF is one of 5 countries with the highest rate of suicide cases. A high rate of primary morbidity with mental disorders, especially with borderline pathology, is registered in adolescence under the influence of two natural processes: intensiveness of personal socialization and active physiological transformation of the organism. Thus, a serious problem in the adolescent period is an insufficient social adaptation that is expressed as a high rate of behavioral disorders: from proneness to conflict to behavior that leads to illegal acts.

Health status and medical-social problems of modern children and adolescents represent a special problem in modern Russian society (Figure 2). Socially significant diseases in childhood and adolescence cannot but influence the health status and disabilities in future age periods. A decrease in the quality of reproduction of further generations can be anticipated. The parameters of health of children and adolescents reflect the actual level of life of the population and significantly depend on social-hygienic characteristics of the family, lifestyle of this group of people, and behavior in the society.

The dynamics of the morbidity rate (Figure 2) in children indicate that children and adolescents are in the group of high medical-social risk.

The programs of periodic health examination. The problem of early diagnostics of socially significant diseases is acute and remains one of the main for practical and scientific medical society. Early diagnostics of socially significant diseases and RF of their development are the aims of target-oriented programs of periodic health examination.

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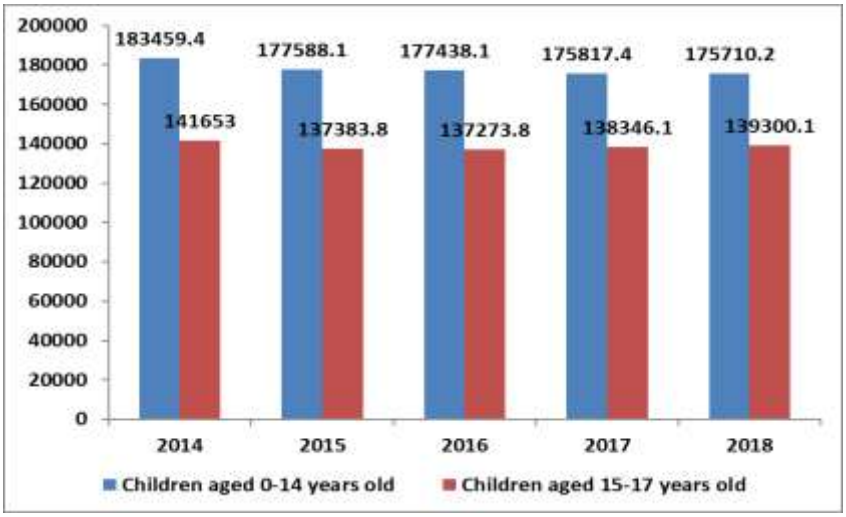

Figure 2: The Dynamics of General Morbidity Rate in Children in 2014-2018 in Russia (Per 100 000 of the Respective Population)

These programs are realized by doctors of primary medical care that are the first to contact with patients, to make early diagnostics of the disease, to perform preventive measures and to treat patients.

I. Periodic health examination of children and adolescents is aimed at regular observation of the health status of these groups of people along with the performance of preventive measures that provide optimum development and prevent diseases.
II. Target-oriented programs on early diagnostics of CVD in people aged 35-5 years old and target-oriented programs on early diagnostics of diseases in adolescents during the before-doctor examination include:
    1. measurement of BP;
    2. evaluation of the levels of glucose and cholesterol in the blood;
    3. tests for heart rhythm disorders (ECG when indicated);
    4. measurement of height, body weight, calculation of BMI;
    5. risk factors survey: smoking, alcohol consumption, low physical activity, hypodynamia.
III. Target-oriented programs on revealing oncological pathology in the population: breast, cervix, and prostate cancer.
IV. Target-oriented program on early diagnostics of tuberculosis and lung tumors. Successful prevention of socially significant diseases is impossible without the measures on the formation of a healthy lifestyle [1, 3, 4, 6, 9].

There are several aspects in the formation of a healthy lifestyle:

1. Increase in population awareness on the negative influence of RF on health: lections, seminars, meetings in the school for people with AH.
2. Health education:
    - Motivation for a healthy lifestyle;

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- Formation of healthy habits: personal hygiene, proper eating behavior, the optimum ratio of labor and rest; physical activity, quenching, giving up harmful habits (smoking, alcohol abuse, drug consumption).

3. Preventive measures: periodic screening, annual health examination, vaccination against measles, hepatitis B, influenza.

The issue of preventive programs availability remains acute, especially among the employed population. Great Russian physiologist I.I. Mechnikov used to say: "Death before 150 years old is death through violence". According to combined recommendations of European societies [6] on the prevention of cardiovascular diseases in clinical practice, people that preserve their health status have certain characteristics that are described by the formula of a healthy lifestyle: 0 3 5 140 5 3 0

0 — do not smoke

3 — walk 3 km per day or have moderate physical load for 30 minutes per day

5 — consume 5 portions of vegetables and fruit per day

140 — have the level of systolic BP < 140 mmHg

5 — have the level of total cholesterol < 5 mmol/L

3 — have the level of LDL < 3 mmol/L

0 — do not suffer from excessive body weight and diabetes.

The formula of a healthy lifestyle includes physical activity aimed at the maintenance and improvement of health status. An active lifestyle is the basis for the diseases prevention and its formation is the main task for social policy of the state in terms of protection and improvement of the population's health. Preventive measures should be realized in all the spheres of medicine, especially in the institutions of primary medical help where preventive, diagnostic, therapeutic, and educational programs are offered for the population.

The main contribution to the additional morbidity and mortality in the subjects of the RF is made by RF associated with constant and multicomponent environmental pollution that determines long-tern complex chemical, biological, and physical burden on the population (Figure 3).

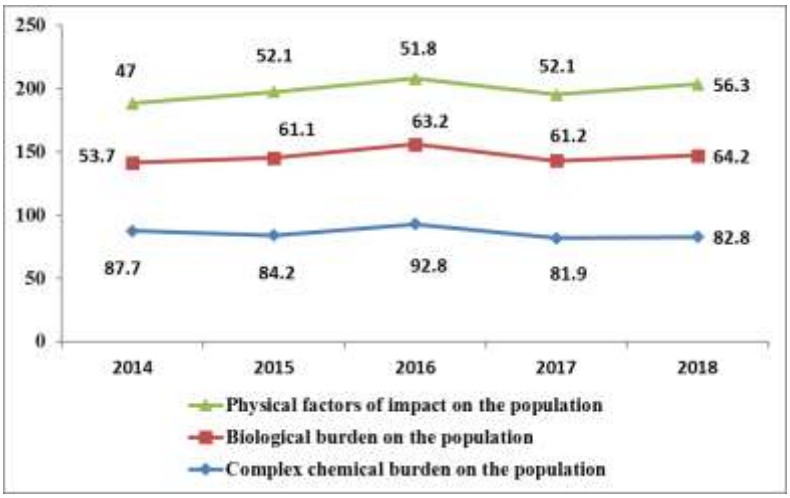

Figure 3: Population in Russia that is Influenced by the Complex of Sanitary-Hygienic Factors (mln)

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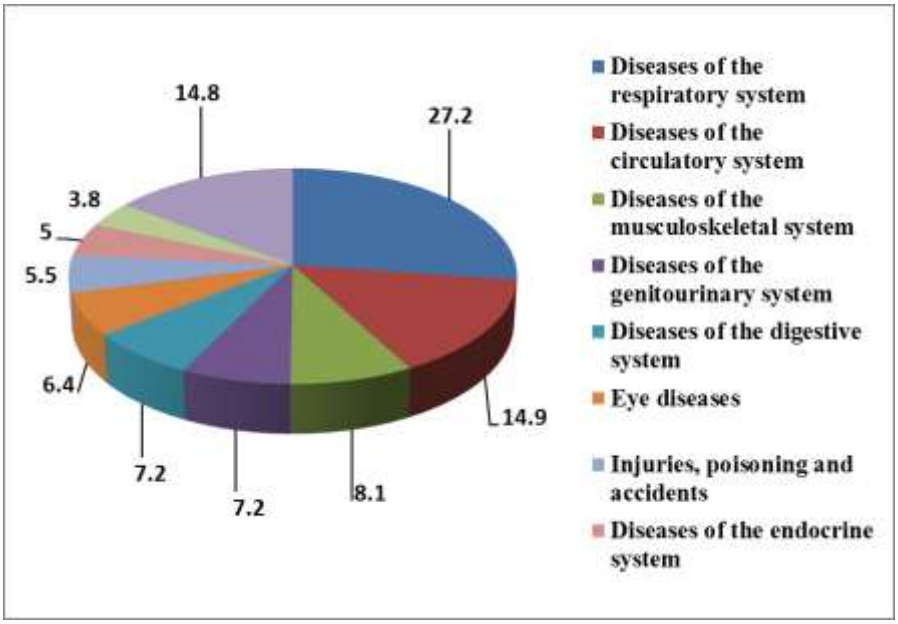
There was an insignificant decrease in the complex chemical burden (by 12.1% during the studied period) but the level of the biological and physical impact remains high. These factors significantly determine the parameters of the morbidity in the subjects of the RF by the main causes: diseases of the circulatory system, neoplasms, environmental causes, diseases of the digestive system, diseases of the respiratory system, infectious and parasitic diseases (Figure 4).



Figures 4: General Morbidity Rate in the Population and Structure of the Disease Causes in the Subjects of the Russian Federation, 2018 (% to the Total)

The results of the analysis of the quality of the living environment and its influence on the health status of the population (mortality and morbidity) revealed different levels of this impact in different subjects of the Russian Federation depending on the set priorities in the development and realization of target-oriented risk management for the population health.

According to the data provided by the Center of Hygiene or Sanitary-Epidemiological Control of the RF, the quality of the living environment provides around 15-25% of the global burden of the diseases. The primary risk factors that contribute to the additional mortality and morbidity associated with the environmental factors include constant and multicomponent pollution of air, drinking water, soil, and residential territories.

The specifics of air pollution and peculiarities of the sanitary-epidemiologic situation in the regions determine medical-demographical damage associated with the living habitat. Social-hygienic monitoring revealed elevated levels of benzapyrene, hydrogen fluorine, saturated hydrocarbons, hydrogen chloride, hydrogen sulphide, ammonia, suspended particles, phenol, amines, hydrocarbon, carbon oxide, xylol, formaldehyde, heavy metals, and other chemical substances in the air that can contribute to the development of unfavorable events in the respiratory, immune, nervous, urogenital, musculoskeletal, reproductive, circulatory and haemopoietic systems, and influence on the development of the organism.

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The morbidity of the population with the diseases of the respiratory system is associated with the pollution of air with nitrogen oxide, formaldehyde, benzapyrene and its derivatives, ammonia, Chlorum, dihydrosulfide, and other substances in the 41 subjects of the RF. Air pollution provides from 3.02 (Volgogradnkaya oblast) to 11,863.7 (Smolenskaya oblast) additional cases of diseases of the respiratory system per 100,000 people.

The morbidity rate with asthma among children is considered by the WHO as an indicator of the quality of the living environment. In 2017, the morbidity rate with primarily diagnosed asthma and status asthmaticus among children aged 0 to 14 years old was 127.3 cases per 100,000 children of the respected age (in 2016 – 135.0 0/0000, in 2012 – 154.1 0/0000). The rate of primary morbidity with asthma and status asthmaticus in children is higher than average in 27 subjects of the RF.

In general, in the RF, the dynamics of the appearance of additional cases of asthma, associated with air pollution, decreased by 1.18 times in comparison with the previous year (in comparison with 2013, it did not change). Air pollution forms 1.29 to 106.4 additional cases of the morbidity with asthma and status asthmaticus per 100,000 of the adult population.

The morbidity rate with primarily diagnosed chronic and unspecified bronchitis and emphysema among children aged 0 to 14 decreased by 32.5% in comparison with 2013 and was 28.0 cases per 100,000 children of the respected age in 2017.

Air pollution provides additional cases of chronic and unspecified bronchitis and emphysema among children in 36 subjects of the RF: from 0.01 to 38.6 cases per 100,000 children of the respected age. In general, in the RF, the dynamics of the morbidity in children associated with air pollution decreased by 1.37 times in comparison with 2013.

The morbidity with chronic and unspecified bronchitis and emphysema associated with air pollution among adult population was registered in 31 subjects of the RF at the level of 0.9 – 359.7 cases per 100,000 people. In general, in the RF, the dynamics of the morbidity in adults associated with air pollution decreased by 1.42 times in comparison with 2013 (more than 8.1 thousand additional cases).

On average, the number of additional cases of diseases of the respiratory system associated with air pollution in residential areas was 350.6 per 100,000 of the general population in 2018 and 612.8 per 100,000 children, which was 1.0% and 0.5% of the total morbidity caused by the specified factor in the mentioned age groups.

In general, the share of diseases associated with air pollution is around 587.9 additional cases per 100,000 of the total population or around 0.8% from the total share of primary morbidity. In comparison with 2013, there was a decrease in the additional cases of diseases associated with air pollution by 48.7% in all the population and by 46.4% in children.

The biggest contribution to the appearance of additional cases of diseases associated with air pollution is made by excessive levels of nitrogen oxide, benzapyrene, formaldehyde, hydroxybenzene and its derivatives, ammonia, Chlorum, dihydrosulfide.

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The quality of drinking water in the system of central drinking water supply and the presence of elevated levels of different chemical elements, microbiological and parasitic agents can provide additional cases of mortality and morbidity. The elevated levels of chloroform, manganese, strontium, silicium, lithium, chlorum, sodium, magnesium, boron, hydrogen sulphide, etc can cause unfavorable effects in the urogenital, musculoskeletal, endocrine, nervous, cardiovascular, digestive, reproductive, blood and immune systems, skin, and processes of the organism development.

The main result of healthcare system performance at all the levels is the growth of life expectancy in the RF. In 2018, according to the Rosstat forecast, the expected life expectancy at birth was 72.9 years (increased by 0.2 year in comparison with 2017 – 72.7 years), in men – 67.8 years (increased by 0.3 year, in 2017 – 67.5 years), in women – 77.8 years (increased by 0.2 years, in 2017 – 77.6 years old). The difference in the expected life expectancy at birth in men and women was 10 years in 2018 (10.1 years in 2017).

In 2018, in comparison with 2017, a decrease in the mortality rate from the following diseases was observed: diseases of the circulatory system – by 1.9% (from 584.7 to 573.6 per 100,000 people); neoplasms – by 0.1% (from 196.9 to 196.7 per 100,000 people); tuberculosis – by 11.3% (from 6.2 to 5.5 per 100,000 of people); diseases of the respiratory system – by 1.5% (from 41.3 to 40.7 per 100,000 of people); environmental causes – by 5.5% (from 94.6 to 89.4 per 100,000 people), including traffic accidents – by 4.0% (from 10.1 to 9.7 per 100,000 of people).

Implementation of the Decree of the President of the RF dated May 7th, 2018 № 204 "National aims and strategic tasks of the development of the Russian Federation for the period to 2024" and the projects of strategic development of Healthcare in the RF.

The main directions in the development of the system of healthcare are defined in the Decree of the President of the Russian Federation dated May 7th, 2018 № 204 "National aims and strategic tasks of the development of the Russian Federation for the period to 2024" (further – Decree № 204). They include a stable growth of the population in the RF; increase in the life expectancy to 78 years old (in 2030 – to 80 years). For the implementation of the Decree №204, the Ministry of Healthcare of the RF initiated a national program "Public healthcare" dated December 24th, 2018 and approved by the Presidium of the Presidential Council for strategic development and national projects. The national project "Public healthcare" set the following performance targets to 2024: decrease in the mortality rate of the employable population (to 350 cases per 100,000 people), decrease in the mortality rate from diseases of the circulatory system (to 450 cases per 100,000 people), decrease in the mortality rate from neoplasms, including malignant tumors (to 185 cases per 100,000 people), and decrease in the mortality rate of neonates (to 4.5 cases per 1,000 neonates).

The subjects of the RF developed and implemented regional projects within the frame of the national project that determined the planned indicators, the volume of financing, tasks, planned results, control points, and measures. National project "Public healthcare" is comprised of 8 federal projects that include 7 priority projects that are to be realized in 2018-2019 by the Ministry of Healthcare of the RF according to decrees of the Presidential Council for strategic development and national projects.

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The results of the analysis of the implementation of the priority national project "Health" and programs on the modernization of the system of healthcare and accumulation of positive experience provided the grounds for the development of the measures that target the prevention and fight with socially significant diseases.

Decree of the Government of the RF № 2511-p dated December 24th, 2012 approved the "State program of the development of the healthcare system in the Russian Federation". The program describes the main approaches to the solution of such important issues as the improvement of the healthcare infrastructure, the creation of unified preventive environment, the increase in the quality of medical service, the improvement of the education of medical specialists and the increase in their salaries.

The program includes 11 subprograms: "Prevention of the diseases and formation of healthy lifestyle", "Development of primary medical and sanitary help", "Development and implementation of innovative methods of diagnostics and treatment", "Development of medical rehabilitation and sanitary and recreation treatment", etc.

The results of the state program implementation in 2020 will be:

- Decrease in the general mortality rate (per 1000 people) to 11.4;
- Decrease in the maternal mortality (cases per 100,000 alive born neonates) to 15.5, neonate mortality (cases per 1,000 alive born neonates) – to 6.4;
- Decrease in the mortality from CVD (per 100,000 people) to 622.4; decrease in the mortality from neoplasms (per 100,000 people) to 190;
- Decrease in the mortality from tuberculosis (per 100,000 people) to 11.2 in 2020;
- Decrease in the mortality from tuberculosis (per 100,000 people) to 35;
- Decrease in the adult smoking population to 25%, including children and adolescents to 15%;
- Decrease in the level of alcohol consumption (pure alcohol per capita, L/year) to 10;
- increase in the number of medical specialists (per 10,000 people) to 44.8, the ratio of doctors and nurses to 1:3;
- Increase in life expectancy at birth to 74.3 years.

Government of the RF and Ministry of healthcare defined the following tasks for 2019-2020 in terms of the improvement of the population health:

- Monitoring and economic grounds for regional programs that provide state-funded medical care for the citizens.
- Making agreements between the Ministry of the RF, the Federal Fund of obligatory medical health insurance and supreme government organs of the subjects of the RF for the implementation of regional state programs for state-funded medical care for citizens, including the regional programs of obligatory medical insurance.
- The analysis of the implementation of the Program of state-funded medical care for citizens in 2018 and report of the results to the Government of the RF. Preparation of the Program of the state-funded medical care for citizens for 2020 and the planned period of 2021 and 2022.

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- "Organization of medical help for patients with oncologic diseases"; increase in the number of specialists in the oncologic departments; construction of 8 oncologic dispensaries in the republics of Mordovia, Bashkortostan, Khakassia, in Lipetsk, Volgograd, Kostroma, Tomsk and Saratov oblast, as well as the reconstruction of 2 federal objects in Saint-Petersburg and Obninsk.

Thus, an improvement of the preventive component of the system of healthcare and active raising the population awareness on the implemented programs is an effective and perspective tool in the realization of socially significant strategy in the system of healthcare.

V. CONCLUSION

The analysis of the structural changes in the morbidity rate in Russia by the main classes of the diseases allowed the authors to make a conclusion on the results of the performance of medical institutions and evaluate the perspective of the development. Special attention should be focused on the oncological and respiratory diseases because their share in the structure of the morbidity is the highest and constantly increasing from 2013 to 2017. Another significant problem is the growth of the morbidity with endocrine, infectious and parasitic diseases. The share of the morbidity associated with congenital diseases is increasing and requires active preventive measures among potential parents, research studies on the diagnostics and elimination of hereditary factors of the morbidity. Diseases of circulatory and endocrine systems also require special control because they occupy the 2nd place in the rank of the morbidity rate. However, their share in the structure of the diseases by the main classes of the diseased in 2017 in comparison with 2013 and 2015, which can indicate certain positive results.

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