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**The Foreground Directions of Preventive Service Activity in the Republic Sakha (Yakutia): Healthy Nutrition and Disease Prevention Propaganda**

**ABSTRACT**

During the period since the adoption of the Doctrine of a healthy lifestyle in the Republic a holistic organizational - economic, scientific-methodical, informational and educational mechanism for implementing policy for healthy lifestyle and nutrition among different population groups has been formed. The priority trends of the campaign, one of which is the promotion and skills training and a healthy food, contributing to the prevention of nutrition-related chronic and non-communicable diseases are determined. Regulations, guidance documents on implementation of the state policy in the field of healthy lifestyle and nutrition, disease prevention are developed and implemented. Experience of healthy lifestyle base stations at the municipal level is shown; legal framework for improving the preventive work in health care organizations has been prepared, besides there was carried out the work on the organization of the health centers.

**Keywords:** the doctrine of a healthy lifestyle, nutrition culture, healthy eating, disease prevention, health centers.

**INTRODUCTION**

It is known that annually more than 1 million people, of them about 100 thousand people of working-age die of cardiovascular diseases in the world. Cardiovascular diseases are the main cause of disabled people. At the same time, according to WHO data, 10% of health of the population depends on health system, 20% health of people depends on hereditary and biological factors, 70% on living being conditions of a person including physical activity, addictions, smoking and abuse of alcohol. First of all, health of a person depends on food stereotype. According to various authors, primary and general incidence annually grows for 5-7%, the number of functional violations and chronic diseases increases, especially, among children of school age, mental and reproductive health worsens. The following interrelation of mortality with major factors of risk is revealed: smoking – 17,1%, overweight – 12,5%, alcohol abuse – 11,9%, unbalanced food – 12,9% [4].

Considering the difficult demographic situation which is developed today in Russia, the state policy is directed on changing the situation, to increase duration and to increase quality of life, to form principles of healthy lifestyle and food and by that to carry out timely prevention of diseases for health protection of the population.

For long time the health system has been focused mainly on treatment of sick people, today the special attention is paid to health protection of the healthy. Since January 1, 2006 the Health project started, it comprising the category "the national priority project". The main objective of the project was improvement of health care and setting the stages for its subsequent modernization. Within implementation of the national Health project three main directions are allocated: increase of priority of primary medical and sanitary help, strengthening of health care preventive trend, increasing hi-tech medical care capabilities [2]. Because healthy lifestyle is the key parameter determining health state of the nation and each person separately, focusing on prevention activities, the Government of the country made the decision on establishing the Centers of health.

On August 19, 2009 the Order of the Ministry of Health and Social Development of the Russian Federation No. 597n "About the organization of activity of the centers of health for formation of healthy lifestyle at citizens of the Russian Federation, including reduction of consumption of alcohol and tobacco" was adopted. In 2009 502 Centers of health in 83 subjects of the federation were founded in order to implement activities directed on healthy lifestyle propaganda among the population including promotion of culture and skills of healthy food, thereby decreasing incidences and most widespread mortality rates [1]. However, despite positive tendencies in nutrition of the population, chronic diseases mortality, which development substantially connected with an alimentary factor, remains much higher, than in the majority of the European countries. Food of the majority of adult population doesn't correspond to the principles of healthy food because of consumption of foodstuff containing a large amount of fat of animal origin and simple carbohydrates, lack of vegetables and fruit diet, fish and seafood that leads to overweight and obesity which prevalence for the last 8 — 9 years increased from 19% up to 23%, increasing risk of development of diabetes, diseases of cardiovascular system and other frustration [3].

The considerable part of children and teenagers in house conditions and organized establishments, and also the working population in working hours, especially concerning small and medium-sized enterprises, for a number of reasons are deprived of opportunity to eat correctly and safely that adversely affects on their health.

All this testifies to need of development of the programs directed on optimization of food of various groups of the population including – carrying out preventive measures.

Therefore, the Governments of the Russian Federation of 25.10.2010 the order No. 1873 approved "Bases of state policy of the Russian Federation in the field of healthy food of the population for the period till 2020", according to which definite purposes and problems of promotion of the principles of healthy food and carrying out scheduled maintenance through the Centers of health.

For all years of the preventive service activities in the republic, Ministry of Health prepared standard and legal base, the network of service of medical prevention in all municipalities (the centers of medical prevention, departments, offices) is created, the foreground directions of arrangements are defined, methodological and methodical work in interaction with the scientific and educational organizations is adjusted, work at the different levels, including mass media propaganda. In recent years work on creation and organization of the activity of the Health centers has been realized actively.

Today in the republic at 9 medical organizations of the republic there are 5 stationary and 6 mobile centers of health, including 2 health centers for children. Activity of the centers of health is included in the Territorial program of Fund of obligatory medical insurance.

The main functions of these Centers of health is informing the population about harmful and hazardous factors to health of a person, including a food factor forming food security, epidemiological, hygienic and clinical value of food for health of the population; group and individual promotion of healthy lifestyle and food, prevention of developing various diseases and formation of responsible attitude towards health that the population and health of the children; training of the population in hygienic and psychological skills, including inurement of adequate food behavior; training of the population with effective methods of disease prevention in accordance with age; dynamic supervision over risk groups with alimentary related diseases and noninfectious diseases; assessment of functional and adaptive reserves of an organism in accordance with age, the forecast of a state of health; consultation on health prophylaxis and protection, including physical activity recommendations, exercises and sport, sleep mode, living conditions, work (study) and rest, and mainly, recommendations about food correction; development of the

individual program for maintaining healthy lifestyle and food, subject to physiological features of children's age; implementation of monitoring of activities for formation of healthy lifestyle, risk factors of particular diseases.

Preventive activity of the Center of health is carried out in three directions: scheduled maintenance with the population, methodical work in establishment and coordination of the work in the territory. Preventive maintenance with the population is the main task of the Center of health being realized by means of carrying out year-round screening of the population for identification of patients with dangerous diseases. The efficiency of carrying out the prevention activities at the population is traced regularly. The database of results for further inspections is created. Hygienic education via information field including instructions, posters, brochures, booklets, lectures, conversations and other methods is carried out. Methodical work in establishments comprises training of health care workers in methods of assessment and correction of risk, individual and group consultation; assessment of volume and quality of preventive maintenance in medical institutions; introduction of new forms and methods of preventive services; health protection of health care workers; drawing up annual reports. Coordination work in the territory includes interaction with offices (offices) of medical prevention, others medical and not medical institutions on development and implementation of preventive programs; distribution of methodical materials; cooperation with the center of health in carrying out mass health promotion campaigns.

Taking into account the climatic and geographic features of the region and a traditional way of life of the population in territories with extreme conditions, the significant role is given to mobile medical work on the basis of the centers of health. For the purpose of improvement of quality and availability of rendering the out-patient and polyclinic help to the population the mobile centers of health of medical institutions of the republic attend all municipalities of the republic, up to the most remote settlements. Rendering the medical-preventive help has interdepartmental integration approach, putting constructive work with mass media, educational bodies, youth and public organizations, establishing priorities on a family, labor collective and educational organizations (children's garden-school-averages and higher educational institutions).

The mobile Centers of health are completely equipped with the modern diagnostic equipment, teams of health workers have opportunity to conduct complex medical examination which includes: measurement of height and weight; testing on a level of psychophysiological and somatic health of functional and adaptive reserves of an organism by means of complex software for screening assessment; a computer controlled heart screening equipment, which implements express assessment of heart state on electrocardiogram signals from extremities; angiologic screening with automatic measurement of systolic pressure and calculation of ankle-brachial index; express analysis of general cholesterol and glucose in blood; complex detailed assessment of respiratory system (a computer-controlled lung test equipment); examination of a doctor. For detecting additional risk factors which aren't included into the list of complex inspection on the installed equipment the following procedure are recommended for carrying out the researches: bio-impedance testing; carboxyhemoglobin analysis; cotinine and other biological markers in biological environments of an organism; pulse oxymetry; examination of a dentist - hygienist.

On the basis of testing results on the computer controlled complex a doctor conducts examinations of citizens, including children (parents of a child or other representatives): assessment of the most probable risk factors, functional and adaptive reserves of an organism in accordance with age; forecast of health state; reads lectures on healthy lifestyle and food; makes individual programs on healthy lifestyle and food. If necessary he recommends dynamic supervision in the Center of health with carrying out thorough researches according to the revealed risk factors or supervision in offices of medical prevention and organizations, attending classes in schools, medical and



sports clinics with the programs elaborated in the Centers of health. Citizens with symptoms of diseases identified or who need supervision in an office of medical prevention (in an office of healthy child), from their consent are transferred to an office of medical prevention (in an office of healthy child), to a therapist to the district police officer (to the pediatrician local) in a residence of the citizen (in an attachment place) respectively. In this case, the Center of health carries out interaction with offices of medical prevention, offices of the healthy child of the medical organizations for a residence of the citizen, concerning realization of preventive measures.

Table 1

Mobile work coverage of the population by the Centers of Health, in %

|                                              | 2011.                                                 | 2012  | 2013             | 2014<br>(8 months) |
|----------------------------------------------|-------------------------------------------------------|-------|------------------|--------------------|
| Mobile work coverage of the population, in % | 5328                                                  | 11187 | 18974            | 11702              |
|                                              | 49,1<br>number of all<br>addressed                    | 44,3  | 56,8             | 58,3               |
| • In districts                               | 1768                                                  | 5034  | 10032            | 6618               |
|                                              | 33,2<br>from the general<br>coverage of<br>departures | 44,9  | 52,8             | 56,5               |
| • In enterprises                             | 3560                                                  | 6153  | 8942             | 5084               |
| Number of the covered areas including:       | 9                                                     | 22    | 30               | 21                 |
|                                              |                                                       |       | 103 (settlement) | 74 (settlements)   |
| • Northern and Arctic areas                  | 0                                                     | 6     | 15               | 5                  |
|                                              |                                                       |       | 31 (settlement)  | 12 (settlements)   |

In 2012 the mobile work of the Centers of health captured 22 districts of the republic, in 2013 – 30, in 8 months 2014 - 21 districts of the republic (these are 74 settlements). In 8 months 2014 17 441 persons addressed to the centers of health of the republic, 4 132 of them - children. In 5 northern and the Arctic areas (12 settlements), 6618 people, including 1597 children (tab. 1) are examined.

From among the examined 20% were almost healthy, at 80% risk factors of developing of chronic noninfectious diseases (tab. 2) were revealed.

Table 2

Structure of risk factors of chronic noninfectious diseases among adult population, in %

|   | Risk factors of                | 2013 | 2014<br>(8 months ) |
|---|--------------------------------|------|---------------------|
| . | Heterotonia                    | 30,2 | 29,6                |
| . | Change of level of cholesterol | 18,3 | 17,9                |
| . | Overweight                     | 27,9 | 28,8                |
| . | Low physical activity          | 28,6 | 28,2                |
| . | Irrational food                | 33,5 | 33,7                |
| . | Smoking                        | 31,9 | 30,2                |
| . | Increased intraocular pressure | 14,9 | 14,9                |

In comparison with 2013 in 2014 the number of smoking people decreased by 1,7%, with low arterial pressure - for 0,52%, with low physical activity - for 0,4%, with high content of cholesterol in blood - for 0,35%.

The comparative analysis of results of complex inspection showed unsatisfactory threpsology status of children and teenagers living in city and rural areas of the republic. We revealed absolutely only 17,3%, healthy children in the city, 8,7 % in the village respectively that showed the low level of health among rural children. The unsatisfactory threpsology status of children show results of measurements of body composition where the higher prevalence is noted among rural children, almost every third child in the village had malformations of body composition (tab. 3).

Table 3

Structure of risk factors among children and teenagers in a6c., %

| Risk factors                      | City (n =3135) |      | Village (n = 960) |      |
|-----------------------------------|----------------|------|-------------------|------|
|                                   | Abs. number    | %    | Abs. number       | %    |
| Low growth                        | 331            | 10,5 | 135               | 14,0 |
| High growth                       | 526            | 16,7 | 166               | 17,0 |
| Excess of body weight             | 351            | 11,1 | 117               | 12,1 |
| Deficiency of body weight         | 111            | 3,5  | 82                | 8,2  |
| Increase AP                       | 159            | 5,1  | 18                | 1,8  |
| Decrease AP                       | 32             | 1,0  | 8                 | 0,8  |
| Cardiovascular system disorder    | 676            | 21,5 | 144               | 15,0 |
| Increase of sugar in blood        | 258            | 8,2  | 28                | 2,9  |
| Increase of cholesterol           | 234            | 7,4  | 24                | 2,5  |
| Increase of carbon dioxide        | 561            | 17,8 | 60                | 6,2  |
| Need of sanitation of oral cavity | 1152           | 36,7 | 457               | 47,6 |
| Uneasiness                        | 554            | 17,6 | 137               | 14,2 |
| Violation of structure of a body  | 668            | 21,3 | 287               | 29,8 |
| Decrease in lung capacity         | 756            | 24,1 | 117               | 12,1 |
| Decrease in oxygen saturation     | 10             | 0,3  | 7                 | 0,7  |
| Absolutely healthy                | 544            | 17,3 | 84                | 8,7  |

In four years of work of the Center of health 113341 persons were examined, including 54933 people examined by the mobile group. The demand of work of the centers of health annually grows.

It has become traditional to conduct republican arrangements devoted to the World no tobacco day (on May 31), to the International Day of smoking refusal (on November 18), to National Day of health (February), to the World Health Day (on April 7), to the International Day of fight against abuse of drugs and drug trafficking (June).

In 2015 campaigns on the World day of consumer protection and the World Health Day are devoted to healthy food. Within the World day of consumer protection "Week of healthy food in the republic" is held, and the section "Correct Food Basis of Health" is carried out within the republican forum "Way to Active Longevity" devoted to the World Health Day in April, 2015. These days all republican, city medical organizations and the central regional hospitals carried out Fairs of health, the Exhibition of foodstuff, Competition of catering establishments and trade grocery divisions, Youth campaigns, Master classes "Control of weight", were conducted sociological surveys of the population, "Schools of health" worked. There were traditional republican, city, district campaigns, "Fairs of health", Open Days, conferences, seminars, master classes, round tables, health landings, class hours at schools, student's conferences in average special educational institutions, higher education institutions, distribution of promotional and informational materials: booklets, posters, publicizing of campaigns of decade and promotion of healthy lifestyle and food in republican, the rural and city mass media.

In total health workers of the republic during the first half of the year 2014 organized 97 mass health promotion arrangements, with coverage 15 244 persons, 6479 of them being children (tab. 4).

Table 4

| The name of campaigns              | Number of campaigns | Coverage of the population | Children 1-18 years of the total sum |
|------------------------------------|---------------------|----------------------------|--------------------------------------|
| Film-video                         | 68                  | 3487                       | 1780                                 |
| Press conferences and round tables | 10                  | 165                        |                                      |
| Thematic parties and exhibitions   | 2                   | 1524                       | 509                                  |
| Competitions and quizzes           | 2                   | 73                         |                                      |
| Telephone hotline                  |                     |                            |                                      |
| Landings of health                 | 11                  | 3526                       | 728                                  |
| Fairs of health                    | 5                   | 2146                       | 597                                  |
| Improving stocks                   | 5                   | 4257                       | 2865                                 |
| Sports arrangements                | 2                   | 21                         |                                      |
| Open Days                          | 1                   | 45                         |                                      |
| Only                               | 106                 | 15244                      | 6479                                 |

The annual interregional information and health promotion campaign "Health Wave" in 2015 is carried out for the third time. The campaign will be organized by Ministry of Health of the Republic of Sakha (Yakutia) and the Republican center of medical prevention. Highly qualified specialists from different Russian regions, employees from various republican ministries and departments, scientific and educational federal institutions, health workers of city and republican treatment-and-prophylactic institutions take part in this arrangement.

In 2013 the route of carrying out the Wave of health had in the following direction: Yakutsk – Pokrovsk – Olekminsk – Lensk – Yakutsk. 604 children were examined, 86 children of them were recommended for further inspection and treatment. 22 reports, 11 master classes were delivered, 3 round tables were carried out. Motor vessel round of the Wave of health was followed by information in all mass media.

In 2014 the route of the Wave of health passed across two directions:

- Water tour campaign (Mikhail Svetlov motor ship): Yakutsk - the item Sangar - Vilyuysk – the village of Verkhnevilyuysk – Nyurba - Yakutsk
- Land round campaign (automobile): Yakutsk - the village of Berdigestyakh - Vilyuysk – the village of Sydybyl - the village of Verkhnevilyuysk – the village of Homustakh - the village of Haryyalakh - – the village of Suntar - Nyurba - Yakutsk

In total 3644 people were examined, including 2448 children, 1196 adults. 266 children were directed for additional inspection in out-patient clinics, 97 children for stationary treatment.

Except a medical component, the Campaign included an educational program. Scientific and practical and educational events, with participation of specialists of the federal medical centers, specialists of republican and city medical institutions, directed on prevention of socially important diseases are held. 35 reports, 6 master classes have been delivered, 8 round tables with coverage of 1055 people have been carried out. The main educational direction of the Campaign were widely presented with the purpose to promote healthy food and prevention of alimentary and dependent diseases, including, socially important and chronically noninfectious diseases.

Efficiency of any policy depends on support by the population, civil initiatives. In this aspect unique experience at the municipal level held in our republic is based on the district centers of health. There are 46 such settlements in the republic for today. They set an example of work for formation of health saving behavior among the population, for introduction of healthy lifestyle among younger generation. A good tradition in the republic "Health landings" is carried out. The joint teams of doctors attend districts of the republic for carrying out medical examinations and rendering the practical help to the central regional hospitals. Positive responses of the population confirm about correctness of a choice of the directions of preventive maintenance.

Thus, the Republican center of medical prevention is the head and coordinating division of all preventive service in the republic. Through the network of divisions of medical prevention and the Centers of health of Ministry of Health of the Republic of Sakha (Yakutia) the mass health promotion work is carried out on formation of healthy lifestyle, including formation of skills of healthy food. Mobile forwarding consulting and diagnostic work on assessment of the actual food, the food status and health of the population is carried out. In the medical organizations the Schools of Health programs including the separate training courses "School of Healthy Food" and "School of Breastfeeding" "School on prevention of obesity", "School on prevention of chronic noninfectious diseases" for health workers and the population are introduced.

In general, such integration work on promotion of healthy food and prevention of diseases is carried out within the Agreement on mutual cooperation between the Republican center of medical prevention and the Center of food of scientific research institute of health of NHFV of M. K. Ammosov, adopted 05.04.2012.

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