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METHODOLOGY FOR DETERMINING THE MEDICAL DETERMINANT OF PUBLIC HEALTH WITH THE IDENTIFICATION OF MEDICAL RISK FACTORS FOR HEALTH DISORDERS IN OTORHINOLARYNGOLOGY (ON THE EXAMPLE OF ANALYZING THE TREATMENT OF POLYPOSIS RHINOSINUSITIS)

DOI 10.25789/YMJ.2024.87.11

UDC 614.2

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An algorithm for assessing the professional potential of an otorhinolaryngologic based on the identification of medical risk factors in the provision of medical care to patients with rhinosinusitis has been developed. A total of 627 otorhinolaryngologic from 32 subjects of the Russian Federation were screened and the treatment of patients with polyposis rhinosinusitis was analyzed. The proposed methodological approach was successfully used to assess the knowledge and skills of physicians of other specialties and formed the basis for the methodology of studying the professional potential of physicians, for which the author's invention certificates were also obtained.

Keywords: public health, medical determinant of public health, medical personnel, human potential, professional potential, staff potential, medical risks, quality, interaction efficiency, medical effectiveness, polyposis rhinosinusitis, antibiotics, topical glucocorticosteroids, antiseptics, otorhinolaryngologic, sociological research.

Introduction. In accordance with the Decree of the President of the Russian Federation the national interest of Russia is: saving the people of Russia, development of human potential, improvement of the quality of life and well-being of citizens. The possibility of saving the people directly depends on the development of human resources potential of health care system employees as a key component affecting the quality of medical determinant of public health. Comprehensive analysis of the attitude of doctors to their activities is significant from the position of preserving and increasing public health. Medical determinant of public health takes into account the state, resource provision and management processes of public health care, which as a result of synergy ultimately affect the quality of public health. Its components are the state of resource endowment of the industry, including staffing, level of professional potential, quality of professional development institutions, processes of medical care and the results associated with their use in the field of prevention, diagnosis, treatment, rehabilitation, which ultimately improve the quality of public health [5]. Low quality of rendered medical services and, as a consequence, low medical efficiency, negatively affect the state of public health, which is why it is necessary to take into account the state

of medical determinants in order to develop a productive system of public health management. [5].

The state of staffing and the level of professional potential, as components of the medical determinant of public health, are one of the main components of the health care system in addressing the degree of achievement of medical outcomes. The methodological peculiarity of the work was the use of the following definitions as working concepts, which were proposed by researchers at different stages of human resources study: human potential, professional potential and human resources potential of health care workers [4,6,9]. One Nobel laureate Armantia Sen defined the key goal of society development as the increase of human potential, and as the main characteristic of human potential he indicated the possibility of free choice of value-oriented activities by an individual, and another Nobel laureate James Heckman further developed the concept of human potential, linking it to the development of internal abilities of an individual, to the activation of his creativity. However, there is still no unified interpretation of this concept. Human potential can be considered as a certain "resource" that is used both in the employment market and outside it. Its main components will be education and level of expertise, but the content of this term is expanding by adding such personal characteristics as, for example, the structure of interests and values.

Health status as one of the forms of human capital is included in the "core" of human potential and makes it possible to analyze the level of economic return in the form of added value at the macro level, and in the form of income from labor activity or increased consumer demand at the micro level [14]. Comprehensive studies of the current state of human potential of health care are insufficient, and the existing methodological approaches to its assessment are characterized by fragmentation, lack of an integral approach and determine the need for further improvement of expert assessment methodology not only at the individual but also at the societal level [4].

The characteristic of a medical worker is included in the criteria for assessing his/her human potential when proving the reliably more effective preservation of life, health, success of professional and labor activity of a medical worker and higher quality of medical care provided by him/her [9]. Human potential is defined as a set of properties and qualities that determine the ability of an individual to achieve the highest success in individual professional activity through self-expression and self-development. The risk-oriented approach can be used as a methodological basis for methodological approaches to measuring human potential.

In accordance with the Rules for the development and approval of professional standards approved by the Government of the Russian Federation of 22.01.2013 № 23, the introduction of professional standards in medical organizations in Russia was accompanied by research in the field of professional competencies of medical workers, which can be considered as a methodological basis for the introduction of the term "professional potential of health care workers". This term can be used not only in terms of assessing the professional competencies of medical workers, but also as a characteristic of the readiness of medical personnel to form and maintain their professional identity, increase their professional expertise, and improve their knowledge, skills and abilities within the medical specialty. Based on the expert assessment, the authors propose a unified concept of human resource potential of the health care sector, which corresponds to the purpose and objectives of our study.

Human resource potential of the health care sector is the ability of a professionally trained and organized workforce - health workers - to achieve the goals of improving the quality of public health to the fullest extent possible. It includes such components as the structure of labor resources and their even distribution; expected duration of labor activity in the sphere of health care; continuous improvement by medical personnel of professional knowledge, skills and abilities in the field of medical prevention, treatment and rehabilitation, medical deontology and ethics; high external assessment of professional competencies of labor resources; inclusion of work in the priority of life values; satisfaction with both the chosen specialty and the present work. Physicians' job satisfaction, motivation to work and medical workers' confidence in their work are also important integral indicators of the professional potential of medical personnel, taking into account the state's personnel policy in the field of health care and public health. The relevance of the development of a new tool for studying and assessing the professional potential of medical personnel is associated with the increased need to provide the health care system with qualified medical personnel as a component of the medical determinant of public health.

Diseases of the ENT organs occupy a significant place in the general structure of morbidity and do not show a downward trend Knowledge of the state and causes of the decline in physicians' competence, human potential and factors determining them would be the basis for making adequate management decisions to improve the quality of medical otorhinolaryngologic care [10]. The estimated incidence of acute rhinosinusitis (ARS) ranges from 1.39% to 9% per year, and chronic rhinosinusitis (CRS), affects about 14 in every 100 people, and about 2-4 out of 100 have polyposis rhinosinusitis (PRS) [10]. Previously, defects in the provision of medical care to patients with rhinosinusitis have been identified in our country [8]. In ORS there is a risk of inflammation transition to a chronic form and development of CRS, Improper treatment of CRS leads to frequent relapses, repeated courses of antibiotic therapy, risk of antibiotic resistance development, increased need for surgical treatment, which increases the material costs of the state on the one hand, and further reduces the quality of life of these patients on the other hand. In ORS, improper treatment of patients, in addition to the recurrence of polyp growth, may worsen the drug control of comorbid pathology in the form of bronchial asthma (BA) and allergic rhinitis due to the common mechanism of development of these pathological conditions.

The aim of this study was to assess the professional competence of otorhinolaryngologic in the subjects of the Russian Federation, as a component of the medical determinant of public health, by means of a quantitative social survey using a questionnaire developed by the authors to assess the knowledge and skills of a doctor [11], using automated systems for collecting and processing information [8].

Materials and methods of research. On the basis of the obtained data of the quantitative sociological survey we analyzed the provision of medical care to patients with rhinosinusitis with the identification of medical risk factors associated with the professional training of otorhinolaryngologic as a component of medical determinants affecting public health.

The assessment of the correctness of the answers of the interviewed doctors was based on comparison with the reference value (standards of medical care). The proposed algorithm (Fig. 1) allows us to assess the level of professional competence of otorhinolaryngologic, the level of their knowledge and skills as a component of the medical determinant of public health with the possibility of identifying medical risk factors in otorhinolaryngology and to identify the main problems,

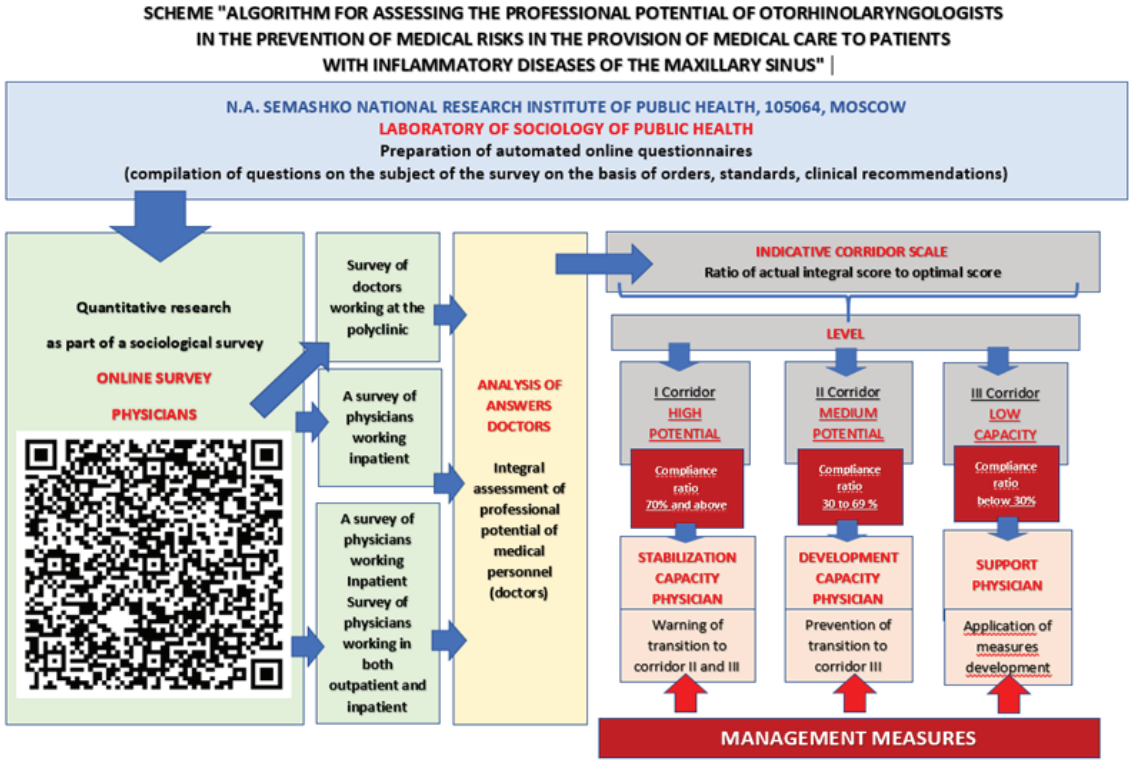
the solution of which through the development of a set of measures can improve the training of medical personnel and ensure the quality of medical care [11].

A pilot approbation of the methodology was carried out by questioning 627 otorhinolaryngologic working in state hospitals or polyclinics from 39 subjects of the Russian Federation. Among the respondents there were 46.25% men and 53.75% women, age up to 44 years was in 49.44% of cases, 45-59 years - in 46.09% of cases and over 60 years - in 4.47% of cases. Work experience up to 10 years was 197 (31.42%), 10-15 years was 119 (18.98%), 16-20 years was 108 (17.22%), 21-25 years was 94 (14.99%), 26-30 years was 68 (10.85%) and more than 30 years was 41 (6.54%). The link to the online form was sent to respondents by e-mail or using the messengers "WhatsApp" and "Telegram". The data of the sociological survey were automatically accumulated on Google Drive in the form of an Excel table for automatic summary, processing and analysis of the data of respondents' answers to the scale of predicting the quality of otorhinolaryngological care, taking into account the characteristics of an otorhinolaryngologic and his competencies, which are a set of interrelated basic qualities of personality and include the application of knowledge, skills and abilities. The survey data were fed into the automated system of information collection and processing "System of automatic data processing and questionnaire administration (SODA version 1)". Computer program registration certificate № 2024613395 [8].

Results. The electronic form of the questionnaire included 229 questions divided into two sections (outpatient, inpatient) with answer choices and open-ended question options with the possibility to give and reflect suggestions from the interviewed otorhinolaryngologic. QR Code to the electronic form of the online questionnaire. (Figure).

The questions for the sociological survey are formulated taking into account clinical recommendations, standards and orders of medical care in the profile of "Otorhinolaryngology", as well as the results of the analysis of theoretical and empirical concepts. The online questionnaire is designed to survey primary care otorhinolaryngologic, as well as otorhinolaryngologic working in a specialized hospital, and consists of three parts:

The proposed algorithm allows us to analyze the average and individual characteristics of the sample, to investigate the consistency of the questionnaire items. The questionnaire includes three blocks of questions:



Scheme "Algorithm for assessing the professional potential of otorhinolaryngologic in preventing medical risks in providing medical care to patients with inflammatory diseases of the maxillary sinus". Industrial design patent No. 139327. [11]

Algorithm of evaluation of answers to the questionnaire questions

Indicator	Scales	Question numbers (number)	Mini-maximum score	Maxi-maximum score
Survey of doctors working in the polyclinic	indicative corridor scale	10-135 (125)	125	375
Survey of physicians working in the hospital	indicative corridor scale	167-229 (62)	62	186
Manipulations/operations performed	indicative corridor scale	136-162 (26)	26	78
Criteria for assessing the quality of medical care. Quality of work of a doctor	importance rating scale in points	163-166 (3)	3	9

-1st block of questions is a survey of doctors working in the polyclinic;

-The -2nd block of questions is a survey of physicians working in the hospital;

-3rd block of questions - a survey of doctors working in both polyclinic and hospital.

The questionnaire also includes two scales: the indicative corridors scale (the ratio of the actual integral assessment to the optimal one), when analyzing and automated processing of respondents' answers using integral assessment of indicators, they are divided into three assessment levels or three indicative corridors:

Corridor I - high physician potential (number of points: 161-240);

Corridor II - average physician capacity (number of points: 81-160);

Corridor III - low physician potential (number of points: up to 80).

The indicators of the scales were developed on the basis of analyzing the existing body of research on this issue. The scales provide an opportunity to diagnose the causes and define indicative corridors of the level of professional potential of a doctor (high, average, low) and makes it possible to take timely management measures, both general and individual. in cases of marking questionnaires or filling them out in the personal cabinet of the automated workplace of a doctor.

Thus, if the physician's potential is high (Figure), take measures to prevent the transition to II and III (medium and low) indicative corridor (level) by stabilizing the process.

At medium potential, developmental measures should be taken to prevent the transition to low potential - Level III.

At low potential (Level III), measures for physician support and professional development should be applied.

The methodology questionnaire includes 229 questions, of which direct 220 questions and 9 -socio-demographic indicators

For each question of the methodology, only one answer can be selected and assigned a score. Each indicator is a value calculated for a specific respondent, expressed in points. Scoring is carried out in manual or automatic mode with determination of the correspondence coefficient: from 70 to 100% and above - high; from 30 to 69% - average; below 30% - low (Table).

The information obtained from the results of the survey of the applied methodology allows to assess the level of professional competence of medical personnel (doctors), to identify the main problems, the solution of which through the development of a set of measures can improve the training of medical personnel and ensure the quality of medical care.

The use of the proposed methodology of the algorithm for assessing the professional potential of a doctor allows to identify medical risk factors in otorhinolaryngology. The questionnaire revealed inconsistencies in the treatment of polyposis rhinosinusitis in the form of irrational prescription of systemic antibiotic therapy in 89.31% of cases, local application of solutions with antibiotics in 52.8% of cases and antiseptics in 36.7% of cases, prescription of vasoconstrictors in 64.8% of cases [2]. Also, 17.5% of otorhinolaryngologic do not recommend intranasal glucocorticosteroids as a basic therapy for MRS, which is the main means of preventing the recurrence of polyp growth, and 48.5% of physicians recommend drugs that have no indications for use in MRS in their instructions.

Discussion. Thus, the initial analysis of the data obtained during the questionnaire revealed inconsistency in the provision of medical care by otorhinolaryngologic in the treatment of ORS in the form of unjustified prescription of systemic and local antibacterial drugs, recommendation of topical GCS "off label" or absence of GCS in the recommendations, which are the basic therapy of ORS, as well as frequent use of decongestants. Inappropriate treatment of ORS leads to uncontrolled growth of polyposis tissue and formation of more severe forms of ORS, and concomitant pathologic conditions in the form of AD and respiratory allergy [2,7]. Given the multifactorial nature of the mechanisms involved in the development of polyposis rhinosinusitis, the identification of inconsistencies in the management of these patients will allow the development of interventions to address them.

Conclusion. The level of professional competence as part of the professional potential of medical personnel in otorhinolaryngology is extremely important as one of the components of the medical determinant of public health, to improve medical efficiency in the prevention, diagnosis, treatment and rehabilitation of ENT diseases of the Russian population.

The proposed algorithm for assessing the professional potential of otorhinolaryngologic in the prevention of medical risks in the provision of medical care to patients with rhinosinusitis [11] was successfully transported to other profiles of medical care is the basis of the methodology for studying the professional potential for physicians of specialists of different profiles of care, influencing medical efficiency in the field of prevention, diagnosis, treatment and rehabilitation, which ultimately improves the quality of public health [12, 13]. The Ministry of Health of the Russian Federation can use the proposed methodology and the obtained results of scientific research in the development of approaches to assess and improve the professional potential of physicians in order to increase the public health of the country.

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Khe Mi Ran

MEDICAL AND STATISTICAL ANALYSIS OF THE PREVALENCE OF ABORTIONS IN THE SAKHALIN REGION

DOI 10.25789/YMJ.2024.87.12

UDC 614.2:311.313(571.64)

The article analyzes the structure and dynamics of abortions in the Sakhalin region for the period 2013-2022 based on statistical data from the Sakhalin region and the State Federal Statistical Observation No. 13 'Information on pregnancy with an abortive outcome'. Despite a significant decrease in the absolute number of abortions in the Sakhalin Region, which is partly due to a decrease in the number of women of fertile age, a high level of abortions per 1,000 women aged 15-49 years remains, almost twice as high as the same indicator in the Russian Federation. There is an increase in the proportion of spontaneous abortions, as well as abortive outcomes associated with other abnormal products of conception, which may indicate problems of women's reproductive health and a decrease in reproductive potential. These changes are also related to the adoption of new statistical forms of registration of abortions in Russia in 2015-2016. In the structure of the terms of termination of pregnancy, the main part during the study period is abortions up to 12 weeks, but there is a tendency to increase the proportion of abortions at a later date of 12-21 weeks - by 44.8%. In turn, not a single case of abortion for social reasons was noted during the study period, but the share of criminal abortion increased, so in 2021 there were seven cases of illegal termination of pregnancy up to 12 weeks and five cases in 2022. There has also been an increase in medical (legal) abortions in non-governmental medical organizations, which indicates the need to develop measures aimed at interaction between state and non-state medical institutions providing abortion services. In addition, there is no data on abortions among first-time pregnancies in non-governmental medical organizations, which leads to an underestimation of this indicator in the overall structure of abortions. According to the data of the State Federal Statistical Observation No. 13, there has been a steady increase in the share of abortions among first-time pregnancies in the structure of all abortions, including in the share of medical (legal) abortions by 31.9% over the period from 2016-2022. This indicates the need to develop preventive measures aimed at increasing the availability of contraception and medical literacy in the field of reproductive health and the formation of responsible reproductive behavior among the population of the Sakhalin region.

Keywords: abortion, fertility, reproductive choice, Sakhalin region

Introduction. More than 30 years ago, the World Health Organization recognized abortion as a serious problem in the field of women's reproductive health. Despite a significant decrease in abortions in Russia over the past decades, abortion remains one of the main methods of birth control. At the same time, the list of social indications for termination of pregnancy has been significantly reduced, since 2012, the only reason is pregnancy resulting from rape, a special time time has been introduced between the woman's treatment and the abortion procedure itself – "week of silence". In addition, since 2016, mandatory demonstration of the fetus and its heartbeat during ultrasound examination has been introduced for women planning to resort to abortion [4]. Thus, abortion preven-

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