



HEALTH CENTRE FOR CHILDREN TO PROMOTE HEALTHY LIFESTYLE "CHILDREN'S HOSPITAL" - NEW TECHNOLOGIES OF PRIMARY PREVENTION

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Summary: This article describes the indicators of the Health Centre for children on healthy lifestyle based on the consulting department of Children's Hospital of Yakutsk.

Keywords: Health Centre, organizing the healthy lifestyle, functional deviation.

Health Protection of the younger generation is one of the most topical and important problems of not only the Health Ministry, but also society as a whole. The importance of this state is defined by the fact that children's health is not only an integral indicator of the health of the population, but is the fundamental basis for the formation of the health potential of adult members of society.

The children's total sick rate of all ages (under 17) is growing by 5-6%. There is a preferential growth of chronic disease among the children. Its share in the structure of their health disturbance currently stands at 30-32 %.

Physical development of children is declining. The last 10 years, the number of children with normal weight has decreased among the boys at 16.9 %, among the girls at 13.9%. The number of undersized children has increased (1.5 % for boys and 1.0 % for girls).

The study of factors that influence the health of the children showed that about 50 % of them are caused by social and economic conditions and the way of life, 25% - by biological and genetic circumstances, 20% - by environmental conditions and climatic factors and 5 % by the features of the Health Care Organization.

The negative trends of health indicators of Russian population require to find new ways for the early rehabilitation of people's health. An important national objective is to prevent the deterioration of the health of people and aspiration to improve it. Therefore, Health Centres are set up to reduce spread of chronic non-infectious diseases.

On May 18, 2009 the Resolution of the Government of the Russian Federation № 413 "About financial support at funding expense of the federal budget measures aimed at forming a healthy lifestyle among the citizens of the Russian Federation including the decrease of alcohol and tobacco consumption in 2009" was adopted. On June 10, 2009 the Order № 302 of the Russian Health Ministry "About the measures on realization the decision of the Government of the Russian Federation" dated May 18, 2009 was published.

This order contains a list of equipment purchased for the Centres of Health, besides it the Order contained the requirements to the organization of Health Centres' activities forming on a functional basis in the public health institutions of the Russian Federation and municipal health care institutions. These requirements have been specified in the Order of the Health Ministry of Russia № 597 of August 19, 2009 "About the organization of the Health Centres' activities on forming healthy lifestyle among the citizens of the Russian Federation, including the decrease of alcohol and tobacco consumption."

The objectives and functions of the Health Centre

The main activities of Health Centers are the following : assessment of functional and adaptive reserves of the body according to the age-features, the forecast of health; dynamic monitoring of patients at risk of non-infectious diseases; monitoring the realization of measures to organizing a healthy lifestyle and risk factors of the developing of diseases.

Forming of a healthy lifestyle is a set of measures aimed at the preservation of health, the



propaganda of healthy lifestyle, motivating citizens to personal responsibility for their health, development of individual approaches to forming healthy lifestyle, strive against risk factors of diseases, education and public informing about the dangers of tobacco use and alcohol abuse, prevention of socially significant diseases, and increase of the duration of active life.

The functions of the Health Centre are informing the public about the harmful and dangerous factors to human health, group and individual propaganda of the healthy lifestyle, prevention of occurrence and development of risk factors of various diseases (smoking, alcohol, lack of exercise, etc.); forming responsible attitude to health of citizens and the health of their relatives; prevention of the use of narcotic drugs and psychotropic substances without doctor's prescription; formation of the public principles of "responsible parenthood"; learning of hygiene skills of the citizens and motivate them to give up bad habits, including the assistance in the rejection of alcohol and tobacco use; training the citizens to the effective methods of disease prevention according to the age-features; dynamic monitoring of patients at risk of non-infectious diseases; evaluation of functional and adaptive reserves of the body according to the age-features; the forecast of health state; counseling on health protection and strengthening, including recommendations for correction of nutrition, physical activity, physical education and sports, and sleep mode, the conditions of life, work (study) and the rest; development of individual programs on healthy lifestyle; to monitor the implementation of measures to form healthy lifestyle, risk factors for disease.

The organization of public services in the Health Centre

In December 2010 at the address: 10/1Petrovsky Street, Health Centre was opened for children on forming healthy lifestyle based on the Consulting Clinic of Children's Hospital of the Sakha Republic on a functional basis (order № 216 -D on 01.07.2010).

In 2010, the Health Centre for children received equipment in sum of 1248115roubles from the Federal subsidies. On December 2011, according to the federal program "Modernization Program of Health of the Republic of Sakha (Yakutia)" (order of the Ministry of Health of Republic of Sakha (Yakutia) on November 17, 2011 № 01-8/4-1851 «About organizing of mobile Health Centers in the Republic of Sakha (Yakutia)» a Mobile Health Centre was received.

There are only 7.5 people in staff list of the Health Centre, including 3.5 doctors and 4.0 medical workers (Table 1). The Centre works in two shifts on schedule. Reception of patients is hold by pediatrician, psychologist, dentist - hygienist, a nutritionist. Recording of citizens for the examination is made by calling the registry of Conculting clinic. In a shift one doctor - pediatrician and two nurses examine 30-35 patients.

Algorithm for the examination at the Centre includes:

1. Measuring of height, weight, blood pressure for screening-level assessment of psycho-physiological and physical health, functional and adaptive reserves of the body with a set of equipment for the measurement of physical development;
2. Assessment of the functional state of the heart with the help of a computerized screening system (rapid assessment of the state of the heart by electric cardiogram signals from the limbs);
3. The evaluation of external breath function with the machine for complex detailed assessment of the functions of respiratory system (computerized spirometer);
4. Determining of the body composition (percentage of water, muscle and fatty tissue) through bioimpedansmetre.
5. Express-analysis of total cholesterol and glucose levels in blood;
6. Determination of carbon dioxide in the exhaled air and kaboksigemoglobin using smokelayzer and analyzer of carbon monoxide in the exhaled air.
7. Express- assessment of the saturation of hemoglobin arterial blood with oxygen (oxygen saturation), pulse rate and regularity of rhythm by pulse oximetry (pulse oximeter).
8. Prophylactic examination of a dentist - hygienist: diagnostics of oral diseases, determination of oral hygiene status and patient teaching on brushing methods; individual recommendations on the selection of hygiene for children, preventive and hygienic measures aimed at preserving the



dental health of children and the development of skills of rational care of the oral cavity.

Based on the results of the examination the doctor makes a full machining report on the state of health and an individual plan on keeping healthy lifestyle, including advice on diet, physical activity, avoiding harmful habits, and others. Persons recognized by the survey healthy are recommended to pass the full comprehensive examination at the Centre once a year. In case of defining some functional deviation dynamic monitoring is recommended at the Centre in 2-6 months or an in-depth examination by doctors in the permanent residence.

Defining of diagnosis is not the purpose of the Centre. Experts of the Centre are designed to identify the risk factors for non-infectious diseases and to explain patient in detail their consequences, motivate him to personal responsibility for their health, promote healthy lifestyle and to carry out the correction of risk factors (smoking, poor nutrition, low physical activity, excess body weight), to assist in giving up bad habits.

Health Center provides medical services for the next contingent of citizens:

complex examination of the first consulted children during the year, whose decision of visiting the Health Centre was accepted by their parents (or other legal representative); dynamic health monitoring of the citizens in accordance with the recommendations of the Health Centre's physician and sent to the Health Centre by the medical institutions in permanent residence; the children who were sent by the medical staff of the educational institutions; patients sent by the doctor responsible for conducting additional clinical examination of the first and second groups of health.

Results of the activities of Children's Health Centre for 2010- 2012.

In 2010 - 2012 the total number of visits to the Centre was 8996, including complex examination of 8187 children (2010, 132, 2011 - 2854, 2012. - 5201), dynamic monitoring -809. Among the patients of the Center the proportion of the rural residents is increasing. In 2012 the Mobile Health Centre held work in 8 regions by the order of the Ministry of Health of Sakha Republic. The Mobile Health Centre examined 1032 children (17.1% of the total number of complex examination), 960 (93.6%) - complex examination, 66 (6.3%) - dynamic monitoring.

Analysis of the activities of the Centre for Children on organizing healthy lifestyle showed that 95 % of the visitors were children of school age; children from 0 to 14 were 76.4 %, teenagers of 15-17 ages - 17.9%. As a result of complex examination at the Centre are defined the functional deviations at 80-82,8 % of patients. The most frequently are reported the violations of body composition (overweight, obesity, lack of weight), symptoms of heart function disturbance, over- adaptation mechanisms, disorders of lipid and carbohydrate metabolism, diseases of the oral cavity (Table 1).

The structure of functional deviations identified in the complex examination at the Health Centre

Risk factors	%
Violations of body composition	24.1
Symptoms of the heart function disturbance	31.1
Over- adaptation mechanisms	19.9
Hypercholesterolemia and hyperglycemia	8.2
Violations of external breath function	26.4
Hypoxemia	15.7
Oral diseases	29.0

Health Centre experts examined 1,441 children, 81.6% of them were directed by other medical institutions. The psychologist consulted 1200 children, 43 (6.3%) of them were found to be healthy, 639 (93.6%) children had elevated levels of anxiety. The doctor-nutritionist examined 929 children and 50 (6.5%) children were found to be healthy, 709 (93.4%) children had functional deviations.



Health education for 2012 - 2013

Activities	Quantity	Number of children
Health fair	9	786
Parent's meeting	4	142
Action "Children's Health Day"	6	735
Open door Days	4	93
Health landing party	17	1316
Public round table	1	67
Parents conference	4	132
Round Table with medical workers	3	77
Public appearance on TV	17	
Interview in periodicals	12	
TV Bridge	1	

The specialists of Consulting clinic and the Health Centre educated 11975 children. Pediatricians trained 8298 children, dietitians– 1239, pediatric gynecologists - 2360, endocrinologists -78 children.

Conclusions:

Health Centre for Children on organizing healthy lifestyle is innovative direction of modern medicine which allowed creating optimal conditions for the primary diagnosis of early and timely implementation of complex health measures on preventing the risk factors.

The organization of the Health Centre was a new and additional opportunity for the public to get information about healthy lifestyle, learn their own risk factors for diseases.

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