

**Vera Nikolaevna Aporevich** – Candidate of Jurisprudence, associate professor, the Far-Eastern state transport university (Khabarovsk). *E-mail:* vera.nika.72@bk.ru

### **Legal problems of protection of micro-ecological sphere of the medical staff**

*In the presented work, the author attempts to identify measures to prevent the actions of harmful and hazardous factors on the health of workers and create a healthy micro-ecological sphere for medical personnel. Reviewed work completed on the current topic, which today is quite often studied in the scientific literature. The problem of professional health of medical workers and confirms the idea about the special impact of working conditions on the health of physicians. In this article we present a definition of medical worker, lists the factors that are the causes of occupational diseases among the health care workers. The paper presents the gradation of harmful factors into 5 main groups. The paper identified the most important in the prevention of occupational morbidity of medical workers of the events, such as the early diagnosis of diseases. The author attempts to offer the ways of legal solutions to protect the micro-ecological sphere of medical staff.*

**Keywords:** *micro-ecological sphere, medical personnel, hazardous and harmful factors, occupational diseases, medical examinations, prevention of occupational diseases, protection of micro-ecological sphere.*

### **Правовые проблемы защиты микроэкологической сферы медицинского персонала**

*В представленной работе автором предпринята попытка определить меры по профилактике действия вредных и опасных факторов на здоровье медработников и созданию здоровой микроэкологической сферы для медицинского персонала. Рецензируемая работа выполнена на актуальную тему, которая сегодня достаточно часто исследуется в научной литературе: проблема профессионального здоровья медицинских работников. Подтверждается мысль об особом влиянии условий труда на здоровье медиков.*

*В представленной статье сформулировано определение медицинского работника, перечислены факторы, которые являются причинами возникновения профессиональных заболеваний у медицинских работников. В работе проведена градация вредных факторов на 5 основных групп. Также определены наиболее значимые в профилактике профессиональной заболеваемости медицинских работников мероприятия. Автором*

*предпринята попытка предложить способы правового решения проблемы защиты микрoэкологической сферы медицинского персонала.*

**Ключевые слова:** *микрoэкологическая сфера, медицинский персонал, вредные и опасные факторы, профессиональные заболевания, медицинские осмотры, профилактика профессиональной заболеваемости, защиты микрoэкологической сферы.*

Among nearly 40 thousand professions existing now a specific place is held by medical professions in the field of which more than 4 million health workers work. Work of physicians belongs to the most difficult and responsible kinds of activity because it is characterized by considerable mental loading.

Today very often in the scientific literature the problem of professional health of health workers is investigated and the thought of special influence of working conditions on health of physicians is confirmed: "Medical personnel of any medical institution daily contact to various factors of the infectious and noninfectious nature exerting impact on his health and working capacity therefore the hospital environment has to be regarded as extremely aggressive micro-ecological sphere". [1, p. 100]

Health worker is a natural person who has medical education, also its fundamental labor obligation – implementation of medical activity works in the medical organization. To have the right for occupation with medical activity have the persons who got the higher or secondary medical education, having the diploma and the certificate on accreditation of the expert. The federal law "About the bases of protection of public health in the Russian Federation" discloses this right of citizens in more detail, namely: "In the Russian Federation the persons who got medical or other education in the Russian Federation according to the federal state educational standards and having the certificate on accreditation of the expert have the right for implementation of medical activity". [2, p. 5]

Ensuring protection of public health of the Russian Federation and consequently also the health workers, it is fixed at the state level. The constitution of the Russian Federation indicates that "... everyone has the right to health protection and medical care".

One of the key indicators of health of the working population reflecting also the moderate degree of dependence on the environment is the incidence with the temporary disability.

The professional incidence and incidence with the temporary disability depends on specialty of the health worker and production factors influencing him.

There are several factors which are the causes of occupational diseases at the health workers. All types of harmful factors are subdivided into 5 main groups:

1. Mechanical factors. The personnel forced not to change the long time position of a body at operations, manipulations of a surgical profile i.e. surgeons, operational sisters, stomatologists, massage therapists are a subject to them generally. The static stress of skeletal muscles ("the surgeon's pose"), an overstrain of nervous system leads in 4 – 6 years to a varicosity standing, and from an overstrain of the central nervous system coronary heart disease develops.

Mechanical factors meet not in pure form more often, and in a combination, for example: the compelled position of a body at the surgeon directly is connected with the overstrain of separate bodies, chemical influence from the radio vapors and the reduced ventilation of air supplement this picture "ruining" health of the doctor, supporting to it psychogenic loading from the performed work. Releases of ozone and oxides of nitrogen are added to X-ray – office to radiation.

2. Physical factors. They are X-ray, radiological, ultrasonic and electromagnetic radiation. Therefore, workers of the X-ray rooms, cancer clinic, specialists of ultrasonography and physiotherapeutic offices are a subject to physical harmful factors. Among the physical factors which can significantly affect the state of health of medical personnel ionizing radiation is high on the list. Legislative documents in which doses, safe for the health of workers, and levels of ionizing radiation are established are nowadays issued. However mutual penetration of medical sciences led to the fact that recently under the influence of x-ray radiation in the diagnostic and medical manipulations there are not only radiologists, but also surgeons, traumatologists and also the average medical personnel. [3, p. 15] Radiation levels in the workplaces of these specialists and also the doses of x-ray radiation received by them in some cases exceed the doses received by radiologists and laboratory assistants.

Big distribution in medical practice was gained by lasers and ultrasonic diagnostics. These technologies are widely applied in the physiotherapeutic practice, surgery and ophthalmology when using lasers, in the course of ultrasonic diagnostics at the patients of surgical, gynecologic and obstetric offices. Scientific and technical progress which led to an increase in technical equipment of treatment and prevention facilities, introduction of more modern equipment, tools, use of new medicines and development of new methods of diagnostics and treatment puts the new problems requiring the fastest solution before work medicine.

3. Biological factors. Viruses, microbes, antibiotics, vaccines and different serums belong to this group. In hospital and policlinic the infectious factor works that is in most cases the patient is a source of infection and at non-compliance with the rules of hospital and personal hygiene the medic can catch various infections on a profile of office. Therefore physicians have flu more often by 2 – 3 times, and infectious hepatitis by 4 – 10 times. The greatest danger to the health workers is constituted by the intra-hospital infections capable to extend during the blood transfusion and its medicines, use and collecting injury-causing medical tools and also at close household contact with an infection source. Contact with the patients infected with strains of the intra-hospital microorganisms having multiple resistance to antibiotics sharply increases the risk of disease of the personnel of infections which difficult respond to treatment. The only solution of a problem of control of formation and distribution it is multiple steady intra-hospital strains of microorganisms realization of a complex of actions for essential improvement of the quality of microbiological diagnostics, to introduction of the policy of reasonable application of antibiotics and also on the improvement of infectious control and hospital hygiene is. [4, p. 25]

4. Chemical factors are characterized by the influence of a huge arsenal of production of chemical and pharmaceutical industry, namely the medicinal, narcotic, disinfecting substances and vitamins. The contact of medical and support personnel of treatment and prevention facilities with the potentially dangerous chemicals, can contain the health hazard also. Among these substances the most important role is played by inhalation anesthetics which can be present in the air not only the operating rooms, but also the rooms for anesthesia, resuscitation chambers, patrimonial halls and the offices of surgical stomatology.

5. Psychogenic factors. These are intellectual and emotional loadings. They are directly connected with the tension of medical work and arise for the reason:

a) communication with the patient. In the course of conversation with patients the doctor realizes a sense of responsibility for the patient's life, for reliability of the diagnosis and the appointed treatment;

b) emergence of the emergency situations. The medic has to be in starting readiness for acceptance of measures (so-called "emergency or critical situation"), urgent and important for the patient;

c) unorganized regime of work. Existence of irregular working hours, daily and night watches, night operations leads to violation of biorhythms. [5, p. 5],

Besides the listed factors which are harmful in the medical profession it is also possible to call also a possibility of accidents during the attack mentally of patients, patients of narcological hospitals, etc. It is obvious that the contact of health workers with the specified professional factors affects their health.

Despite the certain achievements in the field of labor protection of health workers, there is no uniform organizational system of protection of the micro-ecological sphere of medical personnel today.

To lower to create the healthy micro-ecological sphere for medical personnel, it is necessary to determine a number of measures for prevention of action of harmful and dangerous factors on the health of medics.

In prevention of professional incidence of health workers the early diagnosis of diseases is still of great importance. So, in the O.V. Romanovskaya's article the question of passing of medical examination as one of the main components of the labor law is considered: "Routine medical examination has the general character, is carried out for the early (timely) identification of pathological states, diseases and risk factors of their development, not medical consumption of drugs and psychotropic substances and also for the formation of groups of the state of health and development of recommendations for patients". [6, p. 115] The article 213 of the Labor Code of the Russian Federation is fixed by the situation concerning the obligatory medical examination for some categories of workers whose number enter as well the workers of health care. [7, p. 35] Obligatory periodic medical examinations (inspections) are performed for:

1) dynamic observation of the state of health of workers, timely detection of diseases, initial forms of occupational diseases, early signs of impact of harmful and (or) dangerous production factors on the state of health of workers, formation of risk groups on the development of occupational diseases;

2) detection of diseases, the states which are medical contraindications for the further work, connected with the influence of harmful and (or) dangerous production factors and also the works when which performing the preliminary and periodic medical examinations (inspections) of workers for public health care, preventions of emergence and a spread of diseases is obligatory;

3) timely holding the preventive and rehabilitation actions directed to the maintaining health and restoration of the working ability of workers;

4) timely identification and prevention of emergence and spread of infectious and parasitic diseases;

5) accident preventions on production. [8, p. 45]

Except the periodic medical examinations, there are surveys called by preliminary. The purpose of preliminary medical examinations at revenues to work is a definition of compliance of the state of health of the worker of the activity charged to it. Concerning health workers preliminary medical examinations are intended not to allow work of the persons which are infection sources. Frequency of performing the periodic medical examinations or inspections is determined by the Territorial departments of Federal Service for the oversight of consumer protection and welfare with a concrete sanitary and epidemiologic situation. In the Russian Federation there is a list of obligatory preliminary and periodic medical examinations of personnel of treatment and prevention facilities on an existence of infection. [9, p. 65]

On the basis of the article 34 of the Act of the Russian Federation "About sanitary and epidemiologic wellbeing of the population" individual entrepreneurs and legal entities are obliged to provide passing by the workers of preliminary and periodic routine medical examinations for prevention of emergence and spread of infectious diseases. [10, p. 115], Results of the preliminary and periodic medical examinations are entered in the map of dispensary patient and in the medical book. Extraordinary (unplanned) examinations of health workers are conducted at the request of workers or according to the medical recommendations of the experts participating in carrying out the preliminary or periodic surveys and also in the epidemiological indications, about instructions of the head (deputy head) of the Territorial departments of Federal Service for the oversight of consumer protection and welfare.

The following method of prevention of developing of diseases at the medics is optimization of a work-rest schedule. In operating time from the person special attention, fast processing of the obtained information, exact coordination of movements, a certain speed of performance of the separate operations is required that can lead sometimes to an over-fatigue, failures in the work of organism and, respectively, to the decrease in working capacity. For decrease in exhaustion set a rational work-rest schedule of the worker, namely the regulated breaks in work during the periods preceding the decrease in working capacity. At a hard physical work recommend frequent (in 2 – 2,5 h) short breaks (5 – 10 minutes). At the brainwork continuous breaks for rest and switching to the physical activity are effective. The regulated rest is more effective, than the breaks arising irregularly. Casual idle times can't be considered as a rest as break a work rhythm. Total time

for rest is determined percentage of shift duration; at the physical activity it can make 4 – 20%; during the work with nervous tension – 14 – 25%, at the brainwork – up to 10%.

In the third way of prevention of occupational diseases at the medical personnel observance by them of rules of labor protection and personal hygiene is considered. The health worker of any rank has to follow the rules of personal hygiene, keep the health. It is necessary both for him, and for the patients served by him. The health worker has to be an example of high sanitary culture. In providing the appropriate working conditions of medics lighting of production rooms, their jobs has an important role. Natural and artificial lighting of rooms has to answer all to the established standards of health and hygienic regulations. Work of medics is directly connected with the sight tension therefore to warn exhaustion of eyes and to prevent disorder of sight in connection with the excessively bright lighting, the employer has to provide performance and observance of all established requirements about working conditions.

So, at the doctor's professional risk under the terms of work belongs to the small or high depending on profession of the doctor, at the average medical personnel – to small, at junior medical staff – to the average. "At the same time, calculation of a category of professional risk on the basis of category of risk and weight of occupational disease testifies to a very high (intolerable) level of professional risk at the specialists, the average and junior staff of medical institutions", – it is specified in the V.A. Pankov and M.V. Kuleshov's article devoted to the professional risk of health workers. [11, p. 56]

Summing up the result in consideration of a problem of protection of the micro-ecological sphere of health workers, it is possible to offer the next ways of its legal decision:

1. To establish the obligatory systematic analysis of data of a microclimate of the working environment, namely: temperatures, relative humidity, etc. and also the indicators concerning the dust content, gas contamination, amount of toxic or harmful fumes to create the safest working conditions.

2. To normalize the work-rest schedule, that is to forbid unreasonable overloads and watches and also to observe a rational work-rest schedule, to create the specially equipped rooms for the intra replaceable rest where workers will have an opportunity to remove excess emotional and mental pressure and to considerably restore the working capacity.

3. To provide the special complexes of actions of professional and applied physical training for the concrete medical specialty.

4. To provide carrying out the extraordinary professional surveys for identification of the facts and extent of influence on the working harmful production factors for definition of the necessary rehabilitation actions.

5. As much as possible to secure health workers against the harmful and dangerous factors of the working environment:

- Not to allow air pollution in the workplaces.
- To observe production and personal hygiene: to protect eyes, lungs, skin, whenever possible to avoid the production injuries.

6. To constantly improve the skills as a specialists.

### ***Literature and the sources:***

1. *Мохов А. А. Основы медицинского права Российской Федерации : учебное пособие для магистров. М. : Проспект, 2013. 154 с.*
2. *Об основах охраны здоровья граждан в Российской Федерации: федеральный закон №323-ФЗ от 21.11.2011 // Справочно-правовая система «Консультант Плюс» / НПП «Консультант». – Последнее обновление 14.09.2017.*
3. *Скачкова Г. С. Комментарий к трудовому кодексу Российской Федерации : учебное пособие. М. : Инфра-М, 2014. 942 с.*
4. *Панков В. А., Кулешов М. В. Профессиональный риск медицинских работников // Бюллетень восточно-сибирского научного центра. Изд-во ВСНЦ РАМН, 2011. 65 с.*
5. *Андреева И. Л., Гуров А. Н., Катунцева Н.А. Оценка показателей здоровья и условий труда медицинских работников [Электронный ресурс] // Вестник новых медицинских технологий, 2013. URL: <http://cyberleninka.ru>*
6. *Романовская О. В. Медицинский осмотр в Трудовом праве [Электронный ресурс] // Трудовое право в России и за рубежом, 2014. URL: <http://base.consultant.ru>*
7. *Трудовой кодекс Российской Федерации : федеральный закон №197-ФЗ от 31.12.2001 // Справочно-правовая система «Консультант Плюс» / НПП «Консультант». – Последнее обновление 14.09.2017.*
8. *Национальная медицинская палата [Электронный ресурс]. URL: <http://www.nacmedpalata.ru/>*
9. *Романовская О. В. Медицинский осмотр в Трудовом праве [Электронный ресурс] // Трудовое право в России и за рубежом, 2014. URL: <http://base.consultant.ru>*
10. *О санитарно-эпидемиологическом благополучии населения: федеральный закон РФ №52-ФЗ от 30.03.1999 в ред. от 28.11.2015 // Справочно-правовая система «Консультант Плюс» / НПП «Консультант». – Последнее обновление 14.09.2017.*
11. *Панков, В.А. Профессиональный риск медицинских работников: журнал Бюллетень восточно-сибирского научного центра / В.А. Панков, М.В. Кулешов. Изд-во: ВСНЦ РАМН 2011. – 65 с.*

### ***References:***

1. *Mohov A. A. Osnovy medicinskogo prava Rossijskoj Federacii : uchebnoe posobie dlya magistrrov. M. : Prospekt, 2013. 154 s.*
2. *Ob osnovah ohrany zdorov'ya grazhdan v Rossijskoj Federacii: federal'nyj zakon №323-FZ ot 21.11.2011 // Spravochno-pravovaya sistema «Konsul'tant Plyus» / NPP «Konsul'tant». – Poslednee obnovlenie 14.09.2017.*

3. Skachkova G. S. *Kommentarij k trudovomu kodeksu Rossijskoj Federacii : uchebnoe posobie*. M. : Infra-M, 2014. 942 s.
4. Pankov V. A., Kuleshov M. V. *Professional'nyj risk medicinskih rabotnikov* // *Byulleten' vostochno-sibirskogo nauchnogo centra. Izd-vo VSNC RAMN*, 2011. 65 s.
5. Andreeva I. L., Gurov A. N., Katunceva N.A. *Ocenka pokazatelej zdorov'ya i uslovij trudamedicinskih rabotnikov [EHlektronnyj resurs]* // *Vestnik novyh medicinskih tekhnologij*, 2013. URL: <http://cyberleninka.ru>
6. Romanovskaya O. V. *Medicinskij osmotr v Trudovom prave [EHlektronnyj resurs]* // *Trudovoe pravo v Rossii i za rubezhom*, 2014. URL: <http://base.consultant.ru>
7. *Trudovoj kodeks Rossijskoj Federacii : federal'nyj zakon №197-FZ ot 31.12.2001* // *Spravochno-pravovaya sistema «Konsul'tant Plyus» / NPP «Konsul'tant»*. – *Poslednee obnovlenie 14.09.2017*.
8. *Nacional'naya medicinskaya palata [EHlektronnyj resurs]*. URL: <http://www.nacmedpalata.ru/>
9. Romanovskaya O. V. *Medicinskij osmotr v Trudovom prave [EHlektronnyj resurs]* // *Trudovoe pravo v Rossii i za rubezhom*, 2014. URL: <http://base.consultant.ru>
10. *O sanitarno-ehpidemiologicheskom blagopoluchii naseleniya: federal'nyj zakon RF №52-FZ ot 30.03.1999 v red. ot 28.11.2015* // *Spravochno-pravovaya sistema «Konsul'tant Plyus» / NPP «Konsul'tant»*. – *Poslednee obnovlenie 14.09.2017*.
11. Pankov, V.A. *Professional'nyj risk medicinskih rabotnikov: zhurnal Byulleten' vostochno-sibirskogo nauchnogo centra* / V.A. Pankov, M.V. Kuleshov. Izd-vo: VSNC RAMN 2011. – 65 s.