



The results of the use of the automated system of preventive examinations of children in Yakutsk

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Abstract.

The main tasks of health protection are: rising of effectiveness medical-diagnostics processes on base of improvement medical and information technologies; improvement of statistic analyses and forecasting morbidity; rising of quality of prophylactic measures among population; using effective methods of planning budget of medical institutions. In this work were presented the optimization scheme of children prophylactic system by using automated system of survey and organization of away medical works.

Keywords: children, automated systems, prophylactic system.

Introduction.

Increasing effectiveness of medical diagnostical processes suppose optimal correlation of results of these processes and labour and financial outlay. Obviously, the effectiveness depend on organization and management of medical diagnostic processes. Poverties of organization and management make serious mistakes on diagnosis and treatment of patients. All these causes tell on results of analyses, forecasting indicators on health conditions of population, effectiveness preventive measures lead to baseless financial outlay. Science substantiated improvement of organization and management medical-diagnostics processes allow to rise on new stage the decision main tasks of health services. Out-patient and polyclinic treatment is one of main links of health services, it includes more than 80 per cent. Further successful development of paediatric depends on correct organization of first-aid. The special sense of preventive treatment, early diagnostic of illness and effective rehabilitation of patients is incontestable [7]. Therefore, rendering of medical aid to children is the main link of domestic health services. There is no doubt of necessity in considered approach to compatible activities of children's doctors, highly specialized doctors and school doctors, making clear coordination and continuity of work. Primary development of specialized medical-aid made negative things on organization of doctors work. Doctors work organized irrationally that lead to baseless research and overloading. Investigations (researches) demonstrated that 30-35 per cent of visits were baseless [6-7]. All it reflected on patients' satisfaction by medical aid at hospitals. School education is one of determining and longest period of men's life. That period so decisive for individual success as development of the country. Modernization of school must secure conformity school education purpose overtake development. On a base of these offers there was prepared national educational strategy – «Our new school», new educational standards [1-6].

Aim. To show possibilities of optimization of medical aid to children by using automatically system of prophylactic examination of a patient (ASPOND-ACDO), on a base of experience of using ASPOND-ACDO at Yakutsk Hospital № 3.

Materials and methods. The room of ASPOND-Д in pediatric hospital № 3 in Yakutsk had been working since 2001 till 2006 consisting of school and had 2 rooms, paediatric's room and the room of functional diagnostic. Staff consist of 2 doctors: one nurse, one computer operator. Such a team observed almost 35 person a day, for 20 minutes to everyone.

On the territory of polyclinics serving there are 16 kindergartens, 11 schools and school of Tabaga.

Prophylactic examinations on ASPOND program took place commonly in agreement with



instructions of Ministry of health of Russian Federation № 186/272 from 30.06.1992 «Improvement of system of children medical providing in educational establishments».

It is children of 3-4, 5-6, 7-8, 11, 14-15 years old. With the help of ASPOND complex 6153 children are examined since 2001-2003 and in 2006.

Results and discussing.

In results of ASPOND program examinations there are 5 stages (table 1):

1 stage are: disease of osseous muscle system;

2 stage are: disease of endocrine system;

3 stage are: disease of digestive system;

4 stage are: disease of nervous system;

5 stage are: ophthalmologist disease.

According to information about comparison of medical examination results by specialists since 2006 till 2009 on the 1 stage there are osseous muscle system – 95,6 to 1000 (2006 – 92,0; 2007 – 89,5,0; 2008 – 90,5), the number of revealing disease of osseous muscle system increased because of the orthopedic took part in those examinations. The 2 stage got disease of endocrine system 71,8 to 1000 (2006 – 66,9; 2007 – 70,0; 2008 – 71,0), the number of disease increased because more children have lack of weight, slow physical development and endemic goiter. The 3 stage get disease of digestive system 64,0 – 1000 (2006 – 62,0 2007 – 64,0 2008 – 65,1 2008 – 63,0), the data increased because of the number of children suffering from stomatological disease rise. The 4 stage – disease of nervous system 64,0 – 1000 (2006 – 60,0 2007 – 55,4 2008 – 64,0), in 2009 the number of disease increased. Ophthalmologist disease get 5 stage 60,1 – 1000 (2006 – 68,3 2007 – 67,7 2008 – 59,0). In comparison with previous years these numbers increased because ophthalmologists took part regularly in the medical examinations.

During the analysis of children passed ASPOND and in comparison of data of children passed deep medical examination with specialist partake, acknowledgement of revealing pathology is 90 per cent and more. Data of medical examinations of schoolchildren and kindergartens children are analyzed by us (table № 2,3).

During the analyses between schools we can find that the pupils of school № 1, 31 have the lowest data of health violation, and pupils of school № 8, 17, 19 have the highest data. The nourishing violation are found among the pupils of school № 3, 17, 20, the pupils of school № 25, 19, 31 have more controlled nourishing.

In comparison of kindergarten children's health condition, the children from kindergartens № 21, 51, 75, 102 have the best health. Children of kindergarten № 21 have the lowest data besides immunology. The children of kindergarten № 51 suffer from stomatological problems. The children of kindergarten № 52 have immunological status violation. The children of kindergarten № 75 have not bad data of health condition besides logopedia. The children of kindergarten № 89 have the highest data of health condition violation on all types pathology. The nourishing of children is violated in the kindergarten № 89, 102, 40, 42. Violations of nourishing are seldom in the kindergarten № 20, 104, 21, 51, that show quality balanced children nourishing in these kindergartens.

Shortage of ASPOND work in hospital № 3 was that in the results of examinations the conclusions were given in type of pathologic profile, in which should pass the specialists for diagnosis confirmation. Almost 95,5% of children, examined by ASPOND didn't pass the specialists because of a lot of queues coupon system, lack of time, so there was no back connection.

Anonymous questioning of parents living in Yakutsk and districts of Republic Sakha (Yakutia) about medical service was taken. There are 1028 forms. The results of questioning showed that the parents have difficulties during passing the specialists. 82% - lack of specialist, 75% - long queues, 65% - lack of coupons to specialists, lack of time – 56%, 34% - children don't want to miss school.

Advantage of ACDO is that forms the issue «Medical card of prophylactic system of children in Russian Federation» (form № 30).



Conclusion.

It is recommended to organize ACDO in stuff of kindergarten and school department. In results of ACDO to organize clear system of specialized observing in kindergartens and schools and not only give diagnoses but also examine by specialists according the recommendations. According the results of ACDO and after medical examinations the form № 30 is got which will be sent to medical establishment. Having the ready forms № 30 the pediatsrs will hold prophylactic works easily. For the health care establishment with a few specialists the system make scrinning-diagnostic functions of the first level of prophylactic work. With the aim of improvement of continuity in the work of medical establishments and improvement of medical services quality to organize clear system of leading the children to specialized examinations. Irrational amount of work of specialists will decrease and data of prophylactic examinations control card № 30 will be better, which has some difficulties on hospitals. Parents will be satisfied that the medical exams with prophylactic system will be organized in the schools.

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Table 1

Data of revealed pathology during the prophylactic exams on the ASPONД program in the period since 2001 to 2003 and 2006

Profiles of pathology	2001	2002	1 period 2003	2006
The amount of examined children of 4-15 years old	947	3645	1100	461
Violation of osseous muscle system	68,0	76,0	78,0	74,0
Violation of nervous system	50,0	56,0	56,0	51,0
Violation of psychiatric and nervous system				24,0
Dental violation	45,0	50,0	55,0	32,0
Digestive system violations	43,0	59,0	64,0	58,0
Ophthalmological violations	33,0	40,0	36,0	51,0
Physical developments violations	22,0	19,0	18,0	16,0
Violation of nourishing	12,0	30,0	26,0	21,0
Violations of stomach system	24,0	28,0	29,0	31,0
Vasocardiology	17,0	21,0	26,0	40,0
Process activity				19,0
Logaoedic violation	21,0	12,0	8,0	2,0



Table 2

Comparative analyses of health condition of the pupils of Yakutsk school according the data of ASPONД (%)

Profiles of pathology	Sch. №1	Sch. №3	Sch. №14	Sch. №17	Sch. №8	Sch. №18	Sch. №19	Sch. №20	Sch. №25	Sch. №31
Orthopedic	69	81	70	87	82	70	83	80	81	78
Endocrinology	64	62	61	61	62	65	65	65	66	62
Nervous system	44	63	48	62	63	55	66	56	53	55
Cardiology	55	51	57	55	57	56	61	53	55	54
Ophthalmological	38	35	41	52	48	52	48	42	38	39
Dental	58	48	54	54	47	49	35	55	49	51
Physiatrist	6	6	7	7	7	12	0	6	12	8
Genetics	25	35	34	45	42	31	42	35	36	38
Stomach system	20	34	27	34	32	29	16	28	36	29
Nourishing	27	39	30	40	31	31	29	40	24	29
Physical development	14	22	16	21	28	14	31	19	18	15

Table 3

**Comparative analyses of health condition of the children attending the kindergartens of
Yakutsk according the data of ASPOND (%)**

Profiles of pathology	K/g 20	K/g 21	K/g 40	K/g 42	K/g 51	K/g 52	K/g 75	K/g 88	K/g 89	K/g 96	K/g 102	K/g 104
Orthopedic	69	46	55	74	52	54	65	66	74	81	59	71
Nervous system	53	38	43	57	34	46	52	34	65	52	61	59
Cardiology	58	55	55	57	46	44	38	46	62	46	53	57
Logaoedic	47	20	29	38	36	23	42	24	43	34	39	27
Dental	38	41	49	45	67	48	38	55	41	61	39	46
Ophthalmological	9	40	8	21	13	30	12	49	42	27	27	46
Nourishing	3	4	14	14	5	10	10	8	18	6	16	3
Physiatrist	12	8	20	21	8	15	13	21	18	13	10	9
Jlop	19	16	12	29	18	19	15	18	25	30	12	20
Physical developmen	51	19	31	19	16	21	23	29	19	19	20	12
Genetics	17	22	16	38	15	31	21	33	43	27	31	31
Stomach system	12	22	22	26	20	23	19	18	29	25	22	24
Immunology	8	15	2	10	2	19	2	8	7	16	2	4
Endocrinology	22	29	55	33	34	31	29	36	45	34	24	40

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