NON-SPECIFIC PREVENTION OF NOVEL CORONAVIRUS INFECTION IN THE WORKPLACE AS A COMPONENT OF MEDICAL DEONTOLOGY

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One of the important factors of medical deontology is the focus of a healthcare professional on the health of patients and colleagues in case of increased infectious morbidity within the framework of limiting transmission of an infectious agent. The aim of the study was to assess the true frequency of regulated use of PPE, including in the provision of medical care to patients with COVID-19, and compliance with the isolation regimen in case of respiratory illness among health workers. The study was conducted using the Internet (the questionnaire is posted on ancetolog.ru) from January to March 2022 (ongoing COVID-19 pandemic). Survey data of 3,570 respondents was analyzed in accordance with the quality criteria for filling out the questionnaires. The overwhelming majority of the respondents were women, 63.6% (2,269 people) and 36.4% (1,299 people) were men, the average age of the respondents was 38.9 ± 14.22 years. Non-compliance with the rules of wearing PPE was detected for every fourth respondent (24.9%), 4.1% refused to wear PPE, and 7% complied with the rules of wearing PPE in the workplace only when their non-compliance could be noticed. The data we have obtained indicates that a quarter of health workers do not follow professional ethics in the framework of preventive measures to reduce infectious diseases, threatening the health of colleagues and patients by their behavior in the workplace.

Keywords: COVID-19, medical ethics, deontology, nonspecific infection prevention, PPE

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НЕСПЕЦИФИЧЕСКАЯ ПРОФИЛАКТИКА НОВОЙ КОРОНАВИРУСНОЙ ИНФЕКЦИИ НА РАБОЧЕМ МЕСТЕ КАК КОМПОНЕНТ МЕДИЦИНСКОЙ ДЕОНТОЛОГИИ

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Одним из важных факторов медицинской деонтологии является личная забота медработника о здоровье пациентов и коллег в условиях повышенной инфекционной заболеваемости в рамках ограничения передачи инфекционного агента. Цель исследования — оценить истинную частоту регламентированного использования СИЗ, в том числе при оказании медицинской помощи пациентам с COVID-19, и соблюдение режима изоляции в случае возникновения респираторного заболевания у медработников. Исследование проведено при использовании Интернета (анкета размещена на платформе ancetolog.ru) с января по март 2022 год (период продолжающейся пандемии COVID-19). В соответствии с критериями качества заполнения анкет анализу подлежали данные опроса 3570 респондентов. Подавляющее большинство опрошенных составили женщины 63,6% (2269 чел.) и 36,4% (1299 чел.) — мужчины, средний возраст респондентов — 38,9 ± 14,22 лет. Несоблюдение правил ношения СИЗ было выявлено у каждого четвертого респондента (24,9%), причем полный отказ от ношения СИЗ был зарегистрирован у 4,1%, а 7% соблюдают регламент ношения СИЗ на рабочем месте только в периоды, когда могут быть замечены за несоблюдением. Полученные нами данные свидетельствуют о несоблюдении четвертью медработников профессиональной этики в рамках осуществления профилактических мер по снижению инфекционной заболеваемости, своим поведением на рабочем месте ставя под угрозу здоровье коллег и пациентов.

Ключевые слова: COVID-19, медицинская этика, деонтология, неспецифическая профилактика инфекции, СИЗ

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Unfortunately, at the present stage, a limited number of health workers observe the principles of medical ethics both in relation to colleagues, including subordinates, and in relation to patients [1]. This problem has become more pronounced in recent years and often leads to retirement of highly qualified personnel. On a daily basis, health workers in the workplace are forced to cope with a large number of tasks, often leading to stress, changes in the psychological state and emotional burnout of the employee, and, as a result, the emergence of a negative attitude towards their activities [2]. All this is associated with the peculiarities of functioning of both outpatient and inpatient healthcare [3]. For example, the daily task of a doctor is not only to examine the patient, establish a correct diagnosis, according to which diagnostic procedures and therapy can be prescribed, regulated by a list of various documents approved at the level of the Ministry of Health of the Russian Federation in accordance with the diagnosis, but also to establish interpersonal contact with the patient, and form a sensitive attitude to the problems of the patient and the patient's relatives. It should be noted that these documents may differ by the same nosology depending on the professional background of a doctor and may be untimely updated or absent in the Ministry of Health's Rubricator [4]. Abundance of information on the Internet, often associated with illiterate medical bloggers supported by patients, often leads to the lack of understanding of interpersonal relationship between a healthcare professional and a patient. At the same time, the strictly regulated time of the patient's appointment, during which the doctor needs to fill in a large number of various documents, leads to an extremely limited dialogue with the patient, causing distrust of the patient and decrease in compliance. It should be noted that modern realities make it essential to fill in medical documentation without the possibility of its further correction, whereas frequent breakdown in medical programs (Unified medical information analysis system), on the Internet, which is used for filling out medical records and issuing referrals for laboratory and instrumental examinations, steadily lead to stress in the workplace and increase in working hours. Frequent conflicts in the workplace associated with increased workload, and frequent lack of proper respect from management, colleagues, and patients and their relatives lead to anxiety and depression among medical staff, especially young people (recent graduates) and people over 65 years of age, a separate cohort whose work is associated with a number of difficulties. Young workers have a lack of experience and self-doubt, and older people have extreme difficulty accepting the new demands of present-day realities of medical work. It must be remembered that under these conditions it is extremely difficult to comply with the principles of medical ethics, and it is important to remember that a healthcare professional shall be responsible for implementation of lawful and unlawful (in case of an incorrect diagnosis or management) actions [2].

An important factor of medical deontology also includes focus of a healthcare professional on the health of patients and colleagues in increased infectious morbidity within the framework of limited transmission of an infectious agent [2, 5]. Thus, it was shown that during the pandemic era, proper wearing of personal protective equipment (PPE), personal hygiene (hand washing, use of antiseptics), and strict isolation in case of illness constituted an integral part of reducing morbidity both within the team and in general population.

The published own data on domestic population show a frequent neglect of compliance with the regulations for wearing PPE, leading to an increased risk of morbidity in a medical facility [5].

In this regard, it is relevant to study the true frequency of PPE use and compliance with the isolation regimen in case of a respiratory illness among medical workers.

The aim of the study was to assess the true frequency of regulated use of PPE, including in the provision of medical care to patients with COVID-19, and compliance with lockdown in case of respiratory illness among health workers.

The study was conducted during the COVID-19 pandemic from January to March 2022. The data were obtained by analyzing anonymous responses from health workers from various regions of the Russian Federation over the age of 18 who provide outpatient care to patients with the new coronavirus infection. The survey was conducted using the Anketolog cloud platform for surveys and sociological research (https: www//anketolog.ru/e/13467998/pG5pKXU8). Filling out a research questionnaire was equal to a voluntary consent. More than 7,000 people have used the online link. Survey data of 3,570 respondents was analyzed in accordance with the quality criteria for filling out the questionnaires. 2269 (63,6%) of those surveyed were women (the vast majority), 1299 (36,4%) were men, the average age of the respondents was 38.9 ± 14.22 years. A quarter of the respondents (31.4%, n = 1122) declared they were somehow related to medicine. Thus, 23.9% (n = 853) were residents, 29.4% (n = 1050) belonged to mid-level medical staff, 9.9% (n = 354) constituted junior medical staff and 5.4% (n = 191) were persons who did not carry out medical activities, but worked in a healthcare institution (drivers, receptionists, economists, etc.). The respondents lived in various cities of Russia: 29.1% in Moscow (n = 1037), 9.8% in Moscow region (n = 349), 8.4% (n = 299) in St. Petersburg and Leningrad region, 17.6% (n = 627) in Samara and Samara region, 21.7% (n = 774) in Crimea, 13.6% in other regions (n = 484).

RESULTS

An analysis of the correct use of PPE and hand washing or use of sanitizers was carried out as a criterion for compliance with medical ethics in relation to preservation of patient's health. Table 1 shows the survey data. It was found that non-compliance with the rules of wearing PPE was detected for every fourth respondent (24.9%), and a complete refusal to wear PPE was registered in 4.1%, whereas 7% followed the rules of wearing PPE in the workplace only when they could be punished for non-compliance. There were approximately equal numbers of people in each group who did not use PPE in the workplace (4%). It should be noted that these respondents also reported a history of new coronavirus infection and presence of vaccination and a protective antibody titer. In the presence of signs of an infectious process, 20.9% and 11.3% of medical staff did not wear masks at shops and medical institutions where they sought medical aid respectively. However, a low percentage of people visit a medical facility without a mask in the presence of clinical symptoms of an infectious disease (Table 1).

Observance of isolation measures in case of respiratory infection is no less important. According to our examination, some of those surveyed can continue their medical activity or visit social institutions (shops, outpatient clinics, etc.) without taking care of possible occurrence of an infectious disease among other people (table 2) irrespective of signs of a respiratory disease. In the presence of signs of an infectious process, 12.7% of those surveyed said that they would go

Table 1. Compliance with regulations for non-specific prevention of transmission of respiratory infections by those surveyed

Response	Groups of those surveyed					Total *n* = 3570 abs. (%)
	Medical professionals				Others *n* = 191 abs. (%)	
	Doctors *n* = 1122 abs. (%)	Postgraduate students *n* = 853 abs. (%)	Nurses *n* = 1050 abs. (%)	Junior medical staff *n* = 354 abs. (%)		
Formulating the following assumption 'I use PPE as per the regulation in the workplace'						
I do not wear it	45(4.0%)	34(4.0%)	42(4.0%)	14(4.0%)	12(6.3%)	147(4.1%)
I always wear it	858(76.5%)	601(70.5%)	797(75.9%)	279(78.8%)	148(77.5%)	2683(75.2%)
I sometimes wear it	143(12.7%)	144(16.9%)	137(13.0%)	46(13.0%)	20(10.5%)	490(13.7%)
I only wear it when I know they might punish me.	76(6.8%)	74(8.7%)	74(7.0%)	15(4.2%)	11(5.8%)	250(7.0%)
The wording of the statement «I wear a mask and change it in accordance with workplace regulations»						
I do not wear it	27(2.4%)	25(2.9%)	30(2.9%)	6(1.7%)	7(3.7%)	95(2.7%)
I always wear it	888(79.1%)	660(58.8%)	849(80.9%)	284(80.2%)	154(80.6%)	2835(79.4%)
I sometimes wear it	154(13.7%)	112(13.1%)	108(10.2%)	55(15.5%)	22(%)	451(12.6%)
I only wear it when I know they might punish me.	53(4.7%)	56(6.6%)	63(6.0%)	9(2.5%)	8(%)	189(5.3%)
The wording of the statement «I wear a mask when visiting a store or public place in case of signs of illness»						
I do not wear it	32(2.9%)	23(2.7%)	32(3.0%)	6(1.7%)	7(4.0%)	100(2.8%)
I always wear it	887(79.1%)	641(75.1%)	842(80.2%)	296(83.6%)	158(83.7%)	2824(79.1%)
I sometimes wear it	137(12.2%)	122(14.3%)	114(10.9%)	39(11.0%)	21(11.0%)	433(12.1%)
I only wear it when I know they might punish me.	66(5.9%)	67(7.9%)	62(5.9%)	13(3.7%)	5(2.6%)	213(6.0%)
The wording of the statement «I wear a mask when visiting a public place in case of signs of illness»						
I do not wear it	15(1.3%)	9(1.1%)	15(1.4%)	2(0.6%)	2(1.0%)	43(1.2%)
I always wear it	980(87.3%)	757(88.7%)	937(89.3%)	322(91.0%)	172(90.1%)	3168(88.7%)
I sometimes wear it	82(7.3%)	50(5.9%)	59(5.6%)	23(6.4%)	10(5.2%)	224(6.3%)
I only wear it when I know they might punish me.	45(4.0%)	37(4.3%)	39(3.7%)	7(2.0%)	7(4.0%)	135(3.8%)
The wording of the statement «I wear medical gloves in the workplace»						
I do not wear it	585(52.1%)	503(59.0%)	542(51.6%)	172(%)	90(47.1%)	1892(53.0%)
I always wear it	298(26.6%)	186(21.8%)	296(28.2%)	109(%)	58(30.4%)	659(18.5%)
I sometimes wear it	218(19.4%)	139(16.3%)	196(18.7%)	66(%)	40(20.9%)	947(26.5%)
I only wear it when I know they might punish me.	21(1.9%)	25(2.9%)	16(1.5%)	7(2.0%)	3(1.6%)	72(2.0%)
The wording of the statement «I use sanitizers for hand treatment»						
I don't use it	141(12.6%)	109(12.8%)	148(14.1%)	40(11.3%)	28(14.7%)	466(13.1%)
Always	587(52.3%)	420(49.2%)	559(53.2%)	183(51.7%)	106(55.5%)	1855(52.0%)
Sometimes	382(34.0%)	313(36.7%)	330(31.4%)	127(35.9%)	55(28.38%)	1207(33.8%)
I only wear it when I know they might punish me.	12(1.1%)	11(1.3%)	13(1.2%)	4(1.1%)	2(1.0%)	42(1.2%)
Specify the frequency of hand washing with soap in the workplace						
Up to 10 times	482(43.0%)	400(46.9%)	413(39.3%)	148(41.8%)	76(39.8%)	1519(42.5%)
10–20 times	345(30.7%)	270(31.7%)	324(30.9%)	110(31.1%)	60(31.4%)	1109(31.1%)
Over 20–30 times	244(21.7%)	139(16.3%)	250(23.8%)	82(23.2%)	47(24.6%)	762(21.3%)
Over 30 times	51(4.5%)	44(5.1%)	63(6.0%)	14(4.0%)	8(4.2%)	180(5.0%)

Table 2. Maintaining isolation in case of signs of respiratory illness

Response	Groups of those surveyed					Total *n* = 3570 abs (%)
	Medical professionals				Others *n* = 191 abs. (%)	
	Doctors *n* = 1122 abs. (%)	Postgraduate students *n* = 853 abs. (%)	Nurses *n* = 1050 abs. (%)	Junior medical staff *n* = 354 abs. (%)		
In the presence of signs of respiratory illness (cough, fever, runny nose, impaired sense of smell, rhinitis, etc.)						
I'm not going to work	889 (79.2%)	628 (73.6%)	799 (76.1%)	282 (79.6%)	162 (84.2%)	2760 (77.3%)
I will go	112 (9.9)	138 (16.1%)	141 (13.4%)	47 (13.2%)	14 (7.3%)	452 (12.6%)
I find it difficult to answer	121 (10.9%)	87 (10.3%)	110 (10.5%)	25 (7.1%)	15 (7.8%)	358 (10%)
In the presence of signs of respiratory illness (cough, fever, runny nose, impaired sense of smell, rhinitis, etc.)						
I will stay at home	921 (82.1%)	654 (76.6%)	834 (79.4%)	300 (84.7%)	165 (86.3%)	2874 (80.5%)
I can visit public institutions	102 (9.1%)	116 (13.6%)	124 (11.8%)	31 (8.8%)	11 (5.8%)	384 (10.8%)
I find it difficult to answer	99 (8.8%)	83 (9.7%)	92 (8.8%)	23 (6.5%)	15 (7.9%)	312 (8.7%)

to work though they knew they were ill and put health of both patients and colleagues at risk; 10% of them found it difficult to answer, meaning that the people could go to work. 77.3% of all medical employees displayed consciousness. 10.8% of healthcare professionals said that they could visit social institutions though they had some signs of an infectious disease, whereas 8.7% found it difficult to answer the question. People without medical education who worked at a medical institution displayed more self-awareness in compliance with isolation regimen; 84.2% of them said that they would not go to work in the presence of a disease, and only 5.8% would go to the shop. Resident doctors were found to be the most undisciplined as 16.1% of them promised to work and 13.6% of them wanted to go shopping even in the presence of clinical signs of an infectious disease.

DISCUSSION

Extremely complex ethical requirements with multiple psychological nuances in the relationship between a healthcare professional and a patient are imposed on a healthcare professional. Constant responsibility to the patient and the patient's relatives, awareness that a person's life depends on his experience and skills, need to take into account both psychological characteristics of the patient and comorbid data, ability to take reasonable risks run through the daily work of a medical professional. Ethical rules and norms of medical care require health workers to behave in a manner aimed at preserving the patient's health and life [2, 4, 6]. Implementation or non-implementation of non-specific prevention of respiratory morbidity reduction in the workplace by wearing PPE displays the ethical or unethical position of the health worker in relation to the patient and colleagues [4].

During the pandemic of the new coronavirus infection in 2019 (COVID-19) health workers were forced to face a number of difficult problem situations. A large number of patients infected with COVID-19, lack of resources and vulnerability to infection, lack of faith in the possibility of using PPE as a protection factor, lack of need for PPE in the presence of vaccination, difficulty in wearing PPE for a long time (according to the temporary regulations), PPE shortage are the main reasons that influenced the ethical decisions of the medical community. Nevertheless, working at the forefront, providing outpatient care to patients with infectious diseases, medical professionals must understand that even asymptomatic carriers can be a source of the infectious process [7]. At the same time, according to the data we received, non-compliance with the rules of wearing PPE was detected in every fourth respondent (24.9%), 4.1% completely refused to wear PPE, whereas 7% complied with the rules of wearing PPE in the workplace only when non-compliance was not reported. It is interesting that the possibility of catching the new coronavirus infection from other persons in various public institutions is underestimated. So, despite the knowledge of the infectious process when morbidity was on the rise and signs of the infectious process were present, 20.9% and 11.3% did not wear masks at shops and medical institutions where they sought for medical help respectively. It should be noted that the persons who reported non-compliance with the use of PPE were vaccinated at the time of the survey. This leads to the conclusion that there is a hope for specific own vaccination and a lack of care for the patient and others.

One of the important tools for reducing the incidence of the new coronavirus infection was social distancing as soon as signs of respiratory illness appeared [8]. In the presence of signs of an infectious process, 12.7% of those surveyed said that they would go to work though they knew they were ill and were ready to put health of both patients and colleagues at risk; 10% of them found it difficult to answer, it means that the people could go to work as well. 10.8% of healthcare professionals said that they could visit social institutions though they had some signs of an infectious disease, whereas 8.7% found it difficult to answer the question.

CONCLUSION

According to the data obtained, almost a quarter of healthcare professionals do not follow professional ethics as part of preventive measures to reduce infectious diseases, posing a threat to health of colleagues and patients with their behavior.

LIMITATIONS OF THE STUDY

As far as we know, this is the first anonymous study devoted to taking ethical decisions aimed at compliance with non-specific preventive measures by medical professionals during the

ongoing COVID-19 pandemic. Despite the important results, our study has some limitations. Given the fact that the vast majority of health workers at the time of the survey were not only newly infected with coronavirus, but also vaccinated or revaccinated, we assume that this could also lead to a decrease in compliance with non-specific preventive measures. However, this does not justify the actions of health workers related to non-compliance with medical deontology in the framework of creating prerequisites for a possible risk of infection both within the team and in relation to their patients.

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