Nat. Volatiles & Essent. Oils, 2021; 8(4): 14653-14657

NVEO
Natural Volatiles &
Essential Oils

Predicting Disability At Working Age As A Component Of Medical And Social Research

Shamatava Nana Emzarovna[1] , Serov Denis Viktorovich[2] , Articulova Irina Nikolaevna[3]

[1]Candidate of Medical Sciences, National Research Institute of Public Health named after N.A. Semashko.

[2]Candidate of Medical Sciences, National Research Institute of Public Health named after N.A. Semashko.

[3]Candidate of Medical Sciences, National Research Institute of Public Health named after N.A. Semashko.

Abstract.

Population health is one of the most important indicators of the country's well-being, and its protection and strengthening is a priority direction in any state development. The most crucial aspect of medical and social research in preventing its deterioration and preventing disability is forecasting. The article compiled a short-term prognosis of disability at working age for the period up to 2020 using the index method and provided its justification.

Keywords: disability, prediction, index, labour potential losses calculations

Introduction.

Disability prevention of the working-age population resulting from long-term or persistent loss (limitation) of working capacity due to a chronic disease, the consequences of injury is an urgent medical and social problem. The frequency and structure of primary disability indicators has a multifactorial nature and is determined by national and regional trends in the public health state of various population groups, the organization of medical and preventive care and regulatory aspects of medical and social expertise institutions activities [1,2,3].

The implementation of scientifically based approaches to studying and identifying removable causes of primary disability can facilitate the decrease of disability at working age, which, in turn, can serve as a basis for the formation of targeted regional programs with an impact on the most critical factors that determine the level of public health, including from specific causes of disability [4,5].

Results.

Make a short-term forecast of the probability of disability for the working-age population and assess the losses accompanying disability based on the use of the index method for predicting the leading demographic indicators.

The object of the study was the case of disability, the working-age population of the constituent entity of the Russian Federation.

An observation unit is a disabled person of working age who lives in the Moscow region and is examined by the ITU Bureau.

The research subject is the factors influencing the level of disability of the working-age population and ways to reduce it.

В соответствии с определённой целью была использована комплексная методика исследования: изучение и обобщение опыта, статистический, социологический (интервью и анкетирование), экспертных оценок, сравнительного и экономического анализа и др.

Для определения приоритетных направлений деятельности медицинских учреждений здравоохранения весьма важным является прогнозирование ситуации по инвалидности лиц трудоспособного возраста на ближайшие годы. Предполагаемые уровни показателей инвалидности позволяют планировать и выбирать кардинальные направления профилактической работы.

Для того, чтобы более наглядно и точно показать динамику выхода на инвалидность был применён индексный метод, являющийся наиболее точным в статистике.

Базисный индекс показывает (таблица 1), что контингент впервые признанных инвалидами постоянно снижается по сравнению с 2001 годом. Причём темпы снижения по Московской области опережают темпы снижения в целом по стране. Что же касается тенденции по общему контингенту инвалидов трудоспособного возраста то здесь видна тенденция к его росту, причём в МО темп роста значительно выше, чем в РФ, что объясняется большим притоком мигрантов, как контролируемым, так и нет, что отражается на показателях состояния здоровья населения МО (темп снижения в РФ -23,1%, в МО – 5,5%. Темп роста в РФ +29,2%, в МО+ 31%).

Таблица 1.

Динамика индексов инвалидности трудоспособного населения в Российской Федерации и в Московской области за 2001–2020 гг.

A comprehensive research methodology was used under a specific goal: study and generalization of experience, statistical, sociological (interviews and questionnaires), expert assessments, comparative and economic analysis, etc.

It is essential to predict the disability situation of working-age people for the coming years to determine the priority areas of medical healthcare institutions activity. The estimated levels of disability indicators allow planning and choosing the cardinal directions of preventive work.

In order to more clearly and accurately show the dynamics of reaching disability, the index method was used, which is the most accurate in statistics.

The primary index shows (Table 1) that the contingent of those who were recognized as disabled for the first time is constantly decreasing compared to 2001. Moreover, the decline rate in the Moscow region is faster than that of the country as a whole. As for the trend in the general contingent of disabled people of working age, there is a tendency to its growth, and in the Moscow region, the growth rate is much higher than in the Russian Federation, which is explained by the large influx of migrants, both controlled and not, which is reflected in the indicators of the MR population health status (the decline rate in the RF -23.1%, in the MR- 5.5%. The growth rate in the RF + 29.2%, in the MO + 31%).

Table 1. Disability indexes dynamics of the working-age population in the Russian Federation and the Moscow region for 2001–2020.

Year	URL		Total number of people with disabilities	
	RF	MR	RF	MR
Base index				
2001	1,000	1,000	1,000	1,000
2004	**0,9141**	**0,8800**	**0,9985**	**1,0828**
2005	0,9141	0,8214	0,9776	1,1500
2006	0,8898	0,7400	0,9529	1,2379
2007	0,9249	0,5679	0,9516	1,2580
2008	0,8840	0,5422	1,1104	1,2948
2009	0,5248	0,4163	1,0467	1,2996
2010	0,7164	0,4362	1,0796	1,3385
2020	**0,7028**	**0,8314**	**1,2892**	**1,4177**
Chain index				
2001	1,000	1,000	1,000	1,000
2004/ 2020	0,9141/ 0,9655	0,8800/ 0,9930	0,9985 /1,04139	1,0828/ 1,0801
2005/ 2019	1,0012/ 0,9679	0,9335/ 0,9915	0,9791 / 1,0146	1,0621/ 1,0400
2006/ 2018	0,9949/ 0,9701	0,9009/ 0,9923	0,9748 / 1,0154	1,0764/ 1,0430
2007/ 2017	1,0158/ 0,9721	0,7674/ 0,9901	0,9986 / 1,0162	1,0163/ 1,0430
2008 /2016	0,9558/ 0,9740	0,9546/ 0,9910	1,1670 / 1,0170	1,0292/ 1,0100

2009 /2015	0,5937/ 0,9758	0,7678/ 1,0097	0,9426 / 0,9821	1,0037/ 1,0429
2009 /2020	1,3651/ 1,0417	1,0478/ 1,0282	1,0314 / 0,9975	1,0299/ 1,0300

The chain index shows that the decline in each subsequent year occurs in waves in the whole country, and in the Moscow region, there is a constant increase in the contingent of URLs and an increase in the total contingent of disabled people.

In addition, in work, to calculate the prognosis of disability, the accumulation indices method of the number of people with disabilities in various contingents was also applied by referral to the ITU MO bureau (base years 2000-2020).

The number of people who were first recognized as disabled people of working age according to the average long-term (for 11 years) accumulation index, equal to 0.3%, will amount to 69.4 thousand disabled people in 2013, increasing to 71.1 thousand disabled people in 2014-2015 and up to 74.5 thousand disabled people in 2020.

According to the average long-term accumulation index, the total number of persons with disabilities examined by the ITU MO bureau, which is 2.8%, will be 97 thousand people in 2013, 99 thousand people in 2014-2015 and will increase to 1 million people in 2020.

The forecast for this index revealed the following features. According to the analysis of the time series of disability for 2000-2010 the growth rate of disabled people of working age will be 3.7%. The number of people with disabilities recognized for the first time will amount to 68.6 thousand people in 2013, 64.5 thousand people in 2014-2015 and 67.7 thousand people in 2020. The total number of disabled people will be 1.8 million people in 2013, 2.0 million people in 2014-2015, and will increase to 2.2 million people in 2020.

In conclusion, it should be noted that with various calculation options, the total number of disabled people of working age, examined by the ITU MO bureau in 2020, will amount to 2.0-2.2 million people.

In the study course, the losses from the disability of the working-age population were also calculated, which have a significant economic aspect.

Several indexes are used to consider the incapacity for employment due to disability, the level of income and education of individuals to solve the problems discussed, and direct calculations. Nevertheless, these indexes are integral, and therefore the corresponding calculated indicators do not have specific physical content and can be used only as disadvantage indicators, followed by an analysis of the necessary economic and social categories, some of which are mentioned above.

According to the study, the “disease burden” cost - the loss of labor potential and direct costs, in Russia, including the “direct” cost of the loss of labour potential, as a result, disability and illness with a temporary disability was 15.9% of GDP in 2003 and 22.2% in 2010, respectively.

Conclusion

In order to prevent primary disability and reduce its adverse medical and social consequences, an accurate prognosis of disability and its severity is necessary, the development of comprehensive target programs for organizing medical and preventive care for the working-age population, especially concerning technological forms of diseases and the consequences of injuries, which are most often lead to disability, as well as scientific substantiation and widespread introduction of methods of medical and social rehabilitation of disabled people based on industry sanatorium and health resort and health institutions.

References:

1. Kudrin V.A. Medico-social issues of primary disability of workers in railway transport"//Collection of scientific and practical works in 2 volumes. Healthcare in the railway transport of the CIS member states at the present stage: theory and practice.-M.- 2004-T - pp. 128-131.

2. Shchepin O.P., Ovcharov V.K., Starodubov V.I., Denisov I.N., Mikhailova Yu.V., Sheiman I.M., etc. The main directions of state regulation of the development of healthcare in the Russian Federation for 2000-2010. // Problems of social hygiene, healthcare and the history of medicine - 2000, No. 3 - pp. 3-11.

3. Clausager H. Organization of health services at district/regional level. Report on a study. Copenhagen: World Health Organization – 1990.

4. Cohen, J. and T. Nudel. 1993. Rehabilitation of elderly patients. Don't give up too quickkly: Australian Family Physician 22:553-557.

5. Cushman L.A., Scherer M.J. Psychologial assessmtnt in medical rehabilitation. / Washington. DC. APA. Books. 1995.