

# MODELING THE ATTITUDE OF DOCTORS' PROFESSIONAL GROUP TO INFECTED PATIENTS

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**Abstract - Background:** *The article presents the results of a medical and psychological assessment of the attitude of a professional group of doctors to infected patients in the educational environment of the university.*

**Methodology:** *The study was conducted in the categorical field of the sociology of medicine using the methodology of sociological survey and data analysis of the review of special literature sources on the problem of infection with COVID-19. Junior students of a medical university acted as a model group (N = 280, average age 19.2 ± 1.2 years; girls and boys were taken on an equal footing).*

**Results:** *The results can be extrapolated to the situation of infection with COVID-19, research materials can be recommended for inclusion in the methodological base for the provision of psychological assistance to patients with infectious diseases, as well as optimizing the socio-psychological support of professional education of medical specialists.*

**Conclusion:** *The observed difficult epidemiological situation in Russia and in the world caused by COVID-19 showed the high importance of the professional attitude of doctors to infected patients, based on empathy, compassion and psychological support.*

**Keywords:** *pandemic, infected patients, doctors' professional group, psychological assistance, medical students, ethics, educational environment.*

## **INTRODUCTION**

The new coronavirus infection pandemic has triggered unprecedented ethical and legal challenges to health systems in a global context. International mass media and special sources of information daily cause a mixed reaction of society to newly identified problems in the field of health and social protection [1, 2]. The situation is complicated by the unstable economic situation, the financial instability of the medical services market, the range and spectrum of which has changed dramatically due to the spread of COVID-19 and introduced restrictive measures. Forced self-isolation led to forced informatization. Work and education in a remote format, interpersonal and professional relationships in the Internet space contributed to the growth of psychological stress in society [3; 4; 5].

One of the topics that are being actively discussed today is the attitude of society towards COVID-infected people. A high risk of infection and daily psychological pressure on the dynamics of statistical data (infected, dead, etc.), hypertrophically presented by the media, provokes a negative attitude towards the infected. The problem is exacerbated by the increasing coverage of testing and the allocation of a large group of people with a positive test result and asymptomatic forms of the course of the disease. Medical professionals are also infected; their high risk of infection is associated with professional activities. The situation of infected patients is determined by the legal norms of the current national legislation and even adjusted by new legal norms in the field of administrative and even criminal law; the situation of infected doctors causes a mixed reaction in society and causes moral and ethical disputes. [6; 7; 8].

Despite the recent tendency of the governments of European countries and Russia to take measures to weaken self-isolation and gradually restore the usual way of life, according to scientists and experts, the problem of a new viral infection will not be solved simultaneously; this is due to the duration of the formation of population immunity and a high degree of communication in the global sense. In this regard, the medical, legal, economic, social problems caused by the COVID-19 pandemic require their solution in modern research [9; 10; 11].

## **OBJECTIVE OF STUDY**

The purpose of our work is a medical - psychological assessment of the attitude of infected professional patients to a group of doctors in the educational environment of the university.

## **LITERATURE REVIEW**

A review of Internet sources on this topic showed that during the new coronavirus infection observed during the pandemic, the public reaction to the presence of COVID-19 infected in the immediate environment was rather negative. First of all, this manifested itself in a reaction to migration (including labor) from areas with a high incidence to more prosperous areas; for example, aggression against “Muscovites”, described in the Stavropol and Krasnodar Territories in the early days of the “quarantine holidays” (April 28-28, 05.2020), a request for the resettlement of residents who are on two-week self-isolation, who had contact with the infected, etc.

Of particular interest are cases of a similar reaction in relation to physicians involved in the treatment of COVID-19-infected patients, but who do not have direct contacts (working in the so-called “green zone”) and who remain for living outside the hospital premises. The nurse of the reception told the correspondents of the federal TV channel about the inscriptions of the neighbors at her door, containing demands not to return home from work and even the threat of forced eviction. Despite attracting the attention of society to the heroic professional activity of medical workers, part of the society perceives medical specialists in their immediate environment exclusively as a threat of personal infection. Perhaps this is a psychological reaction to stress, but such forms of manifestation are signs of negative social processes. To some extent, this is due to the decline in the prestige of the medical profession observed before the pandemic, associated with growing legal and ethical problems in the field of healthcare, which were intensely discussed by the media and received wide publicity, forming a certain opinion about the prevalence of “bribe takers” in the professional group of doctors, incompetent specialists, persons with low communicative qualities, etc. [12; 13]. Another reason for this phenomenon may be the low level of

medical and legal literacy of the population, the source of which is often an Internet space filled with unconfirmed sources of information and fake news.

### **RESEARCH METHODOLOGY AND DESIGN**

The empirical base of the study is presented by the results of a sociological survey and the analytical data of a review of special literature sources, including the regulatory framework of the current Russian legislation in this field. The study was conducted in the problem field of the sociology of medicine, the methodological tools of which are most adequate to the purpose of the study. We conducted a sociological study on a model of attitudes towards infected tuberculosis, given the incompleteness of the observed epidemic process associated with the COVID-19 pandemic, which does not allow for representative studies. The working hypothesis of our study was based on similar pathways of infection, initial symptoms and comparable risks of infection (according to official WHO statistics, around 1.5 million people die from tuberculosis in the world each year).

Junior students of Volgograd Medical University took part in the survey (N = 280, average age  $19.2 \pm 1.2$  years; girls and boys were taken in equal relations). According to the purpose of the study, an author's questionnaire was developed, which received a positive conclusion from the Department of Ethical, Legal and Sociological Expertise in Medicine of the Volgograd Medical Scientific Center. The respondents respected confidentiality and ethics.

Mathematical data processing was carried out by methods of variation statistics with the calculation of parametric (Student t-test) criteria of difference using the Excell for Windows Statistica 17.0 application package.

### **RESULTS**

To assess the validity of such conclusions, we conducted a sociological survey of medical students, who, on the one hand, can be regarded as a sample of the youth population, and, on the other hand, as future representatives of a professional group of doctors whose attitude to the problem under consideration is still being formed in the educational environment.

In this regard, the basic medical knowledge of first-year students who have not yet begun to study the nosological groups of diseases and which more likely demonstrate the general ideas of the youth population is indicative. 7.31% of respondents found it difficult to answer the question about possible ways of infection with tuberculosis. Most of the respondents (73.03%,  $p < 0.01$  in relation to the group of those who found it difficult) chose medical facilities as the most likely place for infection with tuberculosis. At the same time, about half (57.32%;  $p < 0.01$  to the group of those who found it difficult) believes that it is most often possible to become infected with direct contact - in a tuberculosis dispensary; 12.11% - in a clinic or other medical organization.

Respondents were asked about the likely ways of infection with tuberculosis for a more detailed assessment of initial medical knowledge, 5.12% were not able to answer it. In general, medical students have an adequate idea of the possible ways of transmitting the infection, with a tendency to underestimate the significance of the household contact route of infection (Table 1).

This peculiarity is typical in general for the population's ideas about the sanitary-hygienic regimen and infection risks if personal hygiene rules are not followed, which is demonstrated by the ideas about the ways of infection of Muscovites with COVID-19. According to an interview with doctors at Kommunarka Hospital, more than 40% of patients do not even guess how their infection occurred.

### **DISCUSSION**

63.32% of respondents said that they fully assume the risk of such infection by assessing the degree of risk of infection for themselves. Such a position, in our opinion, is due not only to students' ideas about the possible ways and environment of infection, but also reflects their belonging to the professional group under consideration. Thus, more than half of future doctors are aware of their professional risks, in

particular, the risk of infection with diseases with possible serious consequences. Indirectly, this positively characterizes the motivation of students to choose professional activities.

This assumption is also confirmed by the distribution of respondents when answering the question: “Do you think that socially disadvantaged sections of the population (drug addicts, alcoholics, etc.?) Are more likely to suffer from tuberculosis.” There is an insignificant number of those who found it difficult to answer (7.21%, <0.5), however, students were divided into approximately equal opposing views (yes-no.) We consider the lack of bias in infected patients in more than 40% of future doctors as one of the positive aspects of this distribution.

The following set of questions was prepared in accordance with the working hypothesis of using tuberculosis infection as a model of COVID-19 infection. About 60% (58.71%) chose an unambiguously positive answer to the question: “Do you consider patients taking treatment for tuberculosis dangerous to society?” Apparently, this part of the respondents was based on the concept of absolute isolation of patients, taking into account possible ways of infection. At the same time, 24.43% of respondents chose the negative answer; every fifth future doctor either did not appreciate the high contagiousness, or considers the danger to society as a legal category. It is surprising that almost 16% of respondents do not have a personal position on this issue (they found it difficult to answer).

To the question: “Do patients who have had tuberculosis pose a danger to society?”, The vast majority of respondents (86.2%;  $p < 0.5$ ) gave a negative answer. Some experts today make unfavorable prognoses for patients with COVID-19; this transformation into society contributes to the stigmatization of even ill patients who have recovered.

This problem is also reflected in the distribution of respondents when answering the question: “Do you think it is worth restricting the professional activities of people who have had tuberculosis?” There were no clarifications regarding testing or other diagnostic procedures in the question, which brings the situation with the situation with COVID-19 closer, for which there is no evidence-based practice of prolonged carriage or relapse of the disease. Only 66.21% of respondents chose the negative answer. Moreover, 23.21% found it difficult to answer. The remaining respondents do not consider restrictions on professional activities necessary.

Respondents answered approximately the same way to the question “Would your attitude to a person close to you who got tuberculosis change?” - the majority chose the negative answer (87.11%;  $p < 0.05$ ). This position, of course, positively characterizes the personal qualities of the studied sample, indirectly confirming their ability to empathy and compassion, the qualities of the doctor most experimented by society.

Today, there is a wide discussion among specialists about the problem of providing psychological assistance to infected COVID-19. According to the results obtained in our study, the majority of respondents (75.92%) gave a positive answer to the question: “Do you think that people with tuberculosis need psychological help?” This, of course, positively characterizes the moral position and professional reflection of future doctors who are aware of the need for psychological support for patients. The Russian Society of Psychologists on its official website offers methods of psychological support not only to patients with COVID-19, but also to medical specialists in specialized departments. Alexander Chuchalin, Academician of the Russian Academy of Sciences, noted in his report at a meeting of the bioethics committee of the Russian Federation Commission for UNESCO on April 30, 2020 that it is very difficult for doctors in protective equipment to show empathy towards patients, when verbal communication is difficult, it is impossible to smile, and the voice is distorted, facial expressions are not visible.

## CONCLUSIONS

A study on a model of infection with tuberculosis makes it possible to assess the attitude to infected patients of a professional group of doctors at the undergraduate stage, in fact, its formation in the educational environment of the university. The observed difficult epidemiological situation in Russia and

in the world caused by COVID-19 showed the high importance of the professional attitude of doctors to infected patients, based on empathy, compassion and psychological support.

The absence of preconditions for such a position among 10-18% of students in the study group (according to the number of negative answers and including respondents who found it difficult to answer) indicates the importance of humanitarian education at a medical university. Since 2012, a branch of the International Network of UNESCO Bioethics Departments with the Wings of Bioethics subdivision for students has been formed at the Volgograd State Medical University. In the process of the work of this unit, future doctors are given the opportunity to participate in scientific events on the problems of bioethics and health law at the international level and demonstrate a worthy moral and ethical position of the future doctor.

### **CONFLICT OF INTEREST**

None declared by the authors

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**Table 1. Distribution of respondents by the answer to the question: “What are the most likely transmission routes for tuberculosis?”**

No	Option for transmission of tuberculosis	Number of respondents choosing this option (%)	p
1	Airborne	88,22	<0,01*
2	Parenteral	27,42	>0,01
3	Transmissible	18,31	>0,01
4	Sexual	23,22	>0,01
5	Fecal - oral	6,22	>0,01
6	Household contact	47,61	<0,05**
7	Difficult to answer	5,22	>0,01

(Note: \* - between this indicator and the rest, \*\* - between this indicator and response indicators No. 3, 5.7).