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DYNAMICS OF MORBIDITY OF CHILDREN'S POPULATION REPUBLIC OF SAKHA (YAKUTIA) FOR 1995-2015

DOI 10.25789/YMJ.2018.63.02

ABSTRACT

The article analyzes the morbidity of children in the Republic of Sakha (Yakutia) for 1995-2015. There is an increase in the morbidity rate of the child population, identified by referral to medical and preventive institutions, for many groups of diseases.

Keywords: children, morbidity, Republic of Sakha (Yakutia).

Introduction

The state of children's health is one of the most important indicators determining the future well-being of society. Increasing the birth rate, maintaining and strengthening the health of children are priority public tasks [1]. It is known that health indicators are the basis for planning the health care resources necessary to meet the existing needs of the population in various types of medical care [2].

Purpose of the study is to analyze the incidence population of children by class of diseases for 1995-2015 in the Republic Sakha (Yakutia).

Materials and methods

We carried out the analysis of indicators of the incidence of children by forms of diseases according to official medical statistics State institution «Yakut Republican Medical Information and Analytical Center of the Ministry of Health of the Republic of Sakha (Yakutia)» for 1995-2015.

Results and discussion

The increase in the indicator of the general morbidity of the children's population of the republic affected almost all classes of diseases. The indicator of the general morbidity of children's population since 1995 to 2015 increased from 1600.2 to 2718.7 per 1,000 children's population (Table 1).

The data of the retrospective analysis of statistical data allow us to state the following. A decrease in the incidence rate by class of infectious and parasitic diseases is noted. Perhaps this is due to the fact that the share of so-called «managed infections» has increased, vaccination against which is included in the national calendar of preventive vaccinations. Between the rates of incidence and vaccination there is direct correlation dependence. With active vaccination against mumps, measles and whooping cough, the incidence rate does not exceed acceptable standards.

On the class of neoplasms, there is an increase in the overall incidence (from 4.2 per 1000 of the child population to 15.0). For the child population, the high rates of growth of diseases of this class are not natural. Observed over the past year, the rate of increase in the incidence of this class indicates the need for deep fundamental research.

Diseases of blood and blood-forming organs are mainly connected with anemia. The incidence of anemia in the study period increased from 17.8 to 23.0 per 1,000 of population children.

With regard to the class of diseases of the endocrine system, eating disorders, metabolic disorders, there is a stabilization of the overall morbidity at the level of 35.4 - 35.5 per 1,000 children. This group of diseases is mainly represented by diabetes mellitus, thyroid diseases and growth retardation in children.

During the study period, there was a slight increase in the indicator of the overall incidence of children's mental disorders and behavioral disorders. This indicator increased from 10.0 to 15.0 per 1,000 children. The increase in the incidence is due to mental disorders of a non-psychotic nature.

The group of diseases of the nervous system has consistently high rates. Diseases of the eye and adnexa have a tendency to increase, primarily due to myopia. With respect to the class of ear and mastoid disease, negative dynamics are also observed from 41.8 to 60.5 per 1000 children. At the same time, it should be noted a decrease in the incidence of chronic otitis media, which may be associated with effective therapy, since in recent years it seems possible to define a clear tactic of treatment and prevention of this disease.

Diseases of the circulatory system are a serious problem, which justifiably

Table 1

The dynamics of the overall morbidity of childhood in the Republic of Sakha (Yakutia) in 1995 -2015 (per 1000 children's population)

Name of classes and individual diseases	1995	2015	Dynamics
Total registered	1600,2	2718,7	1,7 times
Some infectious and parasitic diseases	117,9	64,7	1,8 times
Neoplasms	4,2	15,0	3,5times
Diseases of the blood and blood-forming organs	17,8	23,0	1,3times
	13,5	19,3	0,6 times
Diseases of the endocrine system, eating disorders	35,4	35,5	0,9times
including diabetes mellitus			
insulin-dependent	0,2	0,9	4,5 times
insulin-independent	0,05	0,03	-1,6 times
Mental and behavioral disorders	10,0	15,0	1,5times
Diseases of the nervous system	160,4	164,0	1 times
including infantile cerebral palsy	2,9	4,5	1,5 times
Diseases of the eye and its adnexa	86,8(2001)	150,8	1,7 times
Of which: myopia	27,7	40,6	1,5 times
Diseases of the ear and mastoid process	41,8(2001)	60,5	1,4 times
of which: chronic otitis media	8,9	2,5	-3,5times
Diseases of the circulatory system	6,0	14,8	2,4times
Diseases of the respiratory system	926,7	1536,8	1,6 times
Diseases of the digestive system	92,3	249,7	2,7 times
Diseases of the skin of subcutaneous tissue	83,9	131,1	1,5times
Diseases of the musculoskeletal and connective tissue	13,3	44,6	3,4times
Diseases of the genitourinary system	29,3	55,5	1,9times
Congenital malformations, malformations, deformations, chromosomal abnormalities	14,0	31,1	2,2 times
Injury to poisoning and some consequences of external causes	61,3	108,0	1,7times

removes their prevention and treatment to the level of one of the priority areas of health care. During this period, the incidence rate increased from 6.0 to 14.8 per 1,000 children.

The dynamics of indices of the class of diseases of the digestive organs is also another convincing evidence of the process of a steady increase in the burden of pathology from 92.3 to 249.7 per 1000 children. Perhaps, one of the reasons for the increase in the incidence of the pathology of the gastrointestinal tract in children was insufficient provision of school meals. Proper nutrition in educational institutions positively affects the health of children.

According to the class of skin and subcutaneous tissue diseases, the incidence rate is increasing from 83.9 to 131.1 per 1000 children during the period under review.

The most common are allergic dermatoses.

Similar to the previous class of pathology with a rapid increase in prevalence in children, the situation develops with regard to the class of diseases of the musculoskeletal system and connective tissue. The rate of increase is from 13.3 to 44.6 per 1,000 children. This class is mainly represented by functional disorders of posture and arch of the feet.

Analysis of the state and dynamics of the morbidity of the children's population by the pathology of the genitourinary system also revealed several problems requiring close attention. The increase in the overall incidence was from 29.3 to 55.5 per 1,000 children. The main causes of morbidity of the genitourinary system are such factors as hereditary predisposition, hypothermia, complications after the transferred viral infections.

Congenital anomalies and malformations, deformations and chromosomal violations also have outstripping rates of growth and consistent character of dynamics and pathology among children from 14.0 to 31.1 per 1000. The factor of pathological course of pregnancy combined with undeniable deterioration of environmental parameters and psychological stress in society play its negative role.

Injuries and poisonings in the children's population for the period under review also increased from 61.3 to 108.0 per 1,000 children. This requires interdepartmental work on the prevention of childhood injuries.

The dynamics of incidence rates by class are similar to the Russian Federation indices where there is an increase in the incidence of all classes of diseases (Table 2).

Table 2

The dynamics of the overall morbidity of the child population of the Russian Federation in 1991-2014 (per 100 thousand children's population)

Name of classes and individual diseases	1991	2014	Dynamics
Total registered	140846,0	222926,2	In 1,58 times
Some infectious and parasitic diseases	9654,4	8714,8	- 1,1 times
Neoplasms	209,7	903,9	in 4,3 times
Diseases of the blood and blood-forming organs	873,1	2775,6	in 3,8 times
including anemia	692,7	2476,6	in 3,6 times
Diseases of the endocrine system, eating disorders	1379,5	3746,4	In 2,8 times
including diabetes mellitus			
insulin-dependent	40,2(1995)	96,0	in 2,4 times
insulin-independent	5,1(1995)	1,3	-3,9times
Mental and behavioral disorders	2661,3	2938,5	in 1,1times
Diseases of the nervous system	….	8963,5	
including infantile cerebral palsy	196,1	330,8	in 1,7times
Diseases of the eye and its adnexa	…	11639,0	
including myopia	2540,7	3279,3	in 1,3 times
Diseases of the ear and mastoid process	…	5838,6	
of which: chronic otitis media	379,1	144,5	- 2,6times
Diseases of the circulatory system	687,6	1955,4	in 2,84times
Diseases of the respiratory system	86252,6	120756,3	in 1,4 times
Diseases of the digestive system	8413,0	13575,3	in 1,63times
Diseases of the skin of subcutaneous tissue	5914,7	10046,0	in 1,77times
Diseases of the musculoskeletal and connective tissue	1847,9	7556,7	in4,1 times
Diseases of the genitourinary system	2127,1	5410,2	in 2,55times
Congenital malformations, malformations, deformations, chromosomal abnormalities	1025,4	3359,8	in 3.28times
Injury to poisoning and some consequences of external causes	7099,6	10302,7	in 1,45 times

Conclusions

Analysis of incidence rates of the child population clearly showed the evolution of individual classes of illnesses since 1995 on the appeal of the children's population to medical and preventive institutions. In general, there is an increase in the overall incidence of many classes of diseases. In fact, this indicator is a fairly real and effective tool for planning and optimizing the pediatric service in the region.

References:

1. Dranaeva G.G. Grigor'eva A.N., Burceva T.E. Sostoyanie zdorov'ya detej Respubliki Saha (Yakutiya) [State of health of children of the Republic of Sakha (Yakutia)] M-vo zdravoohraneniya Resp.Saha (Yakutiya), Yakut. nauch. centr KMP SO RAMN [Health Ministry of the Republic of Sakha (Yakutia), Yakut science centre CMP RAMS]. Yakutsk: Offset. 2009, P.176.
2. Tishuk E.A. Ocherk zabolevaemosti naseleniya Rossijskoj Federacii zachetvert' veka [A sketch of the incidence of the Russian Federation's population in a quarter of a century] Medicinskaya statistika i orgmetodrabota v uchrezhdeniyah zdravoohraneniya [Medical statistics and the organization of work in health institutions]. 2017, №1, P. 3- 15.
3. Matalygina O.A. Formirovanie individual'nyh profilakticheskih meropriyatij pri vyyavlenii minimal'nyh riskov zabolevaniya u detej v vozraste ot 3 do 18 let [Formation of individual preventive measures in detecting the minimum risks of the disease in children aged 3 to 18 years]. Saint Petersburg, 2012, P.76.

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