

ACTUAL TOPIC

L.F. Timofeev, A.I. Gogoleva, A.L. Timofeev

STATUS OF PRIMARY DISABILITY OF ADULTS AND CHILD POPULATION IN THE REPUBLIC OF SAHA (YAKUTIA)

The data of the primary disability of the adult and children population in the Republic of Sakha (Yakutia) are presented, what is more in the context of districts / uluses over a ten-year period (2007-2016). The percentile method revealed the levels of primary disability: high, above average, medium, below average and low, which for clarity were painted in appropriate colors. The analysis revealed trends in the dynamics of indicators of primary disability (PD), as well as administrative-territorial entities, where it is better or worse PD level separately among the adult and child population. In addition, the structure of the main causes of disability and distribution to disability groups is presented.

Keywords: primary disability, primary disability of the adult population, primary disability of the child population, structure of the main causes of disability, distribution to disability groups, Republic of Sakha (Yakutia).

Introduction. At the present stage, the most unfavorable features of public health in the Russian Federation are the deterioration of public health and the growth of the disability indicator of the able-bodied population [3]. Disability of the population is a significant informative indicator of public health, accumulating the impact of social, economic, industrial, environmental and genetic factors, the level of medical care and reflecting, ultimately, the quality of the life support system [1]. By definition, Yu.P.Lisitsyn (2009), «disability is a prolonged or permanent loss of ability to work due to a significant impairment of the body's functions caused by a chronic illness or injury» [2].

Materials and methods of research. We analyzed the primary disability of the adult and children of the Republic of Sakha (Yakutia) for 2007-2016. The number of disabled people is presented according to the data of the Regional Department of the Pension Fund of the Russian Federation for the RS (Y) (Fig. 1).

Results and discussion. Total number of disabled people in Yakutia as of 01.01.2017.57 114 people. (as of 01.01.2008 - 49,546), which is 5.9% (in 2008 - 5.2%) of the total population. Of them disabled children 6004 (6428), and this is 10.5% (13.0%) of the total number of disabled people. Over the past 7 years, the levels of primary disability of the adult population in the RS (Y) and RF are almost identical (Figure 2).

The level of primary disability of the adult and children's population has been decreasing in recent years (Tables 1 and 2, figure 3). The level of primary disability of the able-bodied population continues to decrease, from 45.4 in 2008 to 35.7 per 10,000 able-bodied population in 2016.

In terms of the level of primary disability of the adult population, our republic in 2016 occupied 43rd ranked

place (in 2011 - 57th place). At the same time, the level of primary disability in the Russian Federation in 2016 was 56.7 per 10 thousand of the corresponding population (in 2011 - 72.6). In the regions of the republic, the highest levels of primary disability of the adult population were registered in 2016 in such Districts (Uluses) as Allaikovsky, M o m s k y , Srednekolymsky and Even-Bytantsky (above 89.0 per 10,000 adults).

At the same time in Nyurbinsky, O l e n e k s k y and Even-

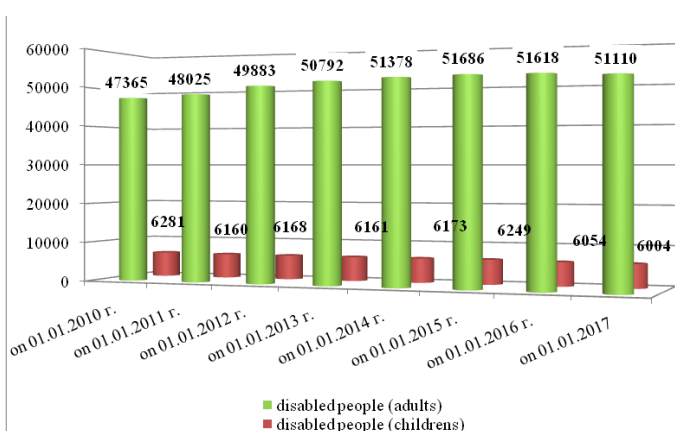


Fig. 1. Number of disabled people (adults and children) in 2010-2017, at the beginning of the year

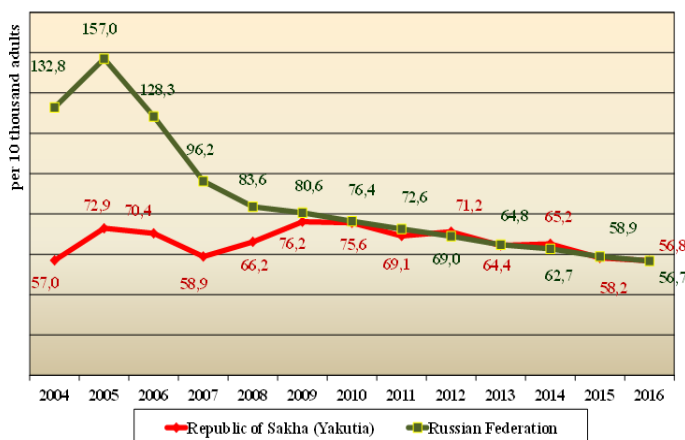


Fig. 2. The indicator of the level of primary disability of the adult population in the Republic of Sakha (Yakutia) and Russian Federation

population.

In the structure of the primary disability of the adult population in 2016, the invalids of the third group still prevailed (Figure 4). The proportion of disabled people in the II group decreased compared to 2009-2011, while group III increased.

In 2016, the following structure of the primary disability of the adult population was formed according to classes and main subclasses of diseases.

BytantskyUluses, the highest increase in this indicator is registered since 2007. The level of primary disability of the adult population below 50.0 per 10 thousand of adult population in 2016 was observed in such areas as Amginsky, Verkhnevilyuisky, Lenskiy, Mirninsky and Namsky. At the same time in Anabarsky, Bulunsky, Gorny and Myrninsky Districts for all 10 years of observation there is a low level of primary disability of the adult

The first ranked place was occupied by diseases of the circulatory system - 13.8 per 10 thousand of the adult population. Compared with 2009 (22.1), there was a significant decrease in the level of 1.6 times.

The second ranked place was occupied by malignant neoplasms - 13.7‰, while their increment for the entire period under consideration attracted attention. So, in comparison with 2009 there is an increase of 28%, although in 2015 the figure was even higher and was 14.4 per 10 000 adults.

At the third ranked place - diseases of the musculoskeletal system (DMS) - 4.3‰. There is also a decrease in the rate in recent years. And in comparison with 2009, the decline is almost twofold.

4-5th ranking places are occupied by ear and eye diseases - 3.4 per 10 thousand of the corresponding population. In comparison with 2009, there is a decrease in the level of primary disability for these classes of diseases (from 3.9‰ and 3.8‰ in 2009, respectively).

The 6th ranked place in 2016 was occupied by external causes - 2.8 ‰.

According to the MSE General Bureau, in the beginning of 2017 there were 6004 disabled people aged 0-18, including 910 children with disabilities for the first time (2009: 869). The indicator of the newly diagnosed disability is 31.0 (2007 - 28.0). These data are higher than the average for the Russian Federation: the level of primary disability in the Russian Federation in 2016 was 25.2 per 10 thousand of the corresponding population (in 2006 - 26.0) (Figure 5). The largest group among newly diagnosed children with disabilities are children under the age of 3 (350 children, 38.5%). In the total number of disabled people, boys continue to predominate.

In terms of the level of primary disability of the child population, our republic in 2016 occupied the 9th ranked place. In the Districts of the republic, the highest levels of primary disability of the child population were registered in 2016 in such Districts as the Anabar, Verkhnekolymsky, Vilyuysky and Momsky (above 45.8 per 10,000 children's population) (Table 2). The situation is better (the indicator is lower than 14.4) in the following Uluses: Allaikhovsky, Oymyakonsky, Oleneksky and Ust-Maysky. For the period 2007-2016 a favorable situation for children's disability is observed in the Aldansky, Kobayarsky, Lensky and Neryungrinsky Districts. And less favorable - in such Uluses as Allaahovsky, Anabarsky, Nizhnekolymsky and Nyurbinsky.

Table 1

The level of primary disability of the adult population by Districts (Uluses) Republic of Sakha (Yakutia) (for 10 thousand of the corresponding population)

Ulus/District of the RS (Ya)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Abyiskiy	101,6	116,9	110,1	91,2	97,9	72,9	112,2	101,6	96,7	72,7
Aldansky	56,2	65,2	85,8	72,6	59,5	67,6	66,4	68,3	69,3	60,0
Allaahovsky	64,9	119,4	108,6	124,4	87,6	103,5	45,3	141,2	58,3	96,7
Amginsky	56,4	62,4	97,3	67,5	74,3	66,7	62,8	67,9	59,5	49,9
Anabarsky	53,7	77,4	52,6	45,9	58,5	54,0	82,6	36,7	45,8	58,3
Bulunsky	38,6	46,7	61,2	69,1	53,3	41,8	32,2	61,5	44,2	52,5
Verkhnevilyuysky	50,5	65,5	57,7	71,9	65,4	74,9	66,2	51,6	44,9	47,1
Verkhnekolymsky	120,7	79,8	57,7	71,5	88,0	60,2	111,0	72,2	106,1	54,6
Verkhoyansky	53,8	67,0	79,4	60,9	40,6	61,1	79,4	53,8	59,5	65,8
Vilyuysky	62,8	86,3	77,6	84,3	91,8	79,2	69,7	72,0	64,2	56,9
Gornyy	60,3	58,7	55,9	70,2	54,0	49,8	57,8	60,7	53,6	67,7
Zhiganskii	66,1	91,9	94,5	41,2	58,4	50,9	79,9	81,1	95,1	63,3
Kobayarsky	70,9	68,3	65,1	81,3	94,5	69,8	103,0	76,5	48,4	63,5
Lensky	65,6	80,0	85,0	99,2	99,2	81,8	73,3	57,7	56,1	40,3
Megino-Kangalassky	76,9	78,5	89,1	88,9	81,2	88,3	69,7	84,3	78,1	71,3
Myrnskiy	37,4	44,3	45,9	47,8	45,0	45,6	42,7	45,9	46,1	45,5
Momsky	63,8	98,2	61,6	87,0	69,6	106,9	100,2	149,7	95,4	91,2
Namsky	67,7	63,4	57,1	62,5	65,8	61,7	60,0	62,3	50,9	49,0
Neryungrinsky	46,5	58,9	87,6	78,4	59,3	64,4	54,5	64,4	56,7	62,0
Nizhnekolymskiy	69,9	87,0	73,7	96,0	104,0	80,8	101,6	86,9	64,6	59,1
Nyurbinsky	61,3	58,2	75,7	75,8	72,1	73,5	73,4	91,0	67,9	81,5
Oymyakonsky	64,9	51,3	95,4	79,3	79,3	81,5	75,7	69,0	45,9	66,4
Olekminsky	80,4	90,1	80,9	100,0	85,9	85,1	70,1	62,5	54,0	63,9
Oleneksky	38,5	46,3	61,8	49,3	60,7	74,2	53,1	77,8	54,5	77,2
Srednekolymsky	38,4	73,9	116,6	104,2	115,2	109,7	75,1	85,1	77,4	89,0
Suntarsky	47,6	56,6	87,4	62,4	71,9	64,2	84,5	63,1	51,7	65,3
Tattinsky	71,2	74,3	96,6	76,1	90,0	72,2	92,3	72,1	69,6	60,6
Tomponsky	54,9	96,6	72,1	72,3	77,0	61,5	53,5	62,9	78,1	50,3
Ust-Aldansky	74,6	82,7	101,9	89,2	69,9	68,2	71,2	67,4	53,0	52,7
Ust-Maysky	58,0	73,8	76,7	58,3	61,0	71,7	79,3	71,1	105,8	69,9
Ust-Yanskiy	55,7	64,7	56,0	89,1	84,5	109,7	58,4	58,7	54,1	66,2
Khangalassky	69,5	71,3	75,7	76,8	62,6	68,3	59,6	63,9	63,0	62,9
Churapchinsky	70,8	62,1	77,8	72,0	65,2	61,1	66,0	70,1	57,7	51,1
Even-Bytantaisky	37,3	69,0	105,5	119,7	72,8	82,2	63,6	75,0	58,6	128,3
Yakutsk	61,6	65,2	75,0	77,3	69,6	77,1	62,9	64,2	55,2	53,2
The RS (Y)	58,9	66,2	76,2	75,6	69,1	71,2	64,4	65,2	58,2	56,8

96,7	high level of disability
77,2	below-average level
49,9	above-average level
40,3	low level of disability

In the structure of the causes of disability, the diseases of the nervous system are on the first place - 13.5 per 10 000 of the corresponding population, in the second place - congenital anomalies, which amounted to 4.7 ‰, in third place - mental disorders and behavior disorders

- 3.8 ‰. In the Russian Federation, the structure is somewhat different (2016): in the first place mental disorders and behavioral disorders - 6.2 per 10 000 children's population, on the second - diseases of the nervous system - 5.0, and on the third - congenital anomalies

Table 2

**Primary disability of the child population in the Republic of Sakha (Yakutia)
(per 10,000 population)**

№	Улусы	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Abyisky	58,9	42,1	25,2	69,6	26,1	31,5	39,2	24,2	40,7	33,1
2	Aldansky	34,6	26,4	18,2	25,3	23,4	22,7	21,7	23,0	18,6	27,4
3	Allaahovsky	27,3	41,0	27,3	95,4	54,5	55,8	22,9	46,9	35,4	12,2
4	Amginsky	31,9	21,3	37,3	25,2	23,4	48,0	41,6	34,5	43,0	23,0
5	Anabarsky	15,2	37,9	45,4	62,2	85,5	15,6	32,7	16,3	49,9	58,3
6	Bulunsky	33,7	16,9	29,5	37,2	49,6	32,7	16,6	12,9	21,8	17,6
7	Verkhnevilyuysky	42,0	34,1	49,9	45,3	37,3	41,3	31,2	31,5	39,6	28,8
8	Verkhnekolymsky	45,0	54,0	36,0	55,8	18,6	28,7	19,8	50,5	20,2	70,7
9	Verkhoyansky	25,6	45,5	19,9	44,3	23,6	38,2	37,5	21,8	13,8	35,9
10	Viluysky	29,5	42,4	36,0	40,0	58,1	34,1	34,3	44,3	56,3	45,9
11	Gorny	52,5	26,3	23,6	47,4	29,0	48,8	36,9	26,0	38,0	14,8
12	Zhiganskiy	35,6	17,8	80,0	17,6	44,0	66,7	42,5	21,3	21,3	21,2
13	Kobyaysky	22,0	36,6	22,0	20,0	22,5	16,8	14,9	42,6	17,6	33,0
14	Lensky	18,0	14,0	22,0	32,7	37,8	31,2	21,0	27,4	14,9	17,1
15	Megino-Kangalassky	27,3	30,2	48,8	21,7	31,5	23,6	31,0	30,8	35,4	34,5
16	Myrminsky	27,6	32,5	29,8	24,6	29,7	26,1	24,4	27,8	21,5	17,1
17	Momsky	0,0	52,5	52,5	59,7	19,9	32,2	19,4	33,4	20,1	66,4
18	Namsky	33,7	31,1	35,0	33,8	33,8	30,6	38,7	42,2	15,4	25,5
19	Neryungrinsky	20,3	21,4	18,1	24,6	23,0	16,2	20,3	24,0	17,8	22,6
20	Nizhnekolymskiy	42,3	110,0	25,4	70,8	44,2	38,3	46,0	38,2	30,1	29,8
21	Nyurbinsky	35,5	38,1	54,6	50,3	50,3	37,6	42,7	41,7	36,6	39,0
22	Oymyakonsky	29,7	39,6	64,4	31,7	31,7	36,6	28,1	19,2	34,1	14,3
23	Olenkinsky	38,4	39,8	35,7	37,9	35,1	42,1	30,5	17,7	23,7	23,8
24	Oleneksky	27,8	55,6	27,8	50,4	57,6	97,7	35,4	50,3	21,4	14,4
25	Srednekolymsky	8,5	16,9	25,4	30,4	43,4	51,6	20,0	60,4	36,6	32,2
26	Suntarsky	27,8	31,3	32,5	38,9	49,6	36,7	38,7	46,1	24,4	20,9
27	Tattinsky	44,1	33,1	42,2	29,9	31,8	53,7	24,3	24,4	24,4	45,4
28	Tomponsky	37,4	32,1	21,4	21,9	19,1	46,6	27,3	52,0	32,9	39,3
29	Ust-Aldansky	27,4	28,8	37,5	36,2	34,7	32,1	27,3	36,9	24,1	22,6
30	Ust-Maysky	46,5	41,3	31,0	27,7	27,7	30,1	15,3	15,4	10,2	10,4
31	Ust-Yanskiy	37,8	16,2	5,4	57,0	39,9	28,2	19,1	14,4	9,7	42,8
32	Khangalassky	21,8	28,1	27,0	25,7	40,7	40,3	33,2	37,8	25,7	25,6
33	Churapchinsky	28,0	23,8	32,2	43,9	38,3	33,9	27,9	36,3	37,4	25,7
34	Even-Bytantaitsky	45,0	33,7	22,5	45,0	11,2	43,4	10,9	21,7	21,7	22,1
35	Yakutskandaj.terr.	28,6	27,6	39,4	37,3	40,1	39,5	36,7	38,9	31,4	39,4
	The RS (Y)	29,4	29,8	34,0	34,6	36,0	35,0	31,0	34,1	28,2	31,0

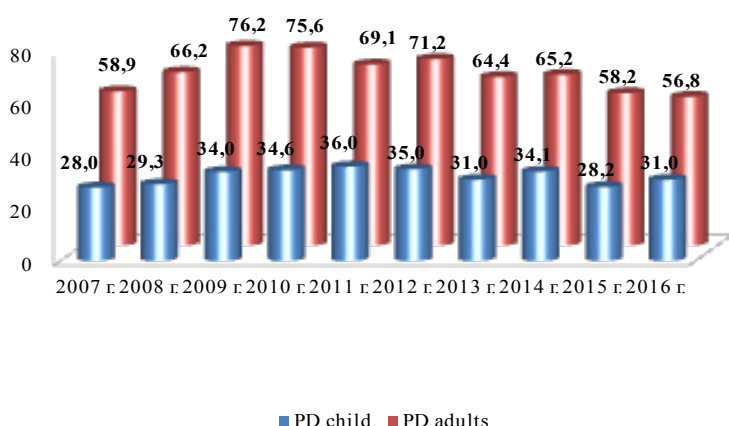


Fig. 3. The level of primary disability of the child and adult population in the Republic of Sakha (Yakutia) by 10 thousand of the corresponding age

- 4.5 respectively.

The conclusion. Thus, the level of primary disability of the adult population has declined in recent years. In the structure of the primary disability of the adult population in 2016, the disabled of the third group prevailed. In the Districts of the republic, the highest levels of primary disability are registered in 2016 in such Districts (Uluses) as Allaahovskiy, Momsky, Srednekolymsky and Even-Bytantaitsky. The first ranked places in the structure of diseases that cause primary disability are steadily occupied by diseases of the circulatory system, malignant neoplasms, diseases of the musculoskeletal system.

The tendency of growth of primary disability among children from 0 to 18 years in recent years characterizes the state of health of the children of Yakutia as unsatisfactory and therefore requires the continuation of program activities to reduce their level. It can not be said that the health authorities and institutions are not doing enough work to improve the maternity and childhood protection service. This direction is today undoubtedly a priority, the leadership of the republic and the branch ministry are doing much to build and improve the material and technical base of perinatal, children's and obstetrical institutions, the training of pediatric staff.

At the same time, in order to preserve and improve the health of the younger generation, even more needs to be done, and in our view, the role of intersectoral cooperation between managers and health and social protection specialists will only increase.

References

1. Schepin, O.P. Health of the population is the basis of healthcare development / O.P. Shchepin, RV Korotkikh, V.O. Shchepin, V.A. Medic. - M.: Nat. Research Institute of Public Health, RA, 2009. - 376 p.
2. Grishina L.P. The analysis of disability in the Russian Federation for 1970-1999 and its forecast until 2015 / L.P. Grishina, N.D. Talalayeva, E.K. Amirova // Med.-soc. examination and rehabilitation. - 2001. - № 2. - P. 27-31.
3. Lisitsyn Yu.P. Public health and health: Textbook / Yu.P. Lisitsyn. - Moscow: GEOTAR-Media, 2009. - 512 p.

The work was carried out within the framework of the research «Multifactor study of the health status of the indigenous and newcomers of the Republic of Sakha (Yakutia) in order to optimize regional programs to improve the quality of life of the inhabitants of the republic, taking into

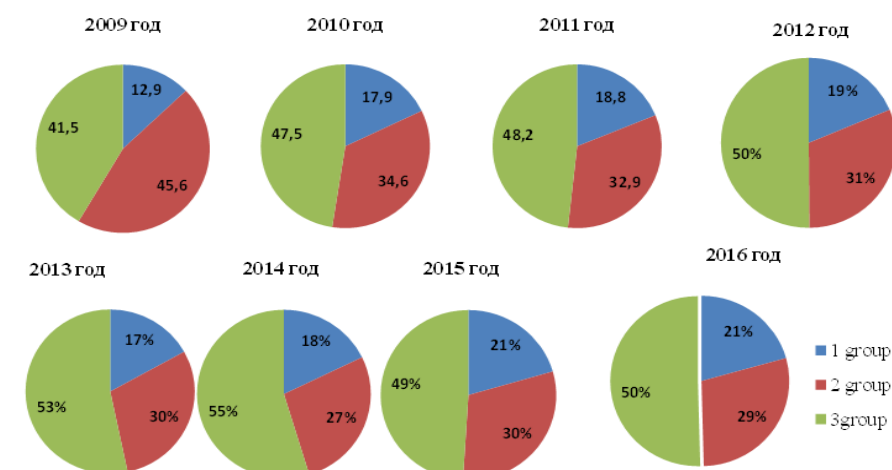


Fig. 4. The proportion of newly recognized disabled people taking into account the disability groups for the RS (Y)

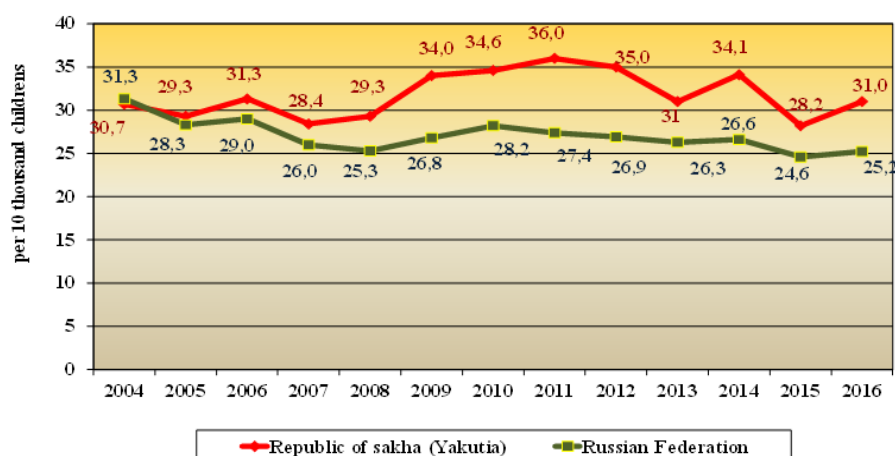


Fig. 5. The level of primary disability of the child population in the Republic of Sakha (Yakutia) and Russian Federation

account territorial, ethnic characteristics in the context of modern socioeconomic development» under the Program for Comprehensive Scientific Research in the Republic Sakha (Yakutia) for 2016-2020.

1. Timofeev Leonid Fedorovich - Doctor of Medical Sciences, Professor of the Department of Public Health and Public Health, General Hygiene and Bioethics, Medical Institute of Medicine, M.K. Ammosov NEFU. 677000 Yakutsk, ul. Oyunsky, 27. Cont. Tel. 8-914-225-88-45. E-mail: tlfnauka@mail.ru

2. Gogoleva Anastasia Ivanovna - Deputy Director for Expert Work, Medical and Social Assessment Bureau of the Sakha Republic (Yakutia), Ministry of Labor of Russia. 677018, Yakutsk, ul. Chernyshevsky 8/2. Cont. 8-924-663-18-86. E-mail: aigogoleva@mail.ru

3. Krivoschapkin Vadim Grigorievich - Doctor of Medical Sciences, Professor, Academician of the Academy of Sciences of the Republic of Sakha (Yakutia), Adviser of the Academy of Sciences of the RS (Ya). Cont. Tel. 8-914-305-46-35. E-mail: kukai1937@gmail.com

4. Timofeev Artem Leonidovich - postgraduate student of the Department of Public Health and Public Health, General Hygiene and Bioethics, Institute of Medicine, M.K. Ammosov NEFU. Address: 677000 Yakutsk, ul. Oyunsky, 27. Cont. Tel. 8-964-423-72-72. E-mail: su-yuol@mail.ru.

A.N. Argunova, A.N. Khorunov, E.A. Andreeva, R.N. Yakovleva

ANALYSIS OF DETECTABILITY OF COPD RISK FACTORS AMONG THE POPULATION OF YAKUTSK

ABSTRACT

The most common reason for the development of chronic obstructive pulmonary disease (COPD) is the damage to airways and lungs caused by tobacco smoking. About 15% of all long-time smokers develop a clinically significant obstructive pulmonary disease. In 80-90% of all cases the development of COPD is connected with smoking. Total incidence of COPD (per 1000 people) in 2008-2014 in Russia, Far Eastern Federal District and the Sakha Republic (Yakutia) in comparison is 5-5,3-6,3-6,8-8-8,6-8,2 in the Sakha Republic, 3,7-4,2-4,7-4 in the Far Eastern District and 3,7-3,9-4,1-3,7 in Russia. The number of COPD cases in the Sakha Republic over time remains high compared to the Far Eastern District and Russia, despite the low density of population. The total number of respiratory system diseases (RSD) in 2014 (preliminary data) was 74,115; pneumonia – 2,308; chronic bronchitis – 19,438; COPD – 5,740; bronchial asthma – 8,773. 2014 saw a decrease in cases of pneumonia by 334 patients as compared to 2010. The number of COPD cases increased by 1,354 patients, and the greatest increase was in the number of bronchial asthma cases – by 2,542 people. (Absolute numbers per Yakutsk Republican Medical Information and Analysis Centre data, 2014). The aim of our research was to study COPD risk factors among the citizens of Yakutsk working in dusty and polluted environments and chemical companies, as well as the people who have a bad habit of smoking. We conducted surveys and examined respiratory functions (spirometry). We examined 70 people living in the City of Yakutsk who had respiratory complaints, were subject to occupational hazards, or were long-time smokers. In order to study the COPD risk factors, we used 'A Patient's Questionnaire' developed by the Pulmonology Research Institute of Russia's Federal Medical-Biological Agency, Moscow. The questionnaire contains 22 questions to identify risk factors and respiratory symptoms. We also used a self-actualisation test to evaluate the impact of COPD on the health status of a responder. This test on chronic obstructive pulmonary disease (COPD) can be used for a simple and reliable evaluation of the health status of patients who have the disease. It is used in conjunction with other diagnostic methods and allows for a relatively simple evaluation of COPD's level of impact on health status. This test is used to evaluate the impact of COPD on the