

Federal State Budgetary Educational Institution of Higher Education

"Privolzhsky Research Medical University"

Ministry of Health of the Russian Federation

BANK OF ASSESSMENT TOOLS

Name of the academic discipline: BIOETHICS

Specialty: 31.05.01 GENERAL MEDICINE

Qualification: GENERAL PRACTITIONER

Department: PSYCHIATRY

Mode of study: FULL-TIME

Nizhny Novgorod

2022

1 . Assessment toolkit for current monitoring of progress, intermediate certification of students in the discipline

This Assessment toolkit in the discipline The Fund of Evaluation Funds in the discipline "Bioethics" is intended to control knowledge in the program of training students in the direction of training 31.05.01 "General Medicine", specialization "General practitioner".

Passport of the Fund of Evaluation Funds in the discipline "Bioethics"

No. p / p	semes ter number	Forms control	Section name disciplines	Evaluation tools		
				kinds	number of questions in the task	number of independent options
1.	4	control of student's independent work	1. Bioethics in modern healthcare: concept, status, structure, content	abstract/report terminological dictation	1 10	40 -
			Section 2. Ethics of scientific research in medicine	oral survey, discussion/round table	- 5	- -
			Section 3. Physician personality and deontology	discussion role-playing game	3	-
2.	4	control of the development of the topic	1. Bioethics in modern healthcare: concept, status, structure, content	oral survey, testing solution of situational problems analytical task	- 20 3 2	- 2 4 2
			Section 2. Ethics of scientific research in medicine	oral survey, testing solution of situational problems analytical task	- 20 2	- 2 4
			Section 3. Physician personality and deontology	oral survey, testing solution of situational problems analytical task	- 20 3 1	- 2 4 4
3.	4	credit/exam	All sections	Final testing	thirty	4

Test questions

1) One answer option:

1. Medical morality can be defined as:

- 1) historically established moral prescriptions, norms, commandments, medical codes, principles and rules governing the relationship of a doctor and a patient, doctors among themselves
- 2) principles of behavior of medical personnel aimed at maximizing the usefulness of treatment
- 3) duty of the doctor not to disclose information about the patient without his consent
- 4) a way to regulate relationships between people in a variety of life situations

2. The main distinguishing feature of the professional ethics of a doctor is:

- 1) the right to deviant behavior
- 2) conscious choice of moral principles and rules of conduct
- 3) criminal liability for non-compliance with professional ethical standards
- 4) the unconditional need to subordinate personal interests to corporate

3. The moral regulation of medical activity differs from the legal one :

- 1) criminal impunity
- 2) the arbitrariness of the motive of activity

3) freedom of choice of action

- 4) the presence of monetary interest

4. Medicine and ethics are united by:

- 1) a person as a subject of study
- 2) research methods
- 3) mastering the techniques of overcoming conflicts in human relationships
- 4) the desire to know the mechanisms of human behavior and to manage it

5. The Hippocratic view of the doctor-patient relationship is better characterized as

- 1) respecting the autonomy of the patient
- 2) dominated by the principle of "do no harm"
- 3) paternalistic
- 4) determined by the principles of justice

6. The ratio of general ethical teachings and professional biomedical ethics has the character:

- 1) regulatory
- 2) defining
- 3) informative
- 4) there is no connection between them

7. The Nuremberg Code dealt with issues related to :

- 1) the patient's right to informed consent and medical secrecy;
- 2) human experiments in medicine;
- 3) protection of the rights of doctors;
- 5) pharmacy and medicines

8. Disclosure of a secret does not include cases of providing or transferring medical information:

- 1) for the purpose of professional advice
- 2) without a court decision
- 3) for the purpose of conducting scientific research, evaluating the effectiveness of medical and recreational programs, examining the quality of medical care and the educational process
- 4) when the doctor has no other way to prevent serious harm to the patient himself or others

9. Any treatment is considered life-sustaining.

- 1) which can cause fatal side effects;
- 2) that uses medical devices to relieve pain;
- 3) which prolongs it;
- 4) aimed at combating the symptoms, and not at eliminating the underlying pathology.

10. The right of a sick person to refuse treatment is based on :

- a) awareness of limited financial opportunities;
- b) recognition of the limited medical facilities;
- c) the right to a quiet natural death;**
- d) acceptance of the will of God

11. Terminal patients are usually called patients who, according to the medical prognosis, have no more than

- 1) one year;
- 2) six months;**
- 3) three months;
- 4) one week.

12. The value of human life in biomedical ethics is determined by:

- 1) age (number of years lived)
- 2) the uniqueness and originality of the individual**
- 3) racial and national identity
- 4) financial viability

13. The term "viable" refers to the embryo

- 1) reached 20 weeks of development and 400 g of weight;
- 2) at the beginning of the ninth week of pregnancy, completely in the second trimester;
- 3) from the beginning of the ninth week of pregnancy;
- 4) reached 22 weeks of development and 500 g of weight.**

1) intentional expulsion of an embryo or fetus from the uterus at a gestational age when it is not yet capable of independent survival;

2) spontaneous abortion (miscarriage) occurring in late pregnancy;

3) an unintended side effect that is either risked or tolerated when certain activities are performed;

4) an abortion that is necessary (a) to save the life of the mother, or (b) on the basis of other medical reasons.

15. The condition for the possible termination of artificial support of respiration, blood circulation and subsequent organ retrieval for transplantation is a statement

- 1) physical death
- 2) biological death**
- 3) clinical death
- 4) brain death

1) extracorporeal dialysis using an artificial kidney machine;

2) analgesic therapies that do not eliminate the cause of the disease, but seek to alleviate or eliminate the sensation of pain;

3) ulcer treatment;

4) artificial lung ventilation.

17. The distinction between ordinary and extraordinary treatment is used to indicate the difference

1) between statistically common or unusual treatments;

2) between treatments that are non-invasive or extremely invasive;

3) between treatments that use low or high technology interventions;

4) between treatments that are beneficial and treatments that are overly burdensome (and useless) to the patient.

18. Iatrogenic diseases are:

1) diseases caused by malicious actions of a doctor;

2) diseases arising from the impact on the human genome;

3) diseases that appear due to the impact of adverse environmental factors;

4) psychogenic disorders arising as a result of deontological errors of medical workers

19. The name of the paternalistic model comes from the Latin word " pater ", which means:

- 1) superiority;
- 2) **father;**
- 3) employee;
- 4) expert.

20. What model of relationship between a doctor and a patient does the characteristic refer to: the relationship between a doctor and a patient is considered from the point of view of a healthcare provider and a client purchasing these services:

- A) technical;
- B) collegiate
- B) contract**
- D) engineering

21. The ethical dilemma of using artificial intelligence in medicine is that:

- 1) for the most effective work of AI, the most complete data on patients, both directly medical and social, are needed;
- 2) the use of AI is unacceptable in the treatment of certain categories of patients;
- 3) **AI cannot be held legally liable in case of poor-quality provision of medical services;**
- 4) AI is too expensive to implement.

22. The first attempts to use computing devices in health care to create medical information systems were made by:

- a) at the beginning of the twentieth century;
- b) in the mid-1950s;**
- c) at the end of the 60s of the twentieth century;
- d) at the end of the twentieth century.

23. What is the percentage of telemedicine projects related to medical education from the total number of telemedicine projects?

- a) 80%;
- b) 20%;
- c) 48%;**
- d) 12%.

24. Informatization of domestic health care originates in the works:

- a) Institute of Surgery. A.V. Vishnevsky;**
- b) Institute of Cardiovascular Surgery. A.N. Bakulev;
- c) Tomsk Medical Institute ;
- d) Moscow State University .

25. The classification of medical information systems according to the levels of the healthcare structure was:

- a) V.Ya. Gelman (2001);**
- b) S.A. Gasparyan (2005);
- c) A.V. Vishnevsky (1962);
- d) A.I. Kitov (1976).

26. Remote provision of telemedicine services using telecommunication technologies is:

- a) telematics;
- b) telemedicine;**
- c) medical telematics;
- d) telemetry.

27. Direction "urgent telemedicine" is the following option for telemedicine consultation:

- a) advice to rescuers;**
- b) telemedicine laboratory examination;
- c) telemedicine functional examination;

d) medical telemedicine consultation.

28. In what year was the first television consultation of the patient held?

- a) 1905;
- b) 1935;
- c) 1955;
- d) 1959.**

29. Telemedicine standard Health Level 7 (HL7) is:

- a) an advisory standard for the exchange of health information;**
- b) industry standard for image transmission;
- c) a standard for the transfer and storage of medical information;
- d) the industry standard for the transmission of radiological and other medical images.

30. The main problems of the widespread introduction of digitalization of medical information:

- 1) medical data is now fragmented, contained in isolated storages and incompatible systems and formats, much exists only on paper or on film;
- 2) the need to ensure the confidentiality of data in an electronic environment;
- 3) the threat of unfair use of data in case of leakage (for example, discrimination in employment, purchase of health and life insurance programs, etc.);
- 4) low digital literacy of the population;
- 5) all of the above.**

31. The classification of medical information systems by objects of description was:

- 1) V.Ya. Gelman (2001);
- 2) S.A. Gasparyan (2005);**
- 3) A.V. Vishnevsky (1962);
- 4) A.I. Kitov (1976).

32. The DICOM telemedicine standard is:

- 1) an advisory standard for the exchange of health information;
- 2) industry standard for image transmission;
- 3) standard for the transfer and storage of medical information;
- 4) the industry standard for the transmission of radiological and other medical images.**

33. Based on the provisions of the Koran and based on the tradition of the Prophet Muhammad, according to which God breathed a soul into the fetus, determine the period during which the fetus takes the form of a person:

- 1) from the moment of conception
- 2) starting from the 1st week of the 2nd month
- 3) on the hundredth day of pregnancy**
- 4) from the moment of birth

34. Unorthodox Jews tend to accept death.

- 1) physical
- 2) biological
- 3) cerebral**
- 4) cerebral

35. Choose the correct answer according to the utilitarian rule:

- 1) never keep your promises
- 2) keep your promises if their fulfillment does not lead to a disastrous result.
- 3) Always keep promises, no matter what the consequences may be.
- 4) keep your promises, except in circumstances where breaking a promise is more beneficial**

36. Under the circumstances of only a few doctor-patient meetings for a very specific purpose, the following model of doctor-patient relationship is the most appropriate

- 1) paternalistic
- 2) engineering
- 3) **contract**
- 4) negotiable

37. The fundamental basis that forms the medical profession is:

- 1) economic
- 2) cognitive (epistemological)
- 3) **moral**
- 4) artistic

38. The correct definition of ethics as a science is:

- 1) ethics is the science of the relationship of living beings to each other
- 2) **ethics - science about the nature and meaning of moral relationships and moral principles**
- 3) ethics -n science about minimizing evil in human relations
- 4) ethics - the science of the ability to behave correctly in society

39. The form of social regulation of medical activity does not include:

- 1) ethics
- 2) morality
- 3) right
- 4) **art**

40. The treatment of corpses is of ethical importance because:

- 1) an autopsy can help establish the truth, detect changes, provide information, promote justice;
- 2) pathological anatomy needs preparation of preparations of excisions of individual parts of the body for demonstration;
- 3) it is necessary for teaching students;
- 4) **the corpse has intrinsic value.**

2. Multiple choice answer

1. The Lisbon Declaration on the Rights of the Patient states:

- 1) **the patient has the right to freely choose a doctor**
- 2) the patient has the right to make adjustments to the treatment prescribed by the doctor
- 3) **the patient has the right, having received adequate information, to agree to treatment or refuse it**
- 4) **the patient has the right to receive the care of a doctor independent of outside influences in their professional medical and ethical decisions**
- 5) the patient has the right to request to be transferred to another room

2. The main factors that determine the importance of confidentiality in the doctor-patient relationship are:

- a) **protection of the economic interests of the patient;**
- b) restriction of the patient's rights;
- c) **ensuring frankness between doctor and patient;**
- d) trust in the patient's relatives;
- e) pride or shyness of the patient

3. Specify the provisions of the doctor's ethics that affect the development of the patient's responsibility for his health:

- 1) strengthening the spirit of trust between doctor and patient;
- 2) untimely appeal for medical care;
- 3) following the principle of "do no harm";
- 4) compliance with the rules of etiquette;**
- 5) the experience of the doctor in terms of obtaining reliable information from the patient about the state of his health or the course of the disease.**

4. The basis of a medical error is:

- 1) dishonest actions of a doctor**
- 2) insufficient experience of the doctor**
- 3) imperfection of medicine
- 4) professional ignorance
- 5) criminal intent

5. The ethics committees may include:

- 1) the staff of the medical institution
- 2) any citizen of the Russian Federation
- 3) priests, public figures**
- 4) lawyers**
- 5) a medical worker of a foreign state

6. Select the doctor-patient relationship characteristic of the engineering model:

- 1) the patient is perceived by a doctor or other medical worker as a biological system in which there are malfunctions in its functioning and it is necessary to eliminate them.**
- 2) The medical worker acts as a caring, strict senior comrade who knows better than the patient what is good for the latter.
- 3) This model is effective only in cases of emergency medical care or in cases where the patient is in an unconscious, incapacitated state.**
- 4) In the relationship with the patient, the doctor relies only on the objective data of clinical diagnostic studies.
- 5) The doctor and the patient see each other as colleagues who strive for one common goal - to eliminate the disease and protect the patient's health.

7. What are the three fundamental principles that a doctor should observe in his relationship with a patient:

- 1) The principle of priority of the health and well-being of the patient.**
- 2) The principle of social justice.**
- 3) The principle of independence and autonomy of the patient
- 4) The principle of correct treatment.
- 5) The principle of collegiality.**

8. Define three groups of iatropathogenies:

- 1) iatropsychogeny;**
- 2) iatrophysiogeny;**
- 3) iatrobiogeny;
- 4) iatropharmacogeny;**
- 5) iatrohemogeny.

9. The rules involved in the ethical regulation of the professional behavior of a doctor:

- 1) truthfulness rule**
- 2) rule of public opinion
- 3) privacy rule**
- 4) informed consent rule**
- 5) golden mean rule

10. A medical worker has the right to transfer information known to him to third parties if:

- 1) the patient refuses to follow the doctor's instructions;
- 2) **the patient is under 15 years of age;**
- 3) **the patient is not able to independently express his will due to a violation of consciousness;**
- 4) **the patient has given permission for the disclosure of information;**
- 5) requested by the patient's relatives

11. The use of artificial intelligence based on the analysis of medical data allows:

- 1) **qualitatively improve the diagnosis of the patient;**
- 2) reduce patient satisfaction with treatment;
- 3) **personalize patient treatment:**
- 4) fundamentally change the making of medical decisions;
- 5) **expand the possibilities of early detection and prevention of diseases.**

12. Currently, the following trends in the digitalization of medicine by the patient are common:

- 1) **use of portable electronic devices for monitoring the state of one's health;**
- 2) **use of mobile phones, tablets for medical online consultations or videoconferencing;**
- 3) **use of systems for storing personal medical information (personal account of the patient, informing about the results of functional diagnostics online, etc.);**
- 4) use of electronic systems for access to medical services.

13. The application of intelligent data processing technologies in medicine (TIOD) in medicine is designed to solve the following problems:

- 1) **ensure the adoption of a reasonable, consistent, evidence-based decision;**
- 2) solve the problem of shortage of medical workers by replacing them with TIOD;
- 3) **ensure decision-making in the shortest possible time, in conditions of stress and incomplete information;**
- 4) to ensure the required completeness of examinations of the patient by the method of evidence-based exclusion of alleged diagnoses;
- 5) **ensure the processing of the maximum amount of data on the patient's health status and data on similar cases of seeking medical care.**

14. Among the main directions of the "digital revolution" in health care, the following areas can be distinguished:

- 1) **remote monitoring of the condition of patients;**
- 2) **development of telemedicine;**
- 3) **active introduction of portable means of monitoring their own health into everyday life of patients;**
- 4) creation of genetic passports of patients;
- 5) **digitalization of storage, exchange and processing of medical data.**

15. The complex of problems of using robotic systems in surgery includes:

- 1) **the probability of mechanical failures of the mechanism;**
- 2) emotional distance between the patient and doctors;
- 3) **lack of interaction between doctor and patient;**
- 4) **the uncertainty of liability for medical errors that may occur during treatment;**
- 5) lack of patient confidence in such technologies.

3. Tasks for correlating concepts:

1. Match the terms and definitions of concepts:

- 1) Iatrogenic disease
- 2) Medical error
- 3) Iatropathy

A) a mental disorder caused by the traumatic influence of the statement and (or) behavior of medical personnel

B) physical pathology caused by medical manipulations (invasive research methods, therapy, surgical interventions, vaccinations).

C) this is a consequence of a conscientious error of a doctor in the performance of his professional duties.

1)-A), 2)-C), 3)-B)

2. Match historical models and moral principles:

1) Hippocratic model;

2) Paracelsus model;

3) Deontological model;

4) Bioethics Model

A) the principle of "observance of duty",

B) the principle of "do no harm";

C) the principle of "do good";

D) the principle of respect for human rights and dignity

1)-B), 2)-C), 3)-A), 4)-D)

3. Correlate the models of doctor-patient relationship and their characteristics:

1) collegial

2) technical

3) contract

4) paternalistic

A) the doctor acts as an applied scientist, inclined to be interested in medical facts

B) the doctor assumes moral obligations and superiority to the patient regarding issues not only of a medical nature, but also beyond the scope of his exclusively professional duties

C) doctor and patient cooperate as colleagues in the pursuit of some common goal

D) the relationship between the doctor and the patient is considered from the point of view of the health care provider and the client buying these services

1)-C), 2) - A), 3)-D, 4)-B)

Topics of student's independent work (reports, abstracts)

1. Biomedical ethics and medical law: the problem of relationship.
2. Biomedical ethics as a form of professional protection of the doctor's personality.
3. The history of the development of bioethical views. Historical types of ethical theory and modern bioethics.
4. History and logic of eugenics.
5. Informed consent: from procedure to doctrine.
6. The principle of autonomy and the right to voluntary euthanasia.
7. The problem of equity in medicine and health care
8. Biomedical research on animals: moral and ethical issues.
9. Paternalism and modern models of doctor-patient relationship.
10. The personality of the patient, his responsibility for health, the impact on the occurrence, course and outcome of diseases
11. "Damned Questions" in "Doctor's Notes" by V.V. Veresaev.
12. The use of stem cells in medicine: problems and prospects.
13. Mercy. The problem of the limits of the obligation of mercy in medicine.
14. Palliative care and hospice movement in Russia and abroad.
15. Moral problems of modern medicine and ways to solve them.
16. The concept of "duty" in medical practice.
17. Modern problems of health medicine, the transition to digital medicine.
18. AIDS: moral and ethical problems.
19. The nature and main types of ethical conflicts.
20. Value conflict of generations in the ethical regulation of medical activity.

21. Ethics of genetics.
22. Ethical and legal issues of biomedical experiment with human participation.
23. Ethical committees: goals, objectives and powers.
24. Ethical aspects of the interaction of domestic healthcare with the pharmaceutical business at the present stage
25. Ethical problems of the beginning of human life: the problem of the status of the embryo.
26. New reproductive technologies: moral, legal, socio-psychological and religious problem.
27. Ethical problem of commercialization of surrogate motherhood.
28. Abortion, sterilization and contraception as problems of bioethics.
29. Ethical problems of new "technologies of conception" (fertilization in vitro, cloning).
30. Ethical problems of providing medical care to drug addicts .
31. Ethical problems of transplantation and xenotransplantation. Bioprinting.
32. Truthfulness and cancer patients.
33. History and specifics of medical secrecy.
34. Confidentiality and medical secrecy in digital health.
35. Moral aspects of teaching students "at the bedside".
36. Images of death in modern public consciousness (mass media, cinema, literature, pop culture).
37. Visualization and digital design in medicine.
38. Bioprinting of human tissues: an ethical aspect.
39. Robotization and artificial intelligence: new ethical challenges.
40. Personality of the doctor in the transforming model of digital medicine.

Essay Topics

1. Own definition of concepts: freedom, duty, responsibility, conscience, morality, morality.
2. "Am I a trembling creature, or do I have a right?"
3. Reflect on the topic "Volunteer work in a hospice, but do I need it?"
4. Mercy: Necessity, benefit, or command of the heart. Your opinion, prove your point.
5. One day in the life of a laboratory rat (dog, guinea pig, rabbit).
6. Moral problems of organ transplantation from cadavers.
7. My friend has AIDS. I'm afraid of him?
8. Can you "relieve" the condition of a dying person by turning off the ventilator?
9. Abortion. Am I the master of my own destiny?
10. What can I personally do to make the world a better place.
11. "Love your neighbor as yourself." Neighbors - who is this?
12. Should the patient know the whole truth about his illness?
13. Cloning - arguments for and against.
14. Incorrectness of the term "holy lie".
15. Why do we talk about "extreme medical ethics" when we talk about clinical transplantation?
16. Concepts of "connected patient" - monitoring the condition and providing medical services using embedded smart devices. Analysis of history, prospects and ethical and legal aspects.
17. Is telemedicine an effective doctor's assistant or a source of ethical and legal problems?
18. Reporting "bad" news in digital medicine.
19. 3D bioprinting of organs and tissues: on the issue of human identity.
20. Doctor or programmer: the realities of modern digital healthcare.

Interactive lessons

Cases (situational tasks)

Situational tasks of the 1st level of complexity (carried out by the method of "brainstorming", during which the only correct decision is made).

1. A severely depressed, elderly widow is admitted to the hospital with shortness of breath. Initial assessment of her condition shows congestive chronic heart failure and pneumonia. Both are considered reversible. The patient refuses treatment, declaring her desire to die.

Under the circumstances, what response is considered ethically justified?

2. The physician who recommended urography to his qualified 68-year-old male patient is trying to decide whether to report the unlikely risk (1 in 10,000) of a fatal reaction. Based on the opinion that the patient would like to know about such unlikely risks, he is guided?

3. An elementary school watchman goes to a psychiatrist hired by the school board and tells him that he has about two cases of molestation of young children. Accepting decides that it is his duty to inform the school board, will the psychiatrist act according to the rule?

4. Last year in the United States, a hospital robot drove into the ward of a seriously ill patient, on the screen of which an image of the attending physician appeared (the doctor used video chat). Without further ado, he spoke about the unfavorable prognosis. To alleviate the suffering, he suggested morphine, but warned that this would make breathing even more difficult. In addition, he offered to provide the patient with palliative care at home. Relatives were discouraged not by the patient's fatal diagnosis, but by the form that the doctor chose to communicate the diagnosis. Under the given circumstances, is this a positive or negative example of the transformation of the doctor-patient relationship with the digitalization of medicine?

Situational tasks of the 2nd level of complexity (carried out in the form of a detailed discussion with a comprehensive analysis of the situation)

Task number 1. According to an ancient aphorism: "He who is not a good person will not be a good doctor."

Does the professional behavior of a doctor depend on his moral qualities?

Task number 2. In 1886, the medical community was shocked by the suicide of the professor-surgeon of the St. Petersburg Military Medical Academy S.P. Kolomnina. He operated on a woman for a rectal ulcer and used a cocaine solution as anesthesia, the patient died 3 hours after the operation, an autopsy showed cocaine poisoning. In medical science at that time there was not enough information to determine the doses of cocaine for anesthesia, Kolomnin determined the dose based on the medical literature, but the situation was aggravated by the fact that he incorrectly diagnosed and the operation was not shown to the patient at all. 5 days after the operation, he shot himself, his answer to the persuasion of friends not to attach much importance to this case is known: "I have a conscience, I am my own judge."

How do the concepts of honor and duty manifest themselves in S.P. Kolomnin?

Task number 3. A woman living in the territory of the Russian Federation came to visit relatives in Moscow. She developed life-threatening bleeding. During examination in the hospital, uterine fibroids were detected. She was offered an urgent operation to remove the uterus, as symptomatic therapy to stop the bleeding was not successful. The woman initially refused. However, a competent and correct conversation with her doctor, including the patient in the decision-making process related to medical intervention, convinced her of the need for surgery. Histological examination revealed cancer in the initial stage. Thus, the woman was saved not only from the acute loss of a large amount of blood, but also extended life due to the early elimination of cancer.

What motivated the doctor's efforts to overcome the patient's refusal?

Task number 4. A 20-year-old patient comes to an appointment at a paid neurological clinic with complaints of headache, the attacks of which have become more frequent during the preparation for the examination session. Clinical examination revealed no somatic and neurological pathology. To obtain maximum profit, the doctor strongly recommends that the

patient undergo a large number of studies, including those that are not justified, although they are harmless to the patient.

What interests determined the doctor's recommendations?

Task number 5. A young doctor operates on a patient diagnosed with stage II stomach cancer. The operation revealed multiple metastases in the mesentery. A more experienced doctor who came to the operation says that the tumor is not operable. However, the young doctor operates on the patient, removing, if possible, all cancerous metastases. As a result, the patient lived for 4 years after the operation, worked, and had a daughter.

What are the moral foundations of a young and more experienced doctor?

Task No. 6. A five-year-old girl with a complex injury of the lower limb was in the trauma department of the hospital. The doctors tried all available methods of treatment to save the child's leg, but they were not successful. Then the hospital staff turned to a research center specializing in such a pathology, because an operation of such complexity could only be carried out there. Otherwise, it was about amputation of the leg.

After assessing the situation, the doctors of the scientific center refused to carry out the treatment, because there was very little chance of success, and this could ruin the reputation of the clinic.

What type of moral consciousness dominated among the doctors of the Institute?

Task number 7. A doctor in a rural outpatient clinic did not go to the call to the patient, 68-year-old Pyotr Semyonovich S. The doctor motivated the refusal by a breakdown in the company car. The doctor offered to hold a video consultation, saying that this is called telemedicine, and such a consultation can replace a personal examination. But Pyotr Semenovich could not connect to the video call, and there was no one to help him. The consultation did not take place, and the doctor's phone was already switched off. At night, the patient felt worse, he was taken to the SMP with a preliminary diagnosis of a heart attack.

What interests determined the doctor's recommendation to use telemedicine? Was it justified in the case described?

Analytical tasks

Task 1. Read the conclusion of the McKinsey consulting agency on the analysis of big data in the healthcare system [Kayyli B , Knott D , Van Kuiken S. _ The big - data revolution in US health care : accelerating value and innovation . McKinsey Quarterly [updated 2013 Apr; cited 2016 May 3]. <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/the-big-data-revolution-in-us-health-care>]

As experts from the international consulting firm McKinsey noted, “in making decisions on the treatment of a particular disease, doctors have traditionally relied on their own judgments. But in the last few years, there has been a clear shift towards evidence-based medicine, which involves systematic analysis of clinical indications and decision-making based on the best available information. Aggregation of individual information arrays based on big data algorithms most often provides the most reliable information in this area.”

Read the full text of the article. What arguments do the authors give for such a conclusion? Give examples of exceptions to this conclusion.

Task 2. “Telemedicine is a method of delivering health care services where distance is a critical factor. The provision of services is carried out by representatives of all medical specialties using information and communication technologies after receiving the information necessary for the diagnosis, treatment and prevention of the disease” [World Health Organization 1998].

The advantages of telemedicine are:

–Solving the problem of access to medical care in remote places of residence of the population:

–Reducing health care costs;

- Opportunity to quickly get the necessary advice to parents of children with disabilities, relatives caring for seriously ill or limited mobility patients;
- Improving the quality of medical care.

At the same time, a number of special examinations among patients who used telemedicine services indicate the risks of reducing the quality of diagnostics and treatment. For example, a comparative study in California of nearly 1,700 patients who used telemedicine sessions to treat acute respiratory infections and a sample of approximately 64,000 patients with acute respiratory infections who used the traditional format of doctor visits found that during virtual contacts physicians prescribed broad-spectrum antibiotics 30% more often than face-to-face [Uscher-Pines L, Mulcahy A, Cowling D, et al. Antibiotic prescribing for acute respiratory infections in direct-to-consumer telemedicine visits. *JAMA Intern Med.* 2015 ;175 (7):1234–1235. doi : 10.1001/jamainternmed.2015.2024

<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2296013>]. Such a more conservative approach to treatment, due to limitations in the obtained diagnostic information about patients within the framework of telecommunication contacts, according to the authors of the work, not only led to the prescription of more expensive drugs, but could also contribute to the formation of antibiotic resistance.

What bioethical problem of telemedicine is illustrated? What approaches to its solution have already been outlined?

Task 3. Watch the video report of the Moscow Health Department on the use of digital technologies during the pandemic.

“Digitalization helps Moscow medicine cope with the challenges of the #covid19 pandemic” <https://www.facebook.com/watch/?v=758333954798619>

What ICTs were most in demand during the pandemic? What are the risks associated with their use?

Task 4. Compare the meaning of healing and the features of medical care in epidemics and normal conditions.

Using google service forms, conduct a survey of at least 30 respondents. It is necessary to monitor the opinions of students of 1-3 courses on the topic of general principles and differences in the provision of medical care and services in normal and epidemic conditions, using the COVID-19 pandemic as an example. Using MS software products Excel and IBM SPS Statistics , analyze the received data and present it as an MS presentation powerpoint .

Task 5 . Familiarize yourself with the ideas of *transhumanism* and answer the following questions:

- What are the main ideas of the concept?
- What ethical and legal risks does this idea have?
- How can the implementation of the ideas of transhumanism affect the activities of doctors?

Information about transhumanism:

https://www.bbc.com/russian/society/2015/12/151210_vert_fut_the_strangest_presidential_candidate

<https://rb.ru/story/bus-dic-transhomo/>

<https://cyberleninka.ru/article/n/kognitivnye-tehnologii-perspektiva-sotsialnogo-razvitiya-vs-utopiya-transgumanizma/viewer>

Task 6. Analyze the possibilities of new business models that, according to researchers, can significantly change the “landscape” of the medical industry (uber-medicine, retail clinics, subscription medical care, networked models of medical care). With the help of the article by Berezny A.V., Saigitov R.T. "Digital revolution" and innovative business models in healthcare: global trends and Russian realities // Bulletin of the Russian Academy of Medical Sciences.

2016. №3. (URL: <https://cyberleninka.ru/article/n/tsifrovaya-revolyutsiya-i-innovatsionnye-biznes-modeli-v-zdravoohranenii-globalnye-trendy-i-rossiyskie-realii>) evaluate the current state and prospects for the development of "digital » healthcare in Russia and analyze the ethical risks of implementing digital technologies.

Task 7. Uncertainty of liability for telemedicine errors is singled out as the risks of using telemedicine. Give a reasoned answer: in your opinion, who will be responsible for a malfunction of a telemedicine service or an incorrect remote diagnosis: a doctor, a software developer, an information technology manufacturer, a site administrator, a cloud services operator or a provider?

Task 8.

The Nuffield Bioethics Council (UK) has recognized the following ethical issues with the use of AI in medicine:

- the possibility of AI making erroneous decisions;
- the question of who is responsible when AI is used for decision support;
- difficulties in validating the results of AI systems;
- the presence of biases in the data used to train AI systems;
- ensuring data protection;
- ensuring public confidence in the development and use of AI technologies;
- impact on the sense of dignity of people in conditions of social exclusion of people with limited mobility;
- impact on qualification requirements for medical workers; and the potential for AI to be used for malicious purposes.

According to the Nuffield Bioethics Council, a key challenge will be to ensure that AI is developed and used in a way that is open and compatible with the public interest, while promoting innovation in the healthcare sector.

Is it possible to say that the solution of these problems pushes the need for the participation of doctors, and not just programmers, in the creation of intelligence. Are you ready to get a second specialty - information technology in medicine, why?

Discussion (round table)

Round table "Science and ethics. The problem of bioethics in the media"

Introductory statement: One of the tasks of bioethics is to raise awareness of bioethical issues among specialists - scientists, lawyers, journalists, etc. These issues include ethical and legal problems of respect for the rights of patients, in particular people living with HIV / AIDS, the problems of human cloning , organ transplants, the development of new reproductive technologies, manipulations with the human genome, scientific experiments on humans, etc.

The role of journalists in informing the public about these difficult and extremely significant problems for any citizen can hardly be overestimated: conscientiously and balanced information is a necessary condition for making an informed choice in a multitude of morally ambiguous situations. Unfortunately, many Russian journalists who write in line with bioethical issues do not have a minimum understanding of its principles, legal aspects, and ethical issues of covering such topics. Unreliable information presented in the media misleads people, leads to social tension, deprives people of the opportunity to exercise their right to participate in making important decisions from the point of view of bioethics.

Given that, by its very nature, bioethics is an area of heated debate, properly trained journalists will be able to help organize a broad public discussion of topical bioethical issues. And this, in turn, will allow civil society institutions, and, consequently, decision makers, to develop an adequate position in response to the challenges faced by the rapid scientific and technological progress of biomedical technologies.

Task: distribute discussion roles (journalists, medical scientists, moderator, invited guests); prepare materials for information support of their role (examples of scientific research, journalistic publications, etc.).

Organization of the discussion.

Topics of discussions and round tables

1. Prerequisites for the emergence of the science of bioethics. Why the 20th century?
2. Medical ethics and bioethics: between science and morality
3. Bioethics - the stimulus of science?
4. What will science give society in the 21st century?
5. Moral and ethical problems of transplantation. Prospects for 3D bioprinting.
6. Should society restrict scientific experiments with "living matter"? Can computer models replace animals and humans in biomedical research?
7. Bioethical problems of BigData in medicine.
8. Genetic certification: pros and cons.
9. Bioethical problem of cloning. Points for and against".
10. Modern contradictions: abortion - a simple operation or murder, the right to dispose of someone else's life, the embryo - already a person or not yet a person?
11. Artificial intelligence in medicine: fantasy or technology of tomorrow.
12. Moral and ethical problems of old age and dying.
13. Bioethical problem of euthanasia: arguments for and against.
14. Robots instead of doctors. Utopia?

Role-playing game

Role-playing game "Euthanasia"

Definition: Euthanasia is a conscious action or refusal to act, leading to the imminent death of a terminally ill person, in order to end pain and suffering (mercy killing).

Classification of euthanasia 1. Active - the application, at the request of the patient, by medical personnel or other persons, of measures to accelerate or facilitate the death of the patient (mercy killing). 2. Passive (let die) - the termination of the provision of honey aimed at prolonging life. assistance, refusal of medical measures to fight for human life.

Types of active euthanasia: 1) The decision is made by the doctor without the request of the patient (mercy killing). 2) The doctor helps to perform euthanasia at the request of the patient. 3) Actions are taken at the request of relatives or a court decision. 4) The patient himself turns on the device, which leads him to a quick and painless death.

Roles of participants: supporters and opponents of euthanasia (journalists, scientists, doctors, patients, human rights activists, members of bioethical commissions), game moderator.

Approach to the problem of euthanasia (proponents)

There are several considerations for stopping treatment: medical - death, a means to end the patient's suffering; patient care for loved ones; worthy retirement; the destruction of not full-fledged people; termination of ineffective life support measures, in order to use the equipment for promising patients; economic reasons (life maintenance requires the use of expensive drugs).

Arguments against euthanasia

- Do not kill, "love of neighbor."
- Medicine knows cases of curing even incurable diseases.
- With an active social position of society, full rehabilitation of the disabled is possible.

Ethical issues of suicide. Suicide from an ethical point of view, any form of participation or assistance is unacceptable on the part of a doctor. Both secular and religious morality condemns.

Topics of student's scientific works

1. Bioethics is the call of the times.
2. Bioethics as a worldview science.
3. Bioethics is a way to expand the boundaries of morality.
4. The need to study bioethics at the university.

5. The value of life in various religions.
6. Religion about the attitude towards animals.
7. Christian bioethics and its development in Russia.
8. Russian scientists-philosophers about the ethical problems of their time. A look into the future.
9. Is man the king of nature?
10. The role of public human rights organizations in solving bioethical problems.
11. "Reverence for Life" What are the advantages and problems in following this principle.
12. Experiments on humans in Nazi Germany.
13. The Hippocratic Oath. Its relevance today.
14. Morality and law as forms of regulation of the scientist-experimenter.
15. Science without conscience devastates the soul.
16. International level of animal rights.
17. Ethical problems of modern reproductive technologies (artificial insemination / in vitro fertilization in vitro / surrogate motherhood).
18. Ethical problems of HIV infection and AIDS.
19. Moral issues of cloning.
20. Moral issues related to human gender.
21. Ethical and legal aspects of the potential of 3D bioprinting as a fundamental transformation of the field of regenerative medicine.
22. Moral problems of palliative medicine.
23. Principles of operation of gerontological centers.
24. Hospice principles.
25. The tradition of dying in different cultures.
26. Dr. Liza Glinka (another doctor of your choice) is a person with a big heart.
27. Personality in a situation of moral choice. The moral choice of the doctor.
28. The image of a doctor in a sociocultural context.
29. "Digital" image of the doctor.
30. Ethics of professional interaction in the medical team.
31. The problem of duty and mercy in the professional self-awareness of a modern doctor
32. Achievements of modern medicine and new ethical problems.
33. The doctor and society in the era of the development of new biomedical technologies.
34. Motives of activity in the structure of professional consciousness of the future doctor. (children's doctor)
35. Perception of the situation of communication with the patient in general practitioners.
36. Features of the communicative potential of doctors of different specializations.
37. Abortion prevention among young people: a medical and social problem.
38. Perception of the disease as a phenomenon at the level of ordinary consciousness of doctors and patients.
39. Psychological qualities of the patient's personality and their influence on his attitude to his health
40. Implementation of the contract model in the conditions of market relations in Russia.
41. Problems of formation of communicative competence among medical students.
42. Prevention of emotional burnout among medical workers.
43. Psychological features of patients with chronic somatic diseases.
44. Telemedicine consultation "doctor-patient" in Russia.
45. AI in Digital Health.
46. Diagnostic errors when using the data processing algorithm in medicine.
47. The ethics of maintaining patient confidentiality and protecting personal data in the context of digital medicine.
48. Clinic without staff: world experience in implementing software algorithms.
49. Digital technologies in doctor-doctor communication.

50. Possibilities of mass communication between a doctor and a patient (at the level of society) through information technologies.

51. Digitalization in the preparation of medical students. Prospects for learning by artificial intelligence.

Control questions on the discipline

1. The subject of bioethics as a theoretical science and practice of a doctor.
2. History of bioethics, actual problems.
3. Problems and norms of bioethics.
4. Basic principles of biomedical ethics.
5. Models of bioethics.
6. Bioethical challenges of digitalization of medicine. Ethical problems of digitalization and robotization in medicine.
7. Basic rules of biomedical ethics and scientific research in medicine and pharmacology. Perspectives of computer modeling.
8. Life and health as a value.
9. Embryo status problem.
10. Ethical problems of intervention in human reproduction.
11. Moral problems of modern genetics.
12. New eugenics.
13. Actual problems of bioethics and approaches to their solution in clinical medicine.
14. Euthanasia problems.
15. Cloning issues.
16. Problems of organ transplantation. Three-dimensional bioprinting as a direction of transplantology.
17. Ethical problems of medical examination and diagnostics (including using ICT)
18. Problems of professional responsibility of medical workers.
19. Iatrogenic diseases and medical errors
20. Deontology and the meaning of healing. The doctor in the era of digitalization of healthcare.
21. Bioethical models of the doctor-patient relationship.
22. Characteristics and psychological mechanisms functioning in models of interaction between a doctor and a patient.
23. Psychological and ethical requirements for the personality of a doctor.
24. Transformation of the doctor-patient relationship in the context of robotization in medicine.
25. Ethical and communicative competence of a doctor, psychological characteristics that form it.
26. General problems of effective communication between a doctor and subjects of medical discourse (patients, their relatives, colleagues, management). Models and stages of a medical interview. Psychological and ethical issues that arise at each of these stages.
27. The specifics of the doctor's communication with incurable patients. Communication in hospices.
28. Stages of acceptance of the disease and ethical and communicative basis of interaction between the doctor and the patient at each of these stages.
29. The specifics of the doctor's communication with patients with sociocultural differences.
30. Telemedicine. Strengths, weaknesses and uncertainty of liability for telemedicine errors.
31. Ethical aspects of the use of artificial intelligence in healthcare
32. Ethical problems of robotization in surgery. Ethics of computer surgery.

33. The problem of patient confidentiality and medical secrecy in the context of digital medicine.

34. Cybercrime in digital health. Protection of personal data of the patient and the consequences of their leakage.