

Informational Technologies at Clinical Examination of Children in the Republic Sakha (Yakutia)

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Abstract

Within the program of pediatrics service modernization in the Republic Sakha (Yakutia) in 10 arctic districts: Anabarsky, Abyjsky, Oleneksky, Bulunsky, Ust-Yansky, Allaikovsky, Nizhne-Kolymsky, Sredne-Kolymsky, Zhigansky and Kobyasky fixed automated systems of prophylactic examination are set. In this article the results of using given technologies are presented. The aim of this article is to demonstrate possibility of using automated system of prophylactic examinations in the Arctic districts of Yakutia. 166 children were examined according the automated system of prophylactic examinations. On the first stage – cardiorheumatology (92.8%), then endocrinology (50.3%), ophtalmological (40.4%), dental (36.7%), pulmonology and otorhinolaryngological pathology. As V.G. Chasnyk says the types of pathologies often observed in children are considered as a populational pathology which needs more attachments for prophylactics and treatments.

Keywords: children, automated system of prophylactic medical examinations, prophylactic medical science.

Introduction

Automated system of prophylactic medical examinations (AKDO) is recognized as more convenient for screening-diagnostic actions of first step. The second step is outcall of specialists for diagnostic and medical aid considering revealed profiles of pathology. The third step is outcall of ambulatory medical team of surgeons for rendering of specialized medical aid directly on the places of residence (order of Ministry of health care of Republic of Sakha (Yakutia) № 01-8/4-378 from 07.03.2012) 2.

For people in remote areas of north of Yakutia costs on the consultative and diagnostic assistance are in many times higher than the costs of citizens living close to the medical institutions. It is difficult to deliver medicaments, foodstuff and other cargo for hospitals because of difficult transport infrastructure.

Therefore, high – qualified medical help becomes unavailable for most people of districts.

The objective. To demonstrate possibility of using automated system of prophylactic examinations in the districts of the Far North of Yakutia on the results of works on Oleneksky district.

Characterization of Oleneksky district. Oleneksky district is situated on the north-west part of the Republic Sakha (Yakutia) on the Arctic zone. It is the most large district which occupied 1/10 part of the whole territory of Republic – the area of district is 321.7 square km. The distance between Olenek and Yakutsk is 2020 km.

There are 4 localities: Olenek, Kharyalakh, Zhilinda, Eyik. Eyik and Zhilinda are situated far away, in winter they can get there on the ice road, and in summer on the river or on air. The air distance between Olenek and Zhilinda 195 km, on the ice road is 300 km, on the car the way takes 9 hours. The air distance between Olenek and Eyik is 350 km, on the ice road it is 600 km, on the car the way takes 24 hours. The population is 4155 people. You can see it on the table № 1. The density of population – 0.0012 men in square km.

Table 1.
The dynamics of population in Oleneksky district

	2010	2011	2012
The population	4028	4113	4155
Children 0-17 years old	1349	1372	1376
0-14 years old	1104	1127	1142
Teenagers	245	246	234
Children under 1 year old	95	80	99

Olenek central hospital, Zhilinda hospital, Kharyalakh medical station, Eyik hospital perform medical prophylactic aid in district.

Only Olenek central hospital has license of pediatrics.

Medical staff. There is 1 doctor of common practice in Oleneksky district, 2 pediatricians. The district has status of less setting (Zhilinda, Kharyalakh) there physician works; in Eyik there a doctor of common practice works.

The results and discussing. 166 children were examined according the system of AKDO. In Olenek – 177, in Zhilinda 31 children, in Kharyalakh – 16 children, in Eyik – 2.

On the first stage – cardiorheumatology (92.8%), then endocrinology (50,3%), ophtalmological (40.4%), dental (36.7%), pulmonology and otorhinolaryngologist pathology. As V.G. Chasnyk says the types of pathologies often observed in children are considered as a populational pathology which needs more attachments for prophylactics and treatments.

Using such technologies on the places we detected the problem – there work only 2 pediatricians, who work on the system of AKDO. It takes 20-25 minutes to observe 1 child. Therefore, in our opinion, it is expediently using such technology at school by school doctors.

The system of AKDO is more comfortable to conducting screening-diagnosis functions of first step. The second step is outcall of specialist for diagnosis and medical aid considering the types of pathology. It essentially soothes the works of specialists. The systems of AKDO make possible to leg to objective valuation not only the health of individual patients, but also children. Full-fledged fulfillment of technology will be possible in wide consolidating of medical workers, parents and school. 1

Table №2

Frequency of pathology in profiles of pathologies in Oleneksky district

Pathology profile	Total	Boys	Girls
Examined, prs	166	82	84
Healthy children, prs	2	0	2
Children with pathology, prs	164	82	82
Cardiological	92,8	92,7	92,9
Endocrinological	51,2	56,1	46,4
Ophtalmological	40,4	36,6	44,0
Dental	36,7	36,6	36,9
Pulmonological	21,1	24,4	17,9
Neuropathological	20,5	26,8	14
Allergological	13,3	14,6	11,9
Otorhinolaryngological	11,4	13,4	9,5
Gastroenterological	7,2	7,3	7,1

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