

MEDICAL ETHICS

SCIENTIFIC INTERDISCIPLINARY JOURNAL OF YAROSLAVL STATE MEDICAL UNIVERSITY
AND PIROGOV RUSSIAN NATIONAL RESEARCH MEDICAL UNIVERSITY

EDITOR-IN-CHIEF Alexander Khokhlov, full member of RAS, DSc (Med), professor
CHAIR OF EDITORIAL BOARD Alexander Chuchalin, full member of RAS, DSc (Med), professor
DEPUTY EDITOR-IN-CHIEF Elena Grebenshchikova, DSc (Phil), professor
JOURNAL EXECUTIVE EDITOR Marina Krotova
EDITOR Marina Syrova
LAYOUT EDITOR Evgeny Lukyanov
TRANSLATOR Diana Kulikova
DESIGN Marina Doronina
LAYOUT Igor Kobzev



SUBMISSION

EDITORIAL BOARD

Alexandrovsky YuA, corr. member of RAS, DSc (Med), professor (Moscow, Russia)
Bagnenko SF, full member of RAS, DSc (Med), professor (Saint Petersburg, Russia)
Baranov AA, DSc (Biol), professor (Krasnoyarsk, Russia)
Bryzgalina EV, CSc, Associate professor (Moscow, Russia)
Bogdanova NV, CSc (Med) (Dmitrograd, Russia)
Crowley F, DSc, professor (Belgium)
Dmitrieva EV, DSc (Sociol) (Moscow, Russia)
Durnev AD, full member of RAS, DSc (Med), professor (Moscow, Russia)
Firsov DE, DSc (Cult), CSc (Phil) (Yaroslavl, Russia)
Goryanov OA, CSc (Med), CSc (Theol), professor (Petrozavodsk, Russia)
Gusev EI, full member of RAS, professor (Moscow, Russia)
Glagolev SV, Deputy Minister of Health (Moscow, Russia)
Ivashkin VT, full member of RAS, professor (Moscow, Russia)
Iliencko LI, DSc, professor (Med) (Moscow, Russia)
Haihong Zhang, professor (Beijing, China)
Kagramanyan IN, DSc (Med), Head of Institute of Leadership and Healthcare Management (Moscow, Russia)
Kudlay DA, corr. member of RAS, DSc (Med) (Moscow, Russia)
Kovtun OP, full member of RAS, DSc (Med), professor (Yekaterinburg, Russia)
Kosenko VV, CSc (Pharm) (Moscow, Russia)
Kontsevaya AV, DSc (Med) (Moscow, Russia)
Korotkova AV, CSc (Med) (Moscow, Russia)
Kudaibergenova T, DSc (Med), Associate professor (Bishkek, Kyrgyz Republic)
Lileeva EG, CSc (Med), Associate professor (Yaroslavl, Russia)
Lukyanov SA, full member of RAS, DSc (Biol), professor (Moscow, Russia)
Malikov AY, CSc (Med) (Saint Petersburg, Russia)
Martynov AI, CSc (Med) (Moscow, Russia)
Mizernitsky YuL, DSc (Med), professor (Moscow, Russia)
Mikhailova NA, CSc (Biol) (Saratov, Russia)
Mokhov AA, DSc (Low), professor (Moscow, Russia)

Moshetova LK, full member of RAS, DSc (Med), professor (Moscow, Russia)
Mosolov SN, DSc (Med), professor (Moscow, Russia)
Nasonov EL, full member of RAS, professor (Moscow, Russia)
Pavlov ChS, DSc (Med), professor (Moscow, Russia)
Pavlov AV, DSc (Med), professor (Yaroslavl, Russia)
Petrov VI, full member of RAS, professor (Volgograd, Russia)
Rebrikov DV, DSc (Biol), professor (Moscow, Russia)
Rozhdestvensky DA, CSc (Med) (Moscow, Russia)
Roshal LM, DSc (Med), professor (Moscow, Russia)
Romanov BK, DSc, Associate (Med), professor (Moscow, Russia)
Safarli N, professor (Baku, Azerbaijan)
Sayamov YuN, CSc (Hist), member of Club of Rome, professor (Moscow, Russia)
Sarymsakova B, DSc (Med), professor (Astana, Kazakhstan)
Sedova NN, DSc (Phil), SJD (Volgograd, Russia)
Semenova NV, DSc (Med) (Saint Petersburg, Russia)
Shimaa E, Associate professor (Egypt)
Shlyakhto EV, full member of RAS, DSc (Med), professor (Saint Petersburg, Russia)
Sozinov AS, DSc (Med), professor (Kazan, Russia)
Sokolchik VN, CSc, Associate professor (Med) (Minsk, Belarus)
Starodubov VI, full member of RAS, DSc (Med), professor (Moscow, Russia)
Tilekeeva UM, DSc (Med), professor (Bishkek, Kyrgyzstan)
Teplova AV, CSc (Hist), professor (Minsk, Belarus)
Tishchenko PD, DSc (Phil), professor (Moscow, Russia)
Teplova NV, CSc, Associate professor (Med) (Moscow, Russia)
Tkachuk VA, full member of RAS, DSc (Med), professor (Moscow, Russia)
Vlasov YaV, DSc (Med), professor (Samara, Russia)
Volchenko NN, DSc (Med) (Moscow, Russia)
Yanushevich OO, full member of RAS, DSc (Med), professor (Moscow, Russia)
Zaborovsky AV, DSc (Med), professor (Moscow, Russia)

SUBMISSION <http://medet.rsmu.press/login?lang=en>

CORRESPONDENCE editor@rsmu.press

COLLABORATION manager@rsmu.press

ADDRESS ul. Ostrovityanova, d. 1, Moscow, Russia, 117997

Indexed in RSCI

Open access to archive



Issue DOI: 10.24075/medet.2026-02

The mass media registration certificate серия ПИ № ФС77-81021 от 02 июня 2021 г.

Founders: Yaroslavl State Medical University (Yaroslavl, Russia)

Pirogov Russian National Research Medical University (Moscow, Russia).

Publisher: Pirogov Russian National Research Medical University; address: Ostrovityanov Street 1, Moscow, 117997, Russia

The journal is distributed under the terms of Creative Commons Attribution 4.0 International License www.creativecommons.org



Approved for print 30.06.2026
Circulation: 100 copies. Printed by Print.Formula
www.print-formula.ru

МЕДИЦИНСКАЯ ЭТИКА

НАУЧНЫЙ МЕЖДИСЦИПЛИНАРНЫЙ ЖУРНАЛ
ЯРОСЛАВСКОГО ГОСУДАРСТВЕННОГО МЕДИЦИНСКОГО УНИВЕРСИТЕТА
И РОССИЙСКОГО НАЦИОНАЛЬНОГО ИССЛЕДОВАТЕЛЬСКОГО МЕДИЦИНСКОГО
УНИВЕРСИТЕТА ИМ. Н. И. ПИРОГОВА

ГЛАВНЫЙ РЕДАКТОР Александр Леонидович Хохлов, академик РАН, д. м. н., профессор
ПРЕДСЕДАТЕЛЬ РЕДАКЦИОННОГО СОВЕТА Александр Григорьевич Чучалин, академик РАН, д. м. н., профессор
ЗАМЕСТИТЕЛЬ ГЛАВНОГО РЕДАКТОРА Елена Георгиевна Гребенщикова д. филос. н., профессор
ОТВЕТСТВЕННЫЙ СЕКРЕТАРЬ Марина Александровна Кротова
РЕДАКТОР Марина Владимировна Сырова
ТЕХНИЧЕСКИЙ РЕДАКТОР Евгений Сергеевич Лукьянов
ПЕРЕВОДЧИК Диана Евгеньевна Куликова
ДИЗАЙН Марина Владимировна Доронина
ВЕРСТКА Игорь Александрович Кобзев



ПОДАЧА РУКОПИСЕЙ

РЕДАКЦИОННАЯ КОЛЛЕГИЯ

Ю. А. Александровский, член-корр. РАН, д. м. н., профессор (Москва, Россия)
С. Ф. Багненко, академик РАН, д. м. н. профессор (Санкт-Петербург, Россия)
А. А. Баранов, д. б. н., профессор (Красноярск, Россия)
Е. В. Брызгалова, к. филос. н., доцент (Москва)
Н. В. Богданова, к. м. н. (Дмитроград, Россия)
Я. В. Власов, д. м. н., профессор (Самара, Россия)
Н. Н. Волченко, д. м. н. (Москва, Россия)
О. А. Горянов, к. м. н., кандидат богословия, профессор (Петрозаводск, Россия)
Е. И. Гусев, академик РАН, профессор (Москва, Россия)
С. В. Глаголев, заместитель Министра здравоохранения РФ (Москва, Россия)
Е. В. Дмитриева, д. с. н. (Москва, Россия)
А. Д. Дурнев, академик РАН, д. м. н., профессор (Москва, Россия)
А. В. Заборовский, д.м.н., профессор (Москва, Россия)
В. Т. Ивашкин, академик РАН, д. м. н., профессор (Москва, Россия)
Л. И. Ильенко, д. м. н., профессор (Москва, Россия)
И. Н. Каграманян, д. м. н., директор департамента здравоохранения Правительства РФ (Москва, Россия)
О. П. Ковтун, академик РАН, д. м. н., профессор (Екатеринбург, Россия)
А. В. Концевая, д. м. н. (Москва, Россия)
Ф. Кроули, доктор наук, профессор (Бельгия)
Т. Кудайбергенова, д. м. н., доцент (Бишкек, Киргизия)
Д. А. Кудлай, член-корр. РАН, д. м. н. (Москва, Россия)
А. В. Концевая, д. м. н. (Москва, Россия)
А. В. Короткова, к. м. н. (Москва, Россия)
В. В. Косенко, к. фарм. н. (Москва, Россия)
С. А. Лукьянов, академик РАН, д. б. н., профессор (Москва, Россия)
Е. Г. Лилеева, к. м. н., доцент (Ярославль, Россия)
А. Я. Маликов, к.м.н. (Санкт-Петербург, Россия)
А. И. Мартынов, к. м. н. (Москва, Россия)
Ю. Л. Мизерницкий, д.м.н., профессор (Москва, Россия)
Н. А. Михайлова, к. б. н., (Саратов, Россия)
Л. К. Моштова, академик РАН, д. м. н., профессор (Москва, Россия)
А. А. Мохов, д. ю. н., профессор (Москва, Россия)
С. Н. Мосолов, д. м. н., профессор (Москва, Россия)
Е. Л. Насонов, академик РАН, профессор (Москва, Россия)
А. В. Павлов, д. м. н., профессор (Ярославль, Россия)
Ч. С. Павлов, д. м. н., профессор (Москва, Россия)
В. И. Петров, академик РАН, профессор (Волгоград, Россия)
Д. В. Ребриков, д. б. н., профессор (Москва, Россия)
Д. А. Рождественский, к. м. н. (Москва, Россия)
Б. К. Романов, д. м. н., доцент (Москва, Россия)
Л. М. Рoshаль, д. м. н., профессор (Москва, Россия)
Н. Сафарли, профессор (Баку, Азербайджан)
Ю. Н. Саямов, к. ист. н., профессор, член Римского клуба (Москва, Россия)
Б. Сарымсакова, д. м. н., профессор (Астана, Казахстан)
Н. Н. Седова, д. филос. н., д. ю. н., профессор (Волгоград, Россия)
Н. В. Семенова, д. м. н. (Санкт-Петербург, Россия)
А. С. Созинов, д. м. н., профессор (Казань, Россия)
В. Н. Соколыч, к. филос. н., доцент (Минск, Беларусь)
В. И. Стародубов, академик РАН, д.м.н., профессор (Москва, Россия)
Н. В. Теплова, д.м.н., доцент (Москва, Россия)
У. М. Тилекеева, д. м. н., профессор (Бишкек, Кыргызстан)
П. Д. Тищенко, д. филос. н., профессор (Москва, Россия)
В. А. Ткачук, академик РАН, д. м. н., профессор (Москва, Россия)
Д. Е. Фирсов, доктор культурологии, к. филос. н. (Ярославль, Россия)
Ч. Хайхун, профессор (Пекин, Китай)
Е. Шимаа, профессор (Египет)
Е. В. Шляхто, академик РАН, д.м.н., профессор Санкт-Петербург, Россия)
О. О. Янушевич, академик РАН, д.м.н., профессор (Москва, Россия)

ПОДАЧА РУКОПИСЕЙ <https://medet.rsmu.press/login?lang=ru>

ПЕРЕПИСКА С РЕДАКЦИЕЙ editor@rsmu.press

СОТРУДНИЧЕСТВО manager@rsmu.press

АДРЕС РЕДАКЦИИ ул. Островитянова, д. 1, г. Москва, 117997

Журнал включен в РИНЦ

Здесь находится открытый архив журнала



НАУЧНАЯ ЭЛЕКТРОННАЯ
БИБЛИОТЕКА
LIBRARY.RU

CYBERLENINKA

DOI выпуска: 10.24075/medet.2026-02

Свидетельство о регистрации средства массовой информации серия ПИ № ФС77-81021 от 02 июня 2021 г.

Учредители: ФГБОУ ВО «Ярославский государственный медицинский университет» Минздрава России (Ярославль, Россия);

ФГАОУ ВО «Российский национальный исследовательский медицинский университет имени Н.И. Пирогова» Минздрава России (Москва, Россия).

Издатель: ФГАОУ ВО «Российский национальный исследовательский медицинский университет имени Н.И. Пирогова» Минздрава России;

адрес: ул. Островитянова, д.1, г. Москва, 117997, Россия, 8(495)434-03-29

Журнал распространяется по лицензии Creative Commons Attribution 4.0 International www.creativecommons.org



Подписано в печать 30.06.2026

Тираж 100 экз. Отпечатано в типографии Print.Formula
www.print-formula.ru

LITERATURE REVIEW 4

Information Security in Healthcare: Modern Threats and Protection Methods

Sokolova OV, Zheltkevich OV, Kalabekova SV

Информационная безопасность в здравоохранении: современные угрозы и методы защиты

О. В. Соколова, О. В. Желткевич, С. В. Калабекова

LITERATURE REVIEW 9

The ethical conduct of a pharmacy executive as the cornerstone of executive professionalism

Alekseeva KS, Galkina GA

Этика руководителя аптечной организации как основа управленческого профессионализма

К. С. Алексеева, Г. А. Галкина

ORIGINAL RESEARCH 14

Doctor's duty as a semantic category in russian poetry

Rutkovskaya LM

Врачебный долг как семантическая категория отечественной поэзии

Л. М. Рутковская

ORIGINAL RESEARCH 19

The Latin language in medical education: ethical and pedagogical aspects

Illarionova IN

Латинский язык в медицинском образовании: этико-педагогические аспекты

И. Н. Илларионова

ORIGINAL RESEARCH 22

Ethical aspects of technological mediation in the professional activity of a foreign language teacher at medical universities

Suryaninova JA, Kuznetsova EB

Этические аспекты технологической медиации в профессиональной деятельности преподавателя иностранного языка в медицинском вузе

Ю. А. Сурьянинова, Е. Б. Кузнецова

ORIGINAL RESEARCH 27

Euphemisms in medical discourse: the role of the Latin language and ethical aspects of communication

Krotova MA

Эвфемизмы в медицинском дискурсе: роль латинского языка и этические аспекты коммуникации

М. А. Кротова

ORIGINAL RESEARCH 30

Placebo and the Double Standard of Care in Clinical Trials: When Inequality Becomes an Ethical Premise Using Inequality as an Ethical Justification

Gidirim UO, Bellaeva AM

Плацебо и проблема двойных стандартов в клинических исследованиях: неравенство как этическое оправдание

У. О. Гидирим, А. М. Беляева

LITERATURE REVIEW 35

Pre-birth pharmacogenetics: personalized pharmacotherapy, the burden of knowledge and ethics of a parental decision

Demarina SM, Usolkin AA, Balashova YD, Tikhomirova SV

Фармакогенетика до рождения: персонализированная фармакотерапия, бремя знания и этика родительского решения

С. М. Демарина, А. А. Усолкин, Ю. Д. Балашова, С. В. Тихомирова

ORIGINAL RESEARCH 41

Ethical views of Karl F. Fuchs, a prominent 19th-century therapist from the city of Kazan, Russia (in celebration of the 250th anniversary of his birth)

Abrosimova MYu

Этические взгляды известного казанского терапевта первой половины XIX века Карла Федоровича Фукса (к 250-летию со дня рождения)

М. Ю. Абросимова

INFORMATION SECURITY IN HEALTHCARE: MODERN THREATS AND PROTECTION METHODS

Sokolova OV¹ ✉, Zheltkevich OV¹, Kalabekova SV²¹ Yaroslavl State Medical University, Yaroslavl, Russia² North Caucasus State Academy, Cherkessk, Russia

The paper analyzes information security issues in Russian healthcare in the context of digital transformation. Digitalization of the healthcare sector, including integration of information systems of medical and pharmaceutical organizations with the Uniform State Health Information System (EGISZ), improves the quality of medicines and healthcare provided to the population. Meanwhile, the risk of patient personal data leakage and computer attacks on healthcare organizational information systems is increasing. The purpose of the study is to develop an integrated approach to information security in medical and pharmaceutical organizations. The research uses content analysis, logical and structural analysis of scientific papers and regulatory legal acts in the field of information technology in healthcare. The authors identify the stages of information security regulation from protecting medical secrets to categorizing critical information infrastructure and using domestic software. The classification of security threats to digital systems is provided based on the location of the threat source depending on whether they originate outside or inside the organization's network perimeter. The directions and evaluation criteria for improving information security are provided based on modern methods and technologies of information protection, including technical means of protection, legal mechanisms, as well as organizational and managerial methods.

Keywords: healthcare, information security, medical personal data, computer attacks, information protection, EGISZ, critical information infrastructure, medical and pharmaceutical workers

✉ **Correspondence should be addressed:** Olga V. Sokolova
Revolutsionnaya Str., 5, Yaroslavl, 150014, Russia; sova293@yandex.ru

Received: 10.04.2026 **Accepted:** 15.04.2026 **Published online:** 27.04.2026

DOI: 10.24075/medet.2026.009

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ИНФОРМАЦИОННАЯ БЕЗОПАСНОСТЬ В ЗДРАВООХРАНЕНИИ: СОВРЕМЕННЫЕ УГРОЗЫ И МЕТОДЫ ЗАЩИТЫ

О. В. Соколова¹ ✉, О. В. Желткевич¹, С. В. Калабекова²¹ Ярославский государственный медицинский университет, Ярославль, Россия² Северо-Кавказская государственная академия, Черкесск, Россия

Статья посвящена анализу проблем информационной безопасности в здравоохранении России в условиях цифровой трансформации. Цифровизация сферы здравоохранения, включая интеграцию информационных систем медицинских и фармацевтических организаций с ЕГИСЗ, повышает качество оказания медицинской и лекарственной помощи населению. При этом увеличиваются риски утечек персональных данных пациентов и угрозы компьютерных атак на информационные системы организаций. Цель исследования — формирование комплексного подхода к обеспечению информационной безопасности в медицинских и фармацевтических организациях. В ходе исследования использованы контент-анализ, логический и структурный анализ научных трудов и нормативно-правовых актов в области применения информационных технологий в здравоохранении. Авторами выделены этапы регулирования информационной безопасности от защиты врачебной тайны к категорированию критической информационной инфраструктуры и применению отечественного программного обеспечения. Приведена классификация угроз безопасности цифровых систем по расположению источника угроз относительно организации по внешним и внутренним критериям. Предложены направления и критерии оценки для повышения информационной безопасности на основе современных методов и технологий защиты информации, включая технические средства защиты, юридические механизмы, а также организационно-управленческие методы.

Ключевые слова: здравоохранение, информационная безопасность, компьютерные атаки, защита информации, ЕГИСЗ, медицинские персональные данные, критическая информационная инфраструктура, медицинские и фармацевтические организации

✉ **Для корреспонденции:** Ольга Вячеславовна Соколова
ул. Революционная, д. 5, г. Ярославль, 150014, Россия; sova293@yandex.ru

Статья поступила: 10.04.2026 **Статья принята к печати:** 15.04.2026 **Опубликована онлайн:** 27.04.2026

DOI: 10.24075/medet.2026.009

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

Digitalization and informatization of the healthcare system, implemented within the information society development strategy and the national Healthcare project, are associated with the introduction and use of information systems in medical and pharmaceutical organizations to provide high-quality medical and medicinal care. Information systems designed to automate business processes include a set of information, software, technical, and organizational tools [1, 2]. At the same

time, information systems store data from financial, economic, administrative and organizational facets; medical information about patients; research and monitoring results, etc. The use of information systems makes it possible to reduce errors when filling out accounting documents, provide quick access to large volumes of medical information, etc. [3].

The possibility of integrating information systems of medical and pharmaceutical organizations with the Unified

State Information System in the Field of Healthcare (USISZ) is worth mentioning, as one of its tasks is to provide information support for state regulation in the field of healthcare. EGISZ includes information about data from the federal electronic registry, electronic patient medical records (EHRs), electronic medical documents, etc. The EGISZ information also includes federal registers. The Federal Register of Medical Workers (FRMR) is a centralized database that contains information about all medical and pharmaceutical workers in Russia. The Federal Register of Medical Organizations (FRMO) contains information about the structure, business profiles, addresses and equipment of each medical institution. The subsystems of the EGISZ are represented by a specialized patient registry for individual diseases and/or conditions, a registry of medicines for medical use, as well as an information and analytical subsystem for monitoring and control in the field of drug procurement [4].

Consequently, the integrated digital healthcare environment contains up-to-date information on technical, medicinal, and human resources in healthcare and personal health-related data of patients. However, as practice shows, digital transformation is accompanied by an increase in risks, with information security threats now occupying a leading position. Therefore, it is necessary to ensure security of information systems for protection of personal data of patients and specialists by developing ways to protect data and equipment from computer attacks [5–8].

Thus, the relevance of the topic is determined by several factors. First, medical data belongs to a special category of personal data. Its leakage is regarded as a violation of the patient's right to medical confidentiality. Second, medical and pharmaceutical organizations are recognized as subjects of critical information infrastructure (CII) with increased requirements for information protection. Third, the significant increase in computer attacks on the healthcare sector confirms its high vulnerability (in the first half of 2025, their number increased by 24% compared to the same period in 2024). Fourth, the level of digital literacy of medical and pharmaceutical workers and training in information security is often insufficient.

The abovementioned facts have determined the purpose of this work consisting in the formation of an integrated approach to information security in medical and pharmaceutical organizations.

Achieving this goal included solving consecutive tasks.

1. Analysis of the stages of development of information security in the healthcare sector.
2. Identification and structuring of information security threats in healthcare.
3. Conducting an analysis of modern information security methods and technologies.
4. Development of recommendations and proposals for ensuring information security in medical and pharmaceutical organizations.

MATERIALS AND METHODS

The research was based on both Russian and foreign scientific publications on the use of information technology while providing medical and medicinal care. Regulatory legal acts in the field of digital transformation of healthcare were studied. In the research process, the logical method, the structural method, and method of content analysis were used.

RESULTS AND DISCUSSION

Based on the analysis of Russian regulatory documents, it is shown that both medical and pharmaceutical information are considered part of the “information constituting a medical

secret” (Articles 13, Articles 20 of Federal Law No. 323-FZ) [9] and “special categories of personal data” (Article 10 of Federal Law No. 152-FZ) [10]. This dual legal status determines a special treatment regime to process information. Collection, storage and transfer of such data require the consent of the subject or a lawful basis.

The formation of the legal framework for information security in Russian healthcare is a gradual process. The main focus is primarily on medical secrecy and protection of personal data in accordance with Federal Law No. 152-FZ [10]. In 2017, Federal Law No. 187-FZ was adopted. It changed approaches to information protection. Thus, medical information systems (MIS) and pharmaceutical systems (PS) are classified as objects of critical information infrastructure (CII), which entailed the obligation to categorize them [11]. As part of meeting the requirements of the law on CII, medical and medicinal care providers are required to categorize not only information systems, but also automated process control systems (automated process control systems), which include medical equipment. It is also necessary to create departmental monitoring centers and use certified protective equipment.

In 2021, amendments to Decree of the President of the Russian Federation No. 250 [12] came into force, instructing the heads of CII organizations to create structural information security units. This requirement applies to organizations at the federal, regional, and municipal levels.

In 2022, the Government of the Russian Federation has defined the tasks of the Unified State Healthcare System (USISZ), its structure, procedures and deadlines for providing information, participants in information interaction, the procedure for protecting information contained in the unified system, as well as requirements for software and hardware. The next important step was to tighten the requirements for using foreign software. Since 2025, CII subjects have not been allowed to use foreign-made information protection tools [13].

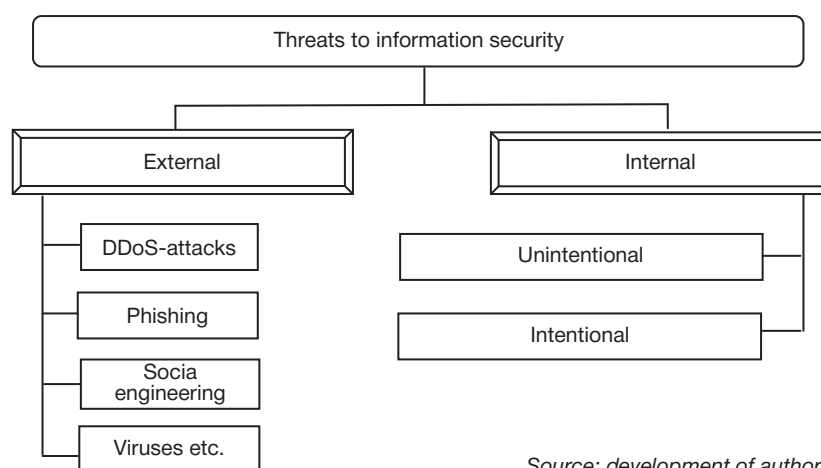
Thus, issues of information security protection in healthcare are being addressed at the state level.

The analysis of the identified risks of healthcare digitalization within the framework of digital information security has shown that the most likely threat is the loss of personal patient data and computer attacks on the digital databases of medical and pharmaceutical organizations [14–17].

It has been established that threats to the security of digital systems are classified according to various criteria. Therefore, to make the further study possible, a tailored classification of information security (IS) threats is essential for medical and pharmaceutical organizations. As threats come not only from outside, but also from within the organization, we have presented a classification based on the source's location relative to the organization (Fig.).

External threats are manifested through targeted computer attacks. Malware is used to infect systems and block access to data; DDoS attacks on telemedicine services make it difficult for the information systems of the Ministry of Defense and the Federal District to function; phishing and social engineering, in the form of letters sent on behalf of the heads of the organization asking for a password, aim at obtaining confidential information from users. Outdated IT systems are also classified by us as external threats because they are vulnerable and can be used by intruders to gain unauthorized access.

Internal threats to information security are classified by source into unintentional and intentional actions of the organization's



Source: development of authors

Fig. Classification of information security threats in healthcare by the source of occurrence

employees. The threats included in the first group are related to the loss of a USB flash drive containing databases; sending confidential information from a personal email to messengers; using simple passwords for authentication. Intentional actions may be accompanied by the sale of patient data to competitors, copying of information before dismissal, violations of regulations for information systems, etc.

Thus, understanding specific threats to information security contributes to the formation of comprehensive protection against risks.

The theoretical foundations of information security in medical and pharmaceutical organizations involve the use of various methods and technologies, including technical means of protection, legal mechanisms, as well as organizational and managerial methods.

Technical protection measures include intrusion detection and blocking systems, hardware and software solutions (DLP systems) against data leaks, antivirus software and firewalls. Cryptographic methods (data encryption algorithms and electronic digital signature) are used to ensure data security. Data access control is provided by an authentication system that uses passwords, certificates, and biometric data.

The transition to domestic software in Russia, mandated by law, serves both strategic political goals and critical practical needs. The products of Russian developers are not inferior to their foreign counterparts in terms of functionality, and in a number of aspects (integration with government monitoring systems, adaptation to the specifics of Russian legislation) surpass them [13].

Compliance with the requirements in the field of processing, storing and transferring personal data in healthcare is regulated by a set of regulatory legal acts, whereas legal enforcement mechanisms provide for liability for violations of information security rules in the form of compensation for damage caused to the patient and payment of a fine in accordance with art. 13.11 of the Administrative Code of the Russian Federation.

Technical means and legal mechanisms for information protection will be effective only if they are integrated into the system of organizational and managerial tools that are used to achieve the goals and objectives of the organization.

Based on the results of the study, we have proposed an approach to ensuring information security in healthcare for provision of high-quality medical and medicinal care, consisting of the main directions and criteria for assessing information security.

One of the directions is categorization of CII objects in accordance with the legislation. Depending on the requirements for protective equipment, an object is assigned the first, the second or the third category of significance. Medical and pharmaceutical organizations are included in the register of significant CII facilities [11].

The next direction involves creating a system for responding to the incidents associated with an unauthorized access to information. It is about development of a standard operating procedure (SOP) outlining mandatory actions for detecting hacking or information leakage incidents. This helps you understand who makes the decision to shut down the system, who interacts with law enforcement agencies, and who notifies patients. Regular exercises (for example, phishing simulations) are crucial for practicing these actions.

Continuous staff training is a significant step in ensuring information security. The basics of information security should be studied already at the training stage of university students and followed by advanced training within the system of continuing professional education.

The proposed criteria for assessing information security for medical and pharmaceutical organizations include:

- 1) regular antivirus software updates;
- 2) the presence of a structural unit responsible for information security, the presence of an approved SOP in this area;
- 3) the proportion of employees who received information security training;
- 4) the absence of recorded violations in the field of information security.

CONCLUSIONS

It has been found out during the study that regulation of information security in healthcare has evolved through successive stages that reflect a systematic strengthening of government requirements for information protection. There exist external and internal threats to the information security of medical and pharmaceutical organizations. Three complementary groups including technical, legal, as well as organizational and management ones were set up following analysis of information protection methods, while the use of each separate group does not provide a sufficient level of protection. To improve information security in medical and pharmaceutical organizations, it is proposed to use an integrated approach containing the main directions and evaluation criteria.

References

1. Sokolova OV, Isaeva IYu, Kulikova OA, Alekseeva KS, Kuznetsova EA. Application of digital tools in a medical organization for optimization of drug provision. *Cardiovascular Therapy and Prevention*. 2024; 23 (S6): 150–151. Russian.
2. Sokolova OV, Kulikova OA, Alekseeva KS., Isaeva IYu. The Importance of Information Systems in the Activities of a Pharmacy Organization. *Issues of Drug Quality Assurance*. 2025; 1 (47): 54–58. DOI 10.34907/JPQAI.2025.63.82.008. Russian.
3. Shandora N. I. Information Security in the Healthcare Sector. In the collection: *Proceedings of the 6th International Scientific and Practical Conference dedicated to the 25th Anniversary of the Faculty of Economics at BSU: Trends in Economic Development in the 21st Century*, February 28–29, 2024. Minsk. 2024; 529–531.
4. Decree of the Government of the Russian Federation No. 140 dated February 9, 2022. "On the Unified State Healthcare System" (together with the "Regulations on the Unified State Healthcare Information System"). Russian.
5. Platonova NI, Ustilentsev KA, Ustilentseva TA. Information Security in the Healthcare Sector: Challenges and Development Prospects. 2022; 33 (2): 124–136. DOI 10.20410/2073-7815-2022-33-2-124-136. Russian.
6. Udaltsov KR. Cybersecurity in Healthcare: Strategies for Protecting Medical Data and Equipment. *International Journal of Information Technology and Energy Efficiency*. 2024; 9 (5): 18–22. Russian.
7. CODE RED 2026 Current Cyber Threats to Russian Organizations. Available from URL: <https://ptsecurity.com/research/analytics/russia-cyberthreat-landscape-2026/#id1> (accessed: 27.03.2026). Russian.
8. Less than 25% of medical organizations in the Russian Federation are equipped with means of protection against internal information threats. Available from URL: <https://medvestnik.ru/content/news/sredstvami-zashity-ot-vnutrennih-informacionnyh-ugroz-osnasheny-menshe-25-medorganizacii-rf.html> (accessed: 27.03.2026). Russian.
9. Federal Law No. 323-FZ dated November 21, 2011. "On the Fundamentals of Public Health Care in the Russian Federation". Russian.
10. Federal Law No. 152-FZ dated July 27, 2006. "On Personal Data".
11. Federal Law No. 187-FZ dated July 26, 2017. "On the Security of the Critical Information Infrastructure of the Russian Federation". Russian.
12. Presidential Decree No. 250 dated May 1, 2022. "On Additional Measures to Ensure the Information Security of the Russian Federation." Russian.
13. Kochergina MO, Chugunova SA. The Role of Medical Software in the Digitalization of Healthcare. In the collection: *New Technologies in the Educational Process and Production: Materials of the XXIII Scientific and Technical Conference with International Participation*. Ryazan. April 16–18, 2025; 347–350. Russian.
14. Solovyov NV. Digital Security in Medicine: Challenges and Threats of Digital Transformation. In the collection: *Materials of the International Scientific and Practical Conference*. Volgograd. November 20, 2025; 40–44. Russian.
15. Lapina MA., Maksimova EA, Lapin VG, Boykov NS. Analytical review of methods for designing security systems in telemedicine systems. *Proceedings of ISP RAS*. 2024; 5. Available from URL: <https://cyberleninka.ru/article/n/analiticheskiy-obzor-metodov-proektirovaniya-sistem-bezopasnosti-v-teleditsinskikh-sistemah> (accessed: 27.03.2026). Russian.
16. Dubovskov MV, Fot Yu D. Information Security in the Healthcare Sector. In the collection: *Current Issues in Ensuring Comprehensive Security: Proceedings of the National Scientific and Practical Conference with International Participation Dedicated to the 35th Anniversary of the Russian Ministry of Emergency Situations and the 95th Anniversary of the Orenburg State Agrarian University*. Orenburg. May 23, 2025; 1041–1044. Russian.
17. Code of Administrative Offenses of the Russian Federation dated 30.12.2001 No. 195-FZ. Russian.

Литература

1. Соколова О. В., Исаева И. Ю., Куликова О. А., Алексеева К. С., Кузнецова Е. А. Применение цифровых инструментов в медицинской организации для оптимизации лекарственного обеспечения. *Кардиоваскулярная терапия и профилактика*. 2024; 23 (S6): 150–151.
2. Соколова О. В., Куликова О. А., Алексеева К. С., Исаева И. Ю. Значимость информационных систем в деятельности аптечной организации. *Вопросы обеспечения качества лекарственных средств*. 2025; 1 (47): 54–58. DOI 10.34907/JPQAI.2025.63.82.008.
3. Шандора Н. И. Информационная безопасность в сфере здравоохранения. В сборнике: *Материалы VI Международной научно-практической конференции, посвященной 25-летию экономического факультета БГУ: Тенденции экономического развития в XXI веке*. Минск. 2024; (1): 529–531.
4. Постановление Правительства РФ от 09.02.2022 № 140 «О единой государственной системе в сфере здравоохранения» (вместе с «Положением о единой государственной информационной системе в сфере здравоохранения»).
5. Платонова Н. И., Устиленцев К. А., Устиленцева Т. А. Информационная безопасность в сфере здравоохранения: проблемы и перспективы развития. 2022; 33 (2): 124–136. DOI 10.20410/2073-7815-2022-33-2-124-136.
6. Удальцов К. Р. Кибербезопасность в здравоохранении: стратегии защиты медицинских данных и оборудования. *Международный журнал информационных технологий и энергоэффективности*. 2024; 9 (5): 18–22.
7. CODE RED 2026 Актуальные киберугрозы российских организаций. Режим доступа: <https://ptsecurity.com/research/analytics/russia-cyberthreat-landscape-2026/#id1> (дата обращения: 27.03.2026).
8. Средствами защиты от внутренних информационных угроз оснащены меньше 25% медорганизаций РФ. Режим доступа: <https://medvestnik.ru/content/news/sredstvami-zashity-ot-vnutrennih-informacionnyh-ugroz-osnasheny-menshe-25-medorganizacii-rf.html> (дата обращения: 27.03.2026).
9. Федеральный закон от 21.11.2011 № 323-ФЗ «Об основах охраны здоровья граждан в Российской Федерации».
10. Федеральный закон от 27.07.2006 № 152-ФЗ «О персональных данных».
11. Федеральный закон от 26.07.2017 № 187-ФЗ «О безопасности критической информационной инфраструктуры Российской Федерации».
12. Указ Президента РФ от 01.05.2022 № 250 «О дополнительных мерах по обеспечению информационной безопасности Российской Федерации».
13. Кочергина М. О., Чугунова С. А. Роль медицинского программного обеспечения в цифровизации здравоохранения. В сборнике: *Новые технологии в учебном процессе и производств: Материалы XXIII научно-технической конференции с международным участием*, 16–18 апреля 2025 г. Рязань. 2025; 1: 347–350.
14. Соловьев Н. В. Цифровая безопасность в медицине: вызовы и угрозы цифровой трансформации. В сборнике: *Материалы международной научно-практической конференции*. 20 ноября 2025 г. Волгоград. 2025; 1: 40–44.
15. Лапина М. А., Максимова Е. А., Лапин В. Г., Бойков Н. С. Аналитический обзор методов проектирования систем

- безопасности в телемедицинских системах. Труды ИСП РАН. 2024;5. Режим доступа: <https://cyberleninka.ru/article/n/analiticheskiy-obzor-metodov-proektirovaniya-sistem-bezopasnosti-v-telemeditsinskih-sistemah> (дата обращения: 27.03.2026).
16. Дубовсков М. В., Фот Ю. Д. Информационная безопасность в сфере здравоохранения. В сборнике: Актуальные вопросы обеспечения комплексной безопасности: Материалы национальной научно-практической конференции с международным участием, посвященной 35-летию МЧС России и 95-летию Оренбургского ГАУ. 23 мая 2025 г. Оренбург. 2025; 1: 1041–1044.
17. Кодекс Российской Федерации об административных нарушениях от 30.12.2001 № 195-ФЗ.

THE ETHICAL CONDUCT OF A PHARMACY EXECUTIVE AS THE CORNERSTONE OF EXECUTIVE PROFESSIONALISM

Alekseeva KS¹ ✉, Galkina GA²

¹ Yaroslavl State Medical University, Yaroslavl, Russia

² The Patrice Lumumba Peoples' Friendship University of Russia, Moscow, Russia

Upholding ethical standards in pharmacy administration enhances a leader's professional competency, ensuring the provision of premium medical care. Yet, organizations still struggle to agree on standard ethical practices. In pharmacy, this is worsened by leaders viewing their roles as mere paperwork, entirely divorced from ethical or socially responsible considerations. Consequently, exploring the professional ethics governing pharmacy executives is paramount for optimizing public access to pharmaceutical care. Application of general scientific methods reveals that managerial ethics is an amalgam of organizational culture, socio-psychological dynamics, and core professional practices. Pharmaceutical managers must integrate ethical principles and regulatory compliance into every facet of their professional duties. The foundational ethics of a pharmacy manager are developed progressively, beginning post-graduation and evolving through lifelong professional education.

Keywords: ethics, manager, pharmacy organization, medical assistance, managerial professionalism

Author contribution: all the authors have made a significant contribution to the preparation of the work: Alekseeva KS — development of research design, selection of literature and sources, writing and editing the text; Galkina GA — writing and editing the text.

✉ **Correspondence should be addressed:** Ksenia S. Alekseeva
Revolutionnaya St., 5, Yaroslavl, 150000, Russia; sokolovaks89@mail.ru

Received: 15.05.2026 **Accepted:** 21.05.2026 **Published online:** 08.06.2026

DOI: 10.24075/medet.2026.013

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ЭТИКА РУКОВОДИТЕЛЯ АПТЕЧНОЙ ОРГАНИЗАЦИИ КАК ОСНОВА УПРАВЛЕНЧЕСКОГО ПРОФЕССИОНАЛИЗМА

К. С. Алексеева¹ ✉, Г. А. Галкина²

¹ Ярославский государственный медицинский университет, Ярославль, Россия

² Российский университет дружбы народов имени Патриса Лумумбы (РУДН) Москва, Россия

Практическое применение моральных и этических принципов в работе руководителя аптечной организации повышает его управленческий профессионализм, направленный на оказание качественной лекарственной помощи. Однако в настоящее время не существует единых этических норм и правил, которых необходимо придерживаться руководству при управлении организацией, также установлено наличие тенденции формального выполнения руководителями аптечных организаций своих управленческих функций без учета этического и социально ответственного осмысления деятельности. В связи с этим актуальным является изучение вопросов профессиональной этики руководителя аптечной организации для совершенствования лекарственного обеспечения населения. С применением общенаучных методов определено, что этика управленческой деятельности объединяет организационную культуру, социально-психологический аспект и собственно профессиональную деятельность. Анализ трудовых функций специалиста в области управления фармацевтической деятельности свидетельствует о необходимости применения этических норм и правил при их выполнении. Формирование профессиональной этики руководителя аптечной организации как основы управленческого профессионализма происходит постепенно при получении специальности «Фармация» и продолжается в рамках дополнительного профессионального образования.

Ключевые слова: этика, руководитель, аптечная организация, лекарственная помощь, управленческий профессионализм

Вклад авторов: все авторы внесли существенный вклад в подготовку работы: К. С. Алексеева — разработка дизайна исследования, подбор литературы и источников, написание и редактирование текста; Г. А. Галкина — написание и редактирование текста.

✉ **Для корреспонденции:** Ксения Сергеевна Алексеева
ул. Революционная, д. 5, г. Ярославль, 150000, Россия; sokolovaks89@mail.ru

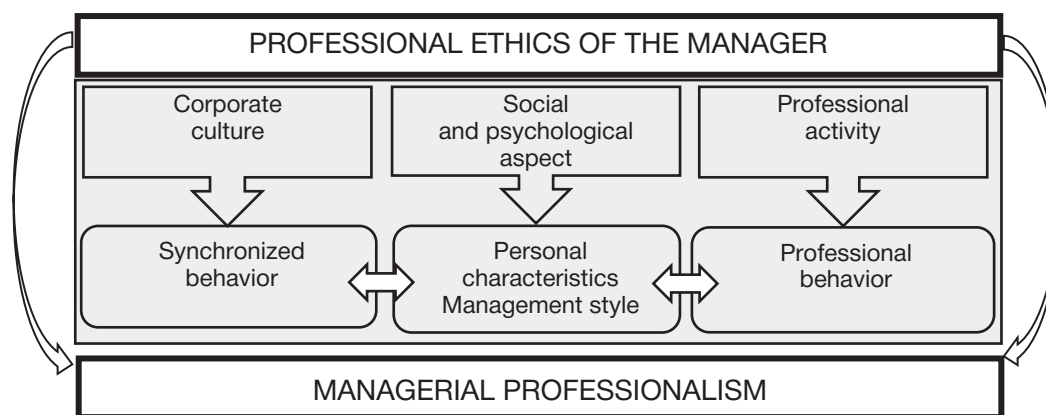
Статья поступила: 15.05.2026 **Статья принята к печати:** 21.05.2026 **Опубликована онлайн:** 08.06.2026

DOI: 10.24075/medet.2026.013

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

Ethical conduct is now a fundamental pillar of the management of a modern organization. When leaders and teams cultivate an ethical culture, it naturally regulates workplace interactions and elevates communication, ultimately empowering the organization to hit its targets efficiently [1]. This plays a crucial role in facilitating access to premium medical services, reflecting a growing societal focus on health preservation.

Evidence confirms that pharmaceutical ethics and deontology govern the entire spectrum of professional duties across the field, universally encompassing even those specialists engaged in pharmaceutical management [2, 3]. Consequently, this study aimed to investigate the professional ethics governing pharmacy managers, ultimately seeking to elevate the standard of pharmaceutical care delivered to the public.



Source: author's development

Fig. Aspects of management ethics

MATERIALS AND METHODS

In pursuit of this goal, we have developed a comprehensive, multi-stage research initiative. The first stage systematically explores the theoretical framework of executive ethics, analyzing core concepts and detailing the structural components of managerial conduct. The next stage consists of assessing the legal duties and job functions of a pharmacy manager. The final section delineates the practical implementation of ethical guidelines within the professional purview of a joint-stock company's director. This study employed content analysis to examine scholarly literature concerning the adherence to moral and ethical principles within contemporary management, medicine, and pharmacy, based on Elibreri.ru electronic resource. Methods of structuring and grouping were used.

RESEARCH RESULTS AND DISCUSSION

Modern leadership ethics is a moral system, where leaders manage organizations by deeply understanding their staff, fostering personal growth, and maintaining composure in professional relationships. Concurrently, effective leadership demands a defined repertoire of competencies to fulfill fundamental managerial duties, encompassing operational planning, team engagement, and systematic oversight for ongoing rectification.

In the absence of standardized ethical frameworks for modern management, this research analyzes the ethics of leadership from a socio-psychological and organizational culture perspective, as well as through the lens of distinct professional domains (Fig.).

PROFESSIONAL ETHICS OF THE MANAGER

Driven by foundational ethics and values, a company's culture acts as a set of guidelines that shapes the synchronized behavior of its personnel. Essentially, these standards define the foundational principles of issuing directives in management, a dynamic clearly evidenced in business correspondence. This fosters seamless integration across all organizational tiers and establishes an optimized work environment. Consequently, this drives continuous professional development and cultivates a highly motivated, accountable labor. A company's culture is shaped by its communication networks, its emotional climate, and its everyday working atmosphere.

A cornerstone of ethical leadership lies in its socio-psychological dimensions. It is known that the effectiveness of an organization's functioning is determined by the quality of its management activities, where its leadership qualities and personal characteristics of the leader are of great importance. Numerous scholars argue that effective management fundamentally relies on assigning tasks to personnel with precision, upholding their professional dignity, fostering innovation, and remaining receptive to their needs. To achieve this, the role of the executive requires a blend of strategic business judgment, exceptional communication skills, and deep industry knowledge. Coupled with strong management skills grounded in moral principles and core values, these traits define the leader's ethical conduct. It should be noted that each leader's personal qualities are expressed in different ways and, depending on the manifestations of qualities, a certain leadership style is developed over time.

A leader's moral conduct is fundamentally bound by the standards inherent to their particular professional community. At present, distinct ethical frameworks govern a multitude of disciplines, encompassing pharmaceuticals, medicine, science, corporate governance, and information and communication technologies. In this context, ethics encompasses more than technical proficiency—it requires observing foundational business principles and industry-specific standards that reflect the core values of the profession. Consequently, this cultivates the manager's professional behavior, encompassing both their core technical duties and their communication framework while executing their occupational responsibilities and prerogatives [4–8].

Consequently, a manager's professional ethics constitutes a holistic educational framework that forms the basis of their managerial expertise, warranting that their duties are executed in strict accordance with universally recognized behavioral standards.

Subsequently, we examine the statutory duties and obligations vested in the director of a pharmaceutical enterprise. In alignment with industry standards, the primary objective of a pharmacy management professional is to ensure consumers have access to safe, efficacious, and premium therapeutic and medical goods—a responsibility that highlights the fundamental societal value of the joint-stock company.

To achieve this objective, the manager is required to execute their standard professional duties, which center on the oversight and administration of pharmaceutical

operations. It is imperative to acknowledge that the role of a corporate CEO demands profound accountability, underpinned by extensive, multidisciplinary expertise. Depending on their hierarchical tier within organizational theory—executive, middle, or operational—joint-stock company managers are responsible for a diverse array of professional duties [9].

The professional standard includes six labor functions [10]. Primarily, it involves directing the operational and strategic initiatives of a pharmaceutical enterprise, which encompasses assessing the current healthcare landscape and aligning with regional health and pharmaceutical development objectives. Achieving the established objectives necessitates a comprehensive evaluation of both the internal resources required to sustain pharmacy operations and the capacity to satisfy consumer demand, particularly for novel pharmaceuticals. The CEO's duties at the joint-stock company entail spearheading comprehensive personnel management, which encompasses the recruitment, onboarding, integration, professional development, and motivation of staff. The JSC's operational success relies on stringent quality control. By defining strict standards for sourcing, receiving, warehousing, and distributing inventory, leadership ensures continuous excellence across all core activities. The Director of the JSC coordinates informational and advisory resources for both the general public and healthcare professionals. A pivotal function is the strategic oversight of a pharmaceutical company's financial and commercial operations, explicitly designed to drive immediate and future business objectives. Significantly, the professional standard mandates knowledge of foundational professional ethics for only two specific job functions.

In light of the outlined operational duties, a pharmacy manager must expertly evaluate the significance and hierarchy of professional objectives to safeguard patient health and uphold the broader public welfare [11]. Ultimately, the overall progress and sustainability of a joint-stock corporation hinge upon the executive's expertise, their capacity to orchestrate human and informational assets, and their aptitude for making principled, ethically grounded decisions. Nevertheless, peer-reviewed literature suggests that executives of joint-stock enterprises tend to adopt a reductionist view of their responsibilities, thereby failing to leverage the full extent of their authority [12].

Modern pharmacy operates on ethical tenets and core values that establish a uniform standard of behavior for everyone involved in the distribution of medicines and healthcare services. Under such conditions, the moral obligations incumbent upon the CEO of a corporation assume paramount importance. In his professional capacity, the executive formulates strategic decisions to safeguard pharmaceutical safety and efficacy, while also upholding the integrity of drug-related information. Consequently, the ethical framework and personal convictions of a joint-stock company's executive should translate into a proactive civic stance, manifesting in initiatives dedicated to public health

advancement [12]. Corporate success is driven by the leadership's value systems, which form the bedrock of the organizational culture.

As the principal executive, the leader is tasked with cultivating relationships across the healthcare spectrum, including employees, patients, medical experts, and suppliers. Additionally, the role necessitates strict adherence to all legal frameworks alongside a profound dedication to societal welfare. During pharmaceutical operations, the corporate leadership and their personnel are required to navigate a complex array of both internal and external variables [13]. Today, pharmaceutical employees navigating organizational goals face immense psychological and emotional strain, severe information overload, and broad operational demands, all heightened by a profound level of accountability. Consequently, leadership must gauge the emotional climate of the team, proactively averting tensions and stressful dynamics with subordinates, amongst staff members, or involving patients [14–16].

Thus, pharmacy operations are inherently collaborative, relying heavily on both the cohesive conduct of the staff and the leadership approach of the manager.

Effective management in pharmacy practice relies fundamentally on pharmaceutical ethics and deontology, principles that are strictly codified by law. Effective management in pharmacy practice relies fundamentally on pharmaceutical ethics and deontology, principles that are strictly codified by law. To ensure these standards are met, the head of the JSC trains personnel in the correct and adept communication of essential information to the public. In accordance with corporate policy, the onboarding process for new hires during their probationary period includes tailored adaptation programs designed to refine communication skills and prevent workplace conflicts [17].

In light of the foregoing, the chief executive of a joint-stock company cultivates a standard of professional conduct dictated by their academic background, intellectual capacity, and breadth of erudition, alongside the mastery of specific industry competencies.

Therefore, when integrating the executive duties of a joint-stock company, moral and ethical principles safeguard the caliber of public services, while elevating the accountability and long-term viability of the pharmaceutical enterprise.

CONCLUSIONS

Within a pharmaceutical setting, an executive's professional ethics serve as the bedrock of their managerial acumen, ultimately elevating the standard of pharmaceutical care provided to the community. The formation of the foundations of professional ethics takes place gradually and consistently during theoretical classes in Pharmacy (Code 33.05.01 and Code 33.02.01) programs, introductory and production practices at the JSC, and later during the development of additional education programs.

References

1. Belozor AF. Professional'naya etika kak faktor effektivnogo sotrudnichestva. V sbornike: Materialy nauchnykh trudov natsional'noy nauchno-prakticheskoy konferentsii BGAU; 20–21 maya 2021 g.; Bryansk. Sostoyaniye, problemy i perspektivy razvitiya sovremennoy nauki. 2021; (1): 305–312. Russian.
2. Kulikova OA., Sokolova OV, Alekseyeva KS. Professional'naya etika farmatsevticheskikh rabotnikov. Meditsinskaya etika. 2022; 10(4): 8–12. DOI: 10.24075/medet.2022.059. EDN GQYXCZ. Russian.
3. Novikova LS, Chumakova LV. Osnovnyye napravleniya etiki i deontologii farmatsevticheskoy deyatel'nosti spetsialistov.

- V sbornike: Materialy Vserossiyskoy nauchno-prakticheskoy konferentsii s mezhdunarodnym uchastiyem, posvyashchennoy 50-letiyu farmatsevticheskogo fakul'teta KGMU; 20–21 oktyabrya 2016 g.; Kursk. Farmatsevticheskoye obrazovaniye, nauka i praktika: gorizonty razvitiya 2016; (1): 169–174. Russian.
4. Shcherbin AA. Professional'naya etika rukovoditelya kak faktor prinyatiya upravlencheskikh resheniy. Obrazovaniye i nauka bez granits: sotsial'no-gumanitarnyye nauki. 2023; 20: 109–112. Russian.
 5. Kalimullina EM. Znachenie upravlencheskoy etiki v biznese. Ekonomika i sotsium. 2016; 2(21). Available from URL: <https://cyberleninka.ru/article/n/znachenie-upravlencheskoy-etiki-v-biznese> (accessed: 30.04.2026) Russian.
 6. Khanafeyeva ER. Ponyatiye etiki i otvetstvennosti v sovremennom menedzhmente. Skif. Voprosy studencheskoy nauki. 2019; 5–1(33): 310–312. Russian.
 7. Chumakov MV, Sapunova TA. Etika upravleniya i etika rukovoditelya: osnovy i printsipy. V sbornike: Materialy nauchnykh statey 8-y Mezhdunarodnoy nauchnoy konferentsii studentov i molodykh uchenykh; 16–17 maya 2024 g.; Kursk. Molodezh' i sistemnaya modernizatsiya strany 2024; (1): 400–403. Russian.
 8. Zagachev AM. Professional'naya etika rukovoditelya kursantskogo kolektiva kak osnova upravlencheskogo professionalizma. Nauchnyy komponent. 2022; 1(13). Available from URL: <https://cyberleninka.ru/article/n/professionalnaya-etika-rukovoditelya-kursantskogo-kollektiva-kak-osnova-upravlencheskogo-professionalizma> (accessed: 30.04.2026) Russian.
 9. Alekseyeva KS, Lavrent'yeva LI, Sokolova OV, Isayeva IYu., Korzina NS. Razvitiye roznichnogo farmatsevticheskogo rynka i sistematizatsiya upravlencheskikh urovney v aptechnykh organizatsiyakh. Patsiyentooriyentirovannaya meditsina i farmatsiya. 2025; 3(4): 84–93. DOI: 10.37489/2949-1924-0122. Russian.
 10. Prikaz Mintruda Rossii ot 22.05.2017 № 428n «Ob utverzhdenii professional'nogo standarta «Spetsialist v oblasti upravleniya farmatsevticheskoy deyatel'nost'yu». Russian.
 11. Ulasen TV, Starodubtsev NN, Krikova AV, Zaitseva VM. Significance of psychological studies in assessment of stress tolerance and social frustration in medical and pharmaceutical students and in management of Pharmacies' teams. Vestnik of the Smolensk State Medical Academy. 2023; 22 (4): 246–252. DOI: 10.37903/vsgma.2023.4.33. Russian.
 12. Chesnokova NN, Kononova SV, Petrova SV. Zaveduyushchiye aptekami: funktsii, prava i obyazannosti. Remedium. 2014; 1–2: 71–72. Russian.
 13. Belikova LO, Vasilevskaya Ye S. Analiz vnutrenney i vneshney sredy aptechnoy organizatsii. Nauchnyy vestnik Omskogo gosudarstvennogo meditsinskogo universiteta. 2022; 2 (5): 96–106. Russian.
 14. Zheltkevich OV, Sokolova OV, Alekseyeva KS, Zavaruyeva AP. Professional'no-vazhnyye kachestva farmatsevticheskikh rabotnikov dlya okazaniya personalizirovannoy lekarstvennoy pomoshchi. Patsiyentooriyentirovannaya meditsina i farmatsiya. 2024; 2 (4): 67–73. DOI: 10.37489/2949-1924-0070. Russian.
 15. Mikhaylova YeA, Gavrilina NI. Nравственно-психологические качества руководителей аптечной организации в процессе управления. Sovremennyye problemy nauki i obrazovaniya. 2014; 3: 726. Russian.
 16. Khutkina GA. Etiko-deontologicheskiye aspekty farmatsevticheskoy pomoshchi. V sbornike: Materialy Respublikanskoy nauchno-prakticheskoy konferentsii s mezhdunarodnym uchastiyem; 02 dekabrya 2016 g.; Vitebsk, Respublika Belarus'. Bioetika i sovremennyye problemy meditsinskoy etiki i deontologii 2016; (1): 105–107. Russian.
 17. Prikaz Minzdrava Rossii ot 29.04.2025 № 259n «Ob utverzhdenii Pravil nadležashchey aptechnoy praktiki lekarstvennykh preparatov dlya meditsinskogo primeneniya». Russian.

Литература

1. Белозор А. Ф. Профессиональная этика как фактор эффективного сотрудничества. В сборнике: Материалы научных трудов национальной научно-практической конференции БГАУ; 20–21 мая 2021 г.; Брянск. Состояние, проблемы и перспективы развития современной науки. 2021; (1): 305–312.
2. Куликова О. А., Соколова О. В., Алексеева К. С. Профессиональная этика фармацевтических работников. Медицинская этика. 2022; 10(4): 8–12. DOI: 10.24075/medet.2022.059. EDN GQYXCZ.
3. Новикова Л. С., Чумакова Л. В. Основные направления этики и деонтологии фармацевтической деятельности специалистов. В сборнике: Материалы Всероссийской научно-практической конференции с международным участием, посвященной 50-летию фармацевтического факультета КГМУ; 20–21 октября 2016 г.; Курск. Фармацевтическое образование, наука и практика: горизонты развития 2016; (1): 169–174.
4. Щербин А. А. Профессиональная этика руководителя как фактор принятия управленческих решений. Образование и наука без границ: социально-гуманитарные науки. 2023; 20: 109–112.
5. Калимуллина Э. М. Значение управленческой этики в бизнесе. Экономика и социум. 2016; 2(21). Режим доступа: <https://cyberleninka.ru/article/n/znachenie-upravlencheskoy-etiki-v-biznese> (дата обращения: 30.04.2026)
6. Ханафеева Э. Р. Понятие этики и ответственности в современном менеджменте. Скиф. Вопросы студенческой науки. 2019; 5–1(33): 310–312.
7. Чумаков М. В., Сапунова Т. А. Этика управления и этика руководителя: основы и принципы. В сборнике: Материалы научных статей 8-й Международной научной конференции студентов и молодых ученых; 16–17 мая 2024 г.; Курск. Молодежь и системная модернизация страны 2024; (1): 400–403.
8. Заграчев А. М. Профессиональная этика руководителя курсантского коллектива как основа управленческого профессионализма. Научный компонент. 2022; 1(13). Режим доступа: <https://cyberleninka.ru/article/n/professionalnaya-etika-rukovoditelya-kursantskogo-kollektiva-kak-osnova-upravlencheskogo-professionalizma> (дата обращения: 30.04.2026)
9. Алексеева К. С., Лаврентьева Л. И., Соколова О. В., Исаева И. Ю., Корзина Н. С. Развитие розничного фармацевтического рынка и систематизация управленческих уровней в аптечных организациях. Пациентоориентированная медицина и фармацевтика. 2025; 3(4): 84–93. DOI: 10.37489/2949-1924-0122.
10. Приказ Минтруда России от 22.05.2017 № 428н «Об утверждении профессионального стандарта «Специалист в области управления фармацевтической деятельностью».
11. Ulasen TV, Starodubtsev NN, Krikova AV, Zaitseva VM. Significance of psychological studies in assessment of stress tolerance and social frustration in medical and pharmaceutical students and in management of Pharmacies' teams. Vestnik of the Smolensk State Medical Academy. 2023; 22 (4): 246–252. DOI: 10.37903/vsgma.2023.4.33.
12. Чеснокова Н. Н., Кононова С. В., Петрова С. В. Заведующие аптеками: функции, права и обязанности. Ремедиум. 2014; 1–2: 71–72.
13. Беликова Л. О., Василевская Е. С. Анализ внутренней и внешней среды аптечной организации. Научный вестник

- Омского государственного медицинского университета. 2022; 2 (5): 96–106.
14. Желткевич О. В., Соколова О. В., Алексеева К. С., Заваруева А. П. Профессионально-важные качества фармацевтических работников для оказания персонализированной лекарственной помощи. Пациентоориентированная медицина и фармация. 2024; 2 (4): 67–73. DOI: 10.37489/2949-1924-0070.
15. Михайлова Е. А., Гаврилина Н. И. Нравственно-психологические качества руководителя аптечной организации в процессе управления. Современные проблемы науки и образования. 2014; 3: 726.
16. Хуткина Г. А. Этико-деонтологические аспекты фармацевтической помощи. В сборнике: Материалы Республиканской научно-практической конференции с международным участием; 02 декабря 2016 г.; Витебск, Республика Беларусь. Биоэтика и современные проблемы медицинской этики и деонтологии 2016; (1): 105–107.
17. Приказ Минздрава России от 29.04.2025 № 259н «Об утверждении Правил надлежащей аптечной практики лекарственных препаратов для медицинского применения».

DOCTOR'S DUTY AS A SEMANTIC CATEGORY IN RUSSIAN POETRY

Rutkovskaya LM ✉

Yaroslavl State Medical University, Yaroslavl, Russia

The article analyzes the image of healthcare professionals shown in Russian poetry of the XX century through the lens of a duty. The topic declared as the subject of a special comprehensive survey has not been brought up in the Russian scientific field. The notion of 'a duty' is defined, a summary of research literature related to this issue is provided. The author mentions that the category of a doctor's professional duty, which appeared in Russian poetry in the beginning of the XX century only, is firmly fixed and reflected herein during the entire investigated period. Meanwhile, poetry provides examples both for children and adults. In this paper, pieces of poetry by Mayakovsky VV, Chukovsky KI, Drunina YV, Zabolotsky NA and Rutkovsky MA have been analyzed. It is indicated that poetry produces a specific effect on the reader. The author concludes that the images of devoted doctors and nurses that have been created by Russian poets can play a significant methodological and educational role in developing the professional identity and personality of future healthcare professionals.

Keywords: ethics, duty, doctor, nurse, morality, national poetry

✉ **Correspondence should be addressed:** Larisa M Rutkovskaya
5 Revolutsionnaya Str., Yaroslavl, Russia; rulame@mail.ru

Received: 02.04.2026 **Accepted:** 21.04.2026 **Published online:** 10.05.2026

DOI: 10.24075/medet.2026.010

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ВРАЧЕБНЫЙ ДОЛГ КАК СЕМАНТИЧЕСКАЯ КАТЕГОРИЯ ОТЕЧЕСТВЕННОЙ ПОЭЗИИ

Л. М. Рутковская ✉

Ярославский государственный медицинский университет, Ярославль, Россия

Статья посвящена анализу образа медицинского работника в отечественной поэзии XX в. применительно к категории долга. Заявленная тема в качестве предмета специального комплексного изучения еще не ставилась в российском научном пространстве. Определяется понятие долга, дается краткий обзор исследовательской литературы по теме. Автор отмечает, что категория профессионального долга врача, появляясь в отечественной поэзии лишь в начале XX в., прочно закрепляется в ней и находит свое отражение на протяжении всего исследуемого периода. При этом поэзия дает примеры как для детского возраста, так и для взрослых, зрелых читателей. В данной статье анализируются поэтические произведения В. В. Маяковского, К. И. Чуковского, Ю. В. Друниной, Н. А. Заболоцкого, М. А. Рутковского. Указывается на особую воздейственную силу поэзии на читателя. Автор приходит к заключению, что созданные отечественными поэтами образы врачей и медсестер, подвижников своего дела, могут иметь методологическое и воспитательное значение в процессе формирования личности будущего врача.

Ключевые слова: этика, долг, врач, медсестра, нравственность, отечественная поэзия

✉ **Для корреспонденции:** Лариса Микелисовна Рутковская
ул. Революционная, д. 5, г. Ярославль, 150000, Россия; rulame@mail.ru

Статья поступила: 02.04.2026 **Статья принята к печати:** 21.04.2026 **Опубликована онлайн:** 10.05.2026

DOI: 10.24075/medet.2026.010

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

A distinctive feature of the Russian educational system is the combination of both the teaching and upbringing components. It means that the problems of ethics and culture play an important role in the formation of a harmoniously developed personality who is not just a craftsman and a focused specialist, but also an expert in his field and a dedicated citizen. The level of moral perfection/imperfection of a society is an indicator of its development, and, in relation to a particular profession, it forms the image of its representatives in the minds of citizens. This determines the relevance of the study on the embodiment of ethical categories such as duty, honor, and benefit in the image of a doctor in Russian poetry and in the profession of a doctor in general.

By synthesizing definitions of the word "duty" given by different dictionaries, we can define it as an ethical category expressed in the moral, internally determined need of an individual, a group of individuals, or an entire society to act in a certain way under specific conditions. In a broad sense,

a duty can be considered as a universal category. In this case, it is determined by timeless and extra-spatial moral norms of a universal nature (for example, the refusal of Marie and Pierre Curie to patent their radium extraction processes in the name of humanity). A duty to the country and people is rooted in accepted social norms and so on. Ideally, they never contradict one another.

Needless to say, when addressing specific duties, someone will immediately say that duties and rights are intrinsically correlative. The question of whether it is ethical to enforce a physician's professional duty when state and societal structures fail to provide adequate living and working conditions. It should be mentioned here that the problem of rights is the subject of another study. We define a duty strictly as 'a self-imposed commitment' [1], in contrast to imperative norms. Ultimately, the concept of a duty is intrinsically linked to an individual's yearning to harmonize personal actions with the collective good. By tackling the profound issues of existence

and mortality, one uncovers a sense of purpose, self-worth, and existential joy.

The ethical disposition of physicians is a well-documented subject within our research literature (papers written by Vagner EA [2], Kharlamov EV [3], collections of articles from various conferences [4], etc.). The thesis by Ivanov NG is devoted to the formation of a conscious professional duty among future military doctors [5]. The works devoted, among other things, to the embodiment of the image of a doctor in fiction are of particular interest. Thus, Kovelina TA notes: "The artistic representation of a physician serves to emotionally resonate with the audience, shaping public perception, driving professional socialization, and acting as a key motivator for career choice [6]. In addition, both domestic and foreign studies are developing a new approach to fiction called a "medical reading" or LM (Literature and Medicine) [7]. There is a growing academic consensus regarding the role of literary narratives in medical training [8].

However, a systematic analysis of the doctor's poetic image still remains a missing component in current literature. As the most compressed and potent form of literary discourse, poetry imbues every lexical item with profound meaning within its broader context. Through the precise interplay of rhythm and rhyme, it offers an unrivaled capacity to resonate deeply within the listener, profoundly influencing their psyche and moral framework. It is no coincidence that early medical literature drew heavily on a poetic style (the works of Asclepiades, Ibn Sina, Lucian, Celsus, Lapidario by Rennes Marbode, The Salerno Code of Health by Arnold of Villanova, etc.).

Specialized studies corroborate the significance and efficacy of integrating poetry into the teaching process, with students reporting 'the emergence of associative, three-dimensional, and figurative connections between abstract academic concepts and concrete, everyday subjects' [9]. Thus, the identification of the poetic image of a doctor has both methodological and practical significance.

Having studied a whole range of Russian poetic texts, we concluded that the concept of medical duty — as a defining component of a physician's moral persona — has been embedded within this literature since the 1920s. This was due to the fact that poetry was beginning to acquire a propagandistic character, especially in the poems of revolutionary poets.

In the work by Mayakovsky VV, a medical worker performs a national task. The poet shows the image of a smallpox-fighting paramedic, as opposed to quackery, superstition and reliance on God's mercy. At the same time, the paramedic works together with the Red Army soldier, who in the minds of the people was a fighter for a just cause, a fighter against remnants of the past, a progressive-minded element of society. Implicitly, the paramedic (doctor, medical worker) is indued with similar features in the narrative, and presumably in popular perception, through the method of expansive transfer.

"Done," he says.

"The smallpox vaccine has taken.

Trust in medicine, not in God's mercy" [10].

In subsequent poetry, a doctor represents the intellectual elite who is not just fulfilling his civic duty, but is also setting an exemplary standard of ethical conduct. In general, a truly remarkable facet of Soviet ideology was the desire to elevate every person — from a worker to an intellectual,

from a toddler to an old man. Therefore, literary examples are positive: they provide prototypes of virtue, embodying ideals that inspire readers to strive for self-betterment. And in poetry, the appearance of a doctor acquires features that evoke a deep sense of respect in the reader. Simultaneously, there is a growing recognition that a doctor is the same employee who works for the common cause of the welfare of the country, performs his specific social duties, and guards' public health.

Thus, the original poetic narrative of Aibolit was introduced to the public by Korney Chukovsky in 1929. The author himself admitted that he intentionally used a lot of visual images and enhanced dynamism to produce a more productive effect on the child's mind. Children's initial introduction to the medical profession was, furthermore, associated with its material world — namely, medicines and thermometers. For an entire generation of Soviet youth, Dr. Aibolit stood as the ultimate vocational role model.

Chukovsky creates the image of Dr. Aibolit as a defender of all the offended, because the disease in his poems can develop from the sting of a wasp: "The thirst for protection of the offended, a precious human feeling, so easily perceived by the child's soul ..." [11]. Chukovsky's hero strives to help those who seek his help, even forgetting about himself, ready to bravely overcome any difficulties. The poem is characterized by a strong heroic pathos, and the image of the doctor is enriched in the children's imagination by such characteristics as sacrifice, service, care, duty: if not me, then who?

The words by Sechenov IM should be quoted here: "He (the child — LR) associates himself with all the characters passing through his consciousness and with all their properties ... Merging himself with any image, the child begins to love all his properties ... Love of truth, generosity, compassion, selflessness ... develop ... through frequent repetition of passionate ideas in the consciousness... One can hardly be surprised when a young person, with an absolute devotion to veracity, is ready to suffer severe trials in defense of that truth. After all, he knows that his ideals, his knights suffered for the truth, and he cannot help being a knight, having lived its heavy burden from the age of five to 18" [12].

Later, this topic will be addressed in children's poems by Barto AL. A distinctive feature of Barto's poetry is the playful construction of a child's self-image. By adopting the persona of a caring doctor, the verse fosters a seamless identification, encouraging young readers to embody a compassionate, empathetic medical professional ("Tamara and I", "In the cat emergency room", etc.)

The dedication of medical personnel to their duty emerged as a pivotal motif in Soviet war poetry during the Great Patriotic War. A lot has been written about the war, as well as about orderlies, nurses, and doctors. Olga Bergholz's poetry ("In the Hospital" and others) is widely recognized for its raw, penetrating, and frequently harsh nature. Health professionals such as Nikanorkin AI, Milyavsky AI, Tushnov VM, etc. were also poets. Soviet poet Yulia Drunina dedicated much of her poetry to the sacrifice of Soviet health professionals. Yulia Drunina lived through the entire war. Thus, the beginning of the war, she joined a voluntary sanitary squad at the Regional Red Cross Society. She finished the war as a medical officer who was awarded the Order of the Red Star and the Medal for Bravery. Her poetry is rooted in her direct daily experience, so all her poems are filled with profound honesty.

"Turning pale,
 Clenching teeth until they crunch,
 From your own trench
 Alone
 You must tear yourself away,
 And through the breastwork
 Dash under fire
 You must.
 ...You must. For you cannot pretend
 To yourself,
 That you don't hear in the night,
 How, almost hopelessly, 'Sister!'
 Someone out there, under fire, is screaming..." [13].

In her poetry, Drunina Y creates an image of medical workers not as abstract symbols, but as individuals with "flesh and blood and soul" for whom there is no higher vocation than to save a man, a comrade who defends the freedom and independence of the Motherland. Qualities such as dedication, attentiveness to everyone in need of medical help, caring for them, and the ability to maintain self-control come to the fore. The recognition of an individual life as the supreme value for Soviet survival fundamentally elevated the status of medical personnel, rendering the roles of doctors and nurse's indispensable.

"Believe me, there is nothing more beautiful
 (And I have seen all sorts of things in my life!)
 Than to shield a comrade from death
 And carry him out from under fire" [14].

She was on the verge of death, needing medical help. During the Great Patriotic War, medical professionals performed a remarkable feat by returning over 70% of wounded soldiers and over 90% of sick soldiers to duty.

But the war was marked not only by elevated poetry, but also by soldiers' folklore. The plots were different, often naive, but close to everyone: the nurse who saved the soldier turns out to be his sister or fiancée, the soldier, who was taken to the hospital in a serious condition, dies, and the nurse recognizes him as her lover or son. A woman in military songs appears in the image of a nurse, an orderly, a signaler, a partisan, always ready not only to follow her lover to the front line and fight "in battle, in flames together with the fighters" [15] for the Motherland, but also to continue the fighter's legacy in the event of his death. In military folklore, a woman or a girl is not a soldier's dream, but his real companion and assistant, brave and loyal.

"You will go to war, my dear,
 And I will go to war with you.
 I will bandage your wounds,
 For you, my darling" [16].

With the end of the Great Patriotic War, all national efforts redirected toward economic recovery, peaceful construction and raising the standard of living of citizens, both economically and culturally. The poets address the problems that worried the inhabitants of the country in peacetime.

In 1957, deeply moved by a brief report in the newspaper *Pravda* regarding a heroic medical worker, Nikolay Zabolotsky composed the poem "Death of a Doctor" [17]. The poet is attracted by the image of a simple man, the ordinary doctor, and admires his great moral strength. Behind this central figure stand countless archetypes; in the

absence of concrete setting or time, it is solely the doctor's representation that remains objective. The provincial doctor from the steppe is transformed into a quintessential Soviet persona, representing timeless moral values. Seemingly placed in an existential, life-or-death situation, the character makes a fatal sacrifice to save the foreman, compelled by an imperative that allows no questioning of his duty to help. He is not even tormented by doubts about the correctness of his choice, he does what he considers the only possible thing for himself — to save another person's life, even at the cost of his own. In "poetic philosophy (Zabolotsky — LR), one reads not only a desperate attempt to overcome the finiteness of being, but the same natural "normality" of experiencing suffering, as well as experiencing happiness, contentment, etc." [18].

"No limit is set for human power:
 He, standing in his grave,
 Did what he wanted" [19].

The doctor in Zabolotsky's poem, thus, rises above existence, everyday life, time and space due to his high morality, purity of soul; he spiritualizes the world, bringing into it his particle of kindness, love, honestly fulfilling his civic duty, when the main thing becomes a "creative, world-transforming human action that will long survive the "physical" age of the creator himself" [20]. The death of a doctor, according to Zabolotsky, is included in the general flow of life, and he — the doctor — is the life's moral and spiritual particle. The poet frames death as a meaningful sacrifice, elevating it to an act of ultimate humanity rather than a meaningless loss.

However, even in peacetime, the theme of war is woven into consciousness again and again, and poets of the 1960s and 1970s continue to address it (Isakovskiy MV, Rozhdestvenskiy RI, Simonov KM, Tvardovskiy AT, Tikhonov NS, and others). Throughout the 1980s, a body of poetry emerged that honored Soviet military medics for their dedicated service during the Afghan conflict.

For poets in the 1970s, the Great Patriotic War, that exposed the eternal problems of the confrontation between good and evil, life and death, truth and lies, was an opportunity not only to express their gratitude to the generation of veterans, to consolidate in people's memory the image of great fighters for a just cause, defenders of the Motherland, but also again, with a sense of awareness of the great importance in the life of a society of moral values, raise the topic of ethics of human behavior. Unfortunately, post-Soviet re-evaluations left much 1970s verse estranged from scientific and shelved until its eventual rediscovery. However, the power of the word they possess, the enduring values embedded in them, and the importance of maintaining continuity in the overall development of Russian literature compel us to return to them and rethink them.

Among these poets was Rutkovskiy MA, who would later become a distinguished Professor and Doctor of Historical Sciences. In 1986, he wrote a poem "About a Soldier and Panfilov's Daughter", highlighting themes of brotherhood and national unity. The historical basis for this is the Battle of Moscow in November 1941. All the images are being heavily compressed within a short text containing the images of a simple soldier, a general, a nurse, but each of them is an image of perseverance and humanity. Strangers who have never known each other before become relatives and friends, united by one misfortune, having a single goal to defeat the enemy, to defend the Motherland. A soldier and

a general, a nurse and a doctor, fathers and children, brothers and sisters, wives and husbands stood together. The poem is filled with lexemes of different word forms expressing the idea of kinship such as a sister, a father, a stepfather, a father, a family. And in this lexical and semantic paradigm, the image of a nurse is highlighted, steadfast and heroic, courageously fulfilling her duty, ensuring that not even for a second do the wounded soldiers perceive her suffering, her feelings, her mental anguish.

“Just one step from the front, to the field hospital ward,
The soldier struggled, whispering, breaking through the pain:
“Sister... Father is gone...” — a phrase that struck a chord,
For all knew the General was the “Father” they called by name.
Not by regulations, but out of love, they held him dear...” [21].

Thus, vivid representations of doctors within 20th-century verse hold substantial pedagogical and methodological significance, providing essential insights for those committing

to a career in medicine. Due to its increased emotionality and semantic capacity, which combines brevity of presentation and extreme accuracy in selecting the means of expression and each word, poetry has a special effect on the moral image of the perceiving subject and has the property of deeply imprinting it. Educating children on the ethical, compassionate nature of the medical profession demands the inclusion of poetry that champions medical duty as an essential moral trait. The archetypal figure of the Russian medical professional — encompassing doctors, nurses, and assistants — has been profoundly shaped by Russian literature through the image of the compassionate altruist seen in Korney Chukovsky's *Aibolit*, the wartime heroism of combat medics depicted in Yuliya Drunina's poetry, the “realistic standardization” celebrated in Nikolai Zabolotsky's works and by cementing authentic historical narratives and collective memory within the consciousness of future generations, mirroring the approach found in Rutkovsky's poetry.

References

1. Filosofskij jenciklopedicheskij slovar'. M.: Sov. jenciklopedija, 1983; 839 s. Russian.
2. Vagner EA. Razdum'ja o vrachebnom dolge. Available from URL: Eugene_Wagner-The_Reflections-RU.pdf. (accessed: 16.03.2026) Russian.
3. Harlamov EV, Skljarov EK, Kiseleva OF. Dolg vracha i grazhdanina. M. Litagent Knizhkin Dom. 2018. Available from URL: <https://www.litres.ru/book/evgeniy-harlamov/dolg-vracha-i-grazhdanina-38624489/> (accessed: 16.03.2026) Russian.
4. Medicinskaja jetika i deontologija. Psihologija professional'nogo obshhenija: Materialy Vserossijskoj nauchno-prakticheskoy konferencii s mezhdunarodnym uchastiem, posvjashhennoj 90-letiju FGBOU VO Daggosmeduniversiteta; 22 nojabrja 2022 g.; Mahachkala: Izdatel'sko-poligraficheskij centr DGMU, 2022; 378 s. Russian.
5. Ivanov NG. Vospitanie professional'nogo dolga u slushatelej voenno-medicinskih vuzov [avtoref. dissertacij]. M., 2005; 22 s. Russian.
6. Kovelina TA. Obraz vracha v kul'ture (dissertacija). Rostov-na-Donu: Rost. gos. un-t, 2006; 296 s. Russian.
7. Tverskaja SS. Vrachebnoe prochtenie kak tehnologija mediko-literaturnogo issledovanija. Aktual'nye issledovanija. 2024; 5 (187): 59–62. Available from URL: <https://apni.ru/article/8351-vrachebnoe-prochtenie-kak-tehnologiya-mediko>. (accessed: 16.03.2026) Russian.
8. Arhirejskaja IM. Izuchenie medicinskoj tematiki v literature kak neobhodimoe uslovie professional'noj podgotovki studentov-medikov. Vestnik nauchnyh konferencij. 2025; 10–6 (122): 12–14. Available from URL: <https://ukonf.com/doc/cn.2025.10.06.pdf>. (accessed: 16.03.2026) Russian.
9. Zajcev AN. Ispol'zovanie vozdejstvija na studentov medicinskogo vuza pojeticheskikh obrazov v kachestve dopolnitel'noj metodiki prepodavaniya klinicheskoy discipliny. Vestnik Sankt-Peterburgskogo nauchno-issledovatel'skogo instituta pedagogiki i psihologii vysshego obrazovanija. 2024; № 2 (10): 38–51. Russian.
10. Majakovskij V. Poln. sobr. soch. Podgot. teksta i primech. Pl Ageeva i FN Pickel'. M.: Gos. izd-vo hudozh. lit. 1955–1961; 5. 1957: 478 s. Russian.
11. Chukovskij Kl. Istorija moego «Aibolita». V knige: Chukovskij Kl. Sobr. soch. 2-e izd., jelektronnoe, ispr. Sost., komment. E. Chukovskoj. M.: Agentstvo FTM, Ltd. 2012; 2:369–379. Available from URL: <https://www.chukfamily.ru/kornei/prosa/knigi/onetofive/istoriya-moego-ajbolita>. (accessed: 16.03.2026) Russian.
12. Sechenov IM. Refleksy golovnogo mozga. V knige: Sechenov IM. Biografija. Glavnye trudy. Avt. predisl., biografii i komment. IV Knjaz'kin i AT Mar'janovich. SPb.: Izd-vo DEAN. 2004; 271–398. Russian.
13. Drunina Ju V. Ty dolzhna Available from URL: <https://www.culture.ru/poems/47594/ty-dolzha>. (accessed: 16.03.2026) Russian.
14. Drunina Ju V. Jeto imja... Stihotvorenija. M.: Sovremennik. 1984; 110 s. Russian.
15. Minc SI, Grechina ON, Dobrovolskij BM. Massovoe pesennoe tvorcestvo. V knige: Russkij fol'klor velikoj otechestvennoj vojny. Akademija nauk SSSR. Institut russkoj literatury (Pushkinskij dom). M.-L.: Nauka, 1964; 103–148. Russian.
16. Vlasov ZI. Chastushki. V knige: Russkij fol'klor velikoj otechestvennoj vojny. Akademija nauk SSSR. Institut russkoj literatury (Pushkinskij dom). M.-L.: Nauka. 1964; 149–193. Russian.
17. Zablockaja L, Shubin E. Primechanija. V knige: Zabolockij NA. Sobr. soch. Predisl. N. Stepanova; Primech. L. Zablockoj, E. Shubina. M.: Hudozh. lit., 1983; 1: 595–646. Russian.
18. Kopteva GG. Jepicheskie intencii v tvorcestve Nikolaja Zabolockogo (avtoref. Dissertacij). Krasnojarsk: Gorno-Altajskij gosudarstvennyj universitet. 2011; 28 s. Russian.
19. Zabolockij NA. Sobr. soch. Predisl. N. Stepanova; Primech. L. Zablockoj, E. Shubina. M.: Hudozh. lit. 1983; 1: 655 s. Russian.
20. Talickaja AA. Jazykovaja reprezentacija koncepta «smert'» v proizvedenijah N. Zabolockogo 1929–1937 gg. Jaroslavskij pedagogicheskij vestnik. 2010; 3: 158–161. Russian.
21. Rutkovskij MA. O soldate i docheri Panfilova. Za tehicheskie kadry. 12 marta 1986; 9 (897). Russian.

Литература

1. Философский энциклопедический словарь. М.: Сов. энциклопедия, 1983; 839 с.
2. Вагнер Е. А. Раздумья о врачебном долге. Режим доступа: Eugene_Wagner-The_Reflections-RU.pdf. (дата обращения: 16.03.2026)
3. Харламов Е. В., Склярова Е. К., Киселева О. Ф. Долг врача и гражданина М.: Литагент Книжкин Дом. 2018. Режим доступа: <https://www.litres.ru/book/evgeniy-harlamov/dolg-vracha-i-grazhdanina-38624489/> (дата обращения: 16.03.2026)

4. Медицинская этика и деонтология. Психология профессионального общения: Материалы Всероссийской научно-практической конференции с международным участием, посвященной 90-летию ФГБОУ ВО Даггосмедуниверситета. 22 ноября 2022 г. Махачкала: Издательско-полиграфический центр ДГМУ. 2022; 378 с.
5. Иванов Н. Г. Воспитание профессионального долга у слушателей военно-медицинских вузов (автореф. Диссертации). М. 2005; 22 с.
6. Ковелина Т. А. Образ врача в культуре (диссертация). Ростов-на-Дону: Рост. гос. ун-т. 2006; 296 с.
7. Тверская С. С. Врачебное прочтение как технология медико-литературного исследования. Актуальные исследования. 2024; 5 (187): 59–62. Режим доступа: <https://apni.ru/article/8351-vrachebnoe-prochtenie-kak-tehnologiya-mediko>. (дата обращения: 16.03.2026)
8. Архирейская И. М. Изучение медицинской тематики в литературе как необходимое условие профессиональной подготовки студентов-медиков. Вестник научных конференций. 2025; 10–6 (122): 12–14. Режим доступа: <https://ukonf.com/doc/sp.2025.10.06.pdf>. (дата обращения: 16.03.2026)
9. Зайцев А. Н. Использование воздействия на студентов медицинского вуза поэтических образов в качестве дополнительной методики преподавания клинической дисциплины. Вестник Санкт-Петербургского научно-исследовательского института педагогики и психологии высшего образования. 2024; 10(2): 38–51.
10. Маяковский В. Полн. собр. соч. Подгот. текста и примеч. П. И. Агеева и Ф. Н. Пицкель. М.: Гос. изд-во худож. лит. 1957; 478 с.
11. Чуковский К. И. История моего «Айболита». В книге: Чуковский К. И. Собр. соч. 2-е изд., электронное, испр. Сост., коммент. Е. Чуковской. М.: Агентство ФТМ, Лтд. 2012; 2:369–379. Режим доступа: <https://www.chukfamily.ru/kornei/prosa/knigi/onetofive/istoriya-moeego-ajbolita>. (дата обращения: 16.03.2026)
12. Сеченов И. М., Князькин И. В., Марьянович А. Т. Рефлексы головного мозга. В книге: Сеченов И. М. Биография. Главные труды. Авт. предисл., биографии и коммент. СПб.: Изд-во ДЕАН. 2004; 271–398 с.
13. Друнина Ю. В. Ты должна. Режим доступа: <https://www.culture.ru/poems/47594/ty-dolzha> (дата обращения: 16.03.2026)
14. Друнина Ю. В. Это имя... Стихотворения. М.: Современник, 1984; 110 с.
15. Минц С. И., Гречина О. Н., Добровольский Б. М. Массовое песенное творчество. В книге: Русский фольклор Великой Отечественной войны. Академия наук СССР. Институт русской литературы (Пушкинский дом). М.-Л.: Наука, 1964; 103–148.
16. Власов З. И. Частушки. В книге: Русский фольклор Великой Отечественной войны. Академия наук СССР. Институт русской литературы (Пушкинский дом). М.-Л.: Наука. 1964; 149–193 с.
17. Заблоская Л., Шубин Е. Примечания. В книге: Заболоцкий Н. А. Собр. соч. Предисл. Н. Степанова; примеч. Л. Заблоской, Е. Шубина. М.: Худож. лит. 1983; 1: 595–646.
18. Коптева Г. Г. Эпические интенции в творчестве Николая Заболоцкого (автореф. Диссертации). Красноярск. 2011; 28 с.
19. Заболоцкий Н. А. Собр. соч. Предисл. Н. Степанова; примеч. Л. Заблоской, Е. Шубина. М.: Худож. лит. 1983; 1: 655 с.
20. Талицкая А. А. Языковая репрезентация концепта «смерть» в произведениях Н. Заболоцкого 1929–1937 гг. Ярославский педагогический вестник. 2010; 3: 158–161.
21. Рутковский М. А. О солдате и дочери Панфилова. За технические кадры. 12 марта 1986; 9 (897).

THE LATIN LANGUAGE IN MEDICAL EDUCATION: ETHICAL AND PEDAGOGICAL ASPECTS

Illarionova IN ✉

Yaroslavl State Medical University, Yaroslavl, Russia

The article investigates the ethical and pedagogical dimensions of education, specifically using the process of teaching Latin in medical schools as a case study. This outlines the core principles of pedagogical ethics and the professional code of conduct for university teachers. The results of a survey given to first-year students at the Department of Foreign Languages of Yaroslavl State Medical University (YSMU) regarding the teacher's role in education are analyzed. The issue of what students look for in the personality of an ideal university teacher is being discussed. The study of Latin must be used to equip students with proper terminological skills, widen their intellectual horizons, and raise their general cultural literacy. The author stresses the essential mission of a modern teacher, noting that teaching skills and moral guidance cannot be separated.

Keywords: pedagogical ethics, teacher's ethical code, terminological literacy, general cultural significance of the Latin language, and ethical foundations of the future doctor's professional culture

✉ **Correspondence should be addressed:** Irina N Illarionova
Revolutsionnaya St., 5, Yaroslavl, 150000, Russia; irina.illarionova@list.ru

Received: 15.06.2026 **Accepted:** 18.06.2026 **Published online:** 28.06.2026

DOI: 10.24075/medet.2026.015

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ЛАТИНСКИЙ ЯЗЫК В МЕДИЦИНСКОМ ОБРАЗОВАНИИ: ЭТИКО-ПЕДАГОГИЧЕСКИЕ АСПЕКТЫ

И. Н. Илларионова ✉

Ярославский государственный медицинский университет, Ярославль, Россия

В статье рассматриваются этико-педагогические аспекты образовательного процесса на примере преподавания латинского языка в медицинском вузе. Выделены основные положения педагогической этики, этического кодекса преподавателя университета. Приводится анализ результатов анкетного опроса студентов-первокурсников на тему «Роль преподавателя в учебном процессе», проведенного на кафедре иностранных языков ЯГМУ. Обсуждаются мнения студентов относительно личных качеств идеального преподавателя университета. Отмечается необходимость формирования терминологической грамотности обучающихся, расширения их кругозора и повышения общекультурного уровня в ходе изучения латинского языка. Автор подчеркивает важность миссии, возложенной на современного преподавателя, и неразрывную связь профессионального обучения и нравственного воспитания.

Ключевые слова: педагогическая этика, этический кодекс преподавателя, терминологическая грамотность, общекультурное значение латинского языка, этические основы профессиональной культуры будущего врача

✉ **Для корреспонденции:** Ирина Николаевна Илларионова
Ул. Революционная, д. 5, г. Ярославль. 150000, Россия; irina.illarionova@list.ru

Статья поступила: 15.06.2026 **Статья принята к печати:** 18.06.2026 **Опубликована онлайн:** 28.06.2026

DOI: 10.24075/medet.2026.015

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

The theoretical roots of Russian pedagogical ethics were established by K. D. Ushinsky, the father of Russian pedagogy. He asserted that “shaping a student's moral character is the ultimate purpose of education, which is far more important than just expanding their knowledge...” [1].

P. F. Kapterev, a follower of K. D. Ushinsky and pioneer of educational psychology, realized the educational goals and theories that Ushinsky was unable to finish during his lifetime. He showed that education and moral growth go hand in hand. “A teacher cannot simply act as an instructor in front of their students and stop being a human”. Teachers “influence students through their core human values just as much as through their teaching methods” [2].

In the tradition of K. D. Ushinsky, P. F. Kapterev, and their contemporaries, Russian pedagogy frames advanced educational concepts within the discipline of pedagogical ethics. The foundational pillars of this approach are “...morality, the teacher's moral culture, moral engagement, and the ethics of moral decision-making” [3]. By definition, pedagogical

ethics centers on the teacher's individual morality and their ethical responsibilities in practice. “The teacher's personality is the heart of teaching; its profound impact on a young mind is a powerful tool that cannot be replaced by books, moral lectures, or reward and punishment systems” [1].

RESEARCH METHODS

This article aims to analyze ethical aspects of teacher-student interactions at medical universities, focusing on experiences in teaching Latin during the foundational stage of medical education. This analysis, based on the Vox studentium (Voice of students) questionnaire, reveals what students expect from their teachers and how they evaluate teaching performance.

To evaluate whether a medical university's Latin teacher met ethical pedagogical standards, we asked first-year students about the teacher's role in the classroom. A total of 100 medical, pediatric, and dental students completed the survey.

DISCUSSION OF RESULTS

The survey results provided the following information. A large majority of surveyed students (93%) emphasized the importance of the teacher's role in their academic discipline. Furthermore, 51% of students highly valued well-structured and properly executed lessons, as this directly drives their comprehension and retention of the subject matter. Additionally, 25% emphasized the importance of engaging with teachers who both "teach and educate", while 9% cherished the teacher's role, noting that "a teacher's character and behavior serve as an educational tool".

An identical percentage (8%) emphasized the importance of interaction with a teacher, which may "preview how they will communicate with coworkers in the future". Nevertheless, 7 individuals did not respond to our query: three found it unanswerable, while four others chose textbook study over direct communication with a teacher.

Unfortunately, we couldn't interview the students who successfully learn Latin independently because the survey was anonymous. We would certainly like to understand our errors that have contributed to the teaching profession receiving less recognition. To find out, we asked students: "What does the ideal modern teacher look like to you?" A 53% majority of the students surveyed believe teachers must be well-educated experts of high moral character who are skilled in contemporary teaching methods. 29% of surveyed individuals expect teachers to engage and inspire students, while 14% highly value teachers who show a supportive approach to students' challenges. Only 4% of participants were unsure how to answer this question.

We also asked our students which professional and personal qualities they value most in a teacher. The response rate for this question was 78% among the surveyed students. The most commonly cited traits included professionalism, high standards, fairness, and kindness, the ability to personalize teaching, sense of responsibility, strong communication skills, and tact, along with a genuine passion for their work and students. According to our students, these are the traits of the perfect university teacher.

Alongside the essential personal attributes, a university teacher must also provide meaningful guidance to their students. First-year students frequently experience a sense of insecurity, notably when encountering novel academic disciplines like Latin. They rely on us for support, including answering questions about the curriculum, recommending study materials, offering preparation tips, etc. We must recognize that students carefully assess every word we say and the tone we use. Our task is to inspire and motivate, not demotivate. For this reason, we never tell students: "You are going to fail, you won't write it, and you won't make it". We will offer them support, including verbal one, guiding them toward effectively overcoming their challenges.

BASIC PROVISIONS OF PEDAGOGICAL ETHICS

Educational ethics require that teachers and students always treat each other with respect. In our view, referring to students informally is unacceptable — a practice we regretfully sometimes observe among our peers in the department. Let's remember that we are educating the next generation of doctors — our future colleagues. Research indicates that 90% of surveyed students support beginning professional medical training in their first year. They are eager to advance their intellectual, cultural, and professional capabilities to become highly moral, educated, and competent practitioners [4]. Thus, addressing the audience as "dear colleagues", which we do from time to time, feels quite appropriate.

Let's briefly outline what the phrase "education through the subject" means. P. F. Kaptelev highlighted that "educational curricula across all disciplines should be intentionally designed to facilitate the ethical development of learners, regardless of the extent" [2]. Although learning Latin builds universal skills, mastering medical terminology in the first year lays the groundwork for clinical competencies and shapes the professional vocabulary the future doctors will use throughout their medical career. Medical terminology operates as an interconnected network of vocabularies, which is broadly divided into three main branches: anatomical terminology, clinical terminology, and pharmaceutical terminology [5].

Both teachers and learners should focus on understanding foundational medical vocabulary and developing terminological literacy, enabling students to use professional medical language accurately and confidently in their specific fields [6]. It is essential to emphasize that our goal is to cultivate a professional culture in future physicians, characterized by deep respect for patients, colleagues, and the medical vocation itself (*medicina nobilissima*). Among qualified, ethical medical professionals, any grammatical, lexical, or terminological errors are completely unacceptable. We try to emphasize this to our students when we discover major mistakes, such as confusing the medical prefixes *hypo-* and *hyper-*, or misusing and incorrectly explaining the suffixes *-osis* and *-itis* in their clinical case studies. Although we don't expect first-year students to give exact scientific definitions of clinical terms, we must make sure they acquire terminological fluency from their very first Latin lessons.

Broad cultural awareness is an essential educational goal, and studying Latin allows to achieve this across the curriculum. Memorizing aphorisms and professional axioms broadens your horizons and enhances your cultural and intellectual development.

We teach our medical students several foundational Latin aphorisms that focus on the issues of life and death, patient wellness, and the ethical conduct of a physician. We place a strong emphasis on proverbs that embody the moral and professional duties of healthcare providers (*Primum noli (non) nocere!* translated as *To help, or at least, to do no harm* (the first commandment of a doctor); *Aliis inserviendo consumor* translated as *I burn serving others* (the burning candle or lamp serves as the symbolic emblem of healing) [7]. We propose discussing aphorism content in class, in addition to preparing reports and presentations for the meeting of Latin department's Student Research Society. Our students are eager to take advantage of these offers and join events organized by Latin departments at other universities across Russia.

CONCLUSION

In conclusion, we stress that pedagogical ethics essentially functions as a teacher's code of conduct. This code or professional educational practice is regulated by local and federal laws, and fundamentally relies on the teacher's strong personal values and ethical principles. Teachers of Latin at medical universities utilize the intrinsic content of the discipline to foster the ethical foundations of a future physician's professional culture at the initial stage of medical education via both curricular and extracurricular activities.

A teacher's mission is successfully accomplished when the principal rules of pedagogical ethics are fully integrated into the educational process: "Learning environments founded on mutual respect, trust, and understanding naturally inspire students, allowing them to experience the joy of creative exploration and scientific discovery..." [2].

References

1. O vospitanii detej i junoshestva. Tradicii russkoj gumanisticheskoy pedagogiki (po rudam Ushinskogo KD) Antologija gumannoj pedagogiki. M. Amrita-Rus'. ID Shalvy Amonashvili. 2023; 224 s. Russian.
2. Kul'tura i lichnost' kak faktory vospitaniya i poznaniya. Rebenok i shkola: opyt plodotvornogo vzaimodejstviya (po trudam Kaptereva PF). Antologija gumannoj pedagogiki. M. Amrita-Rus' ID Shalvy Amonashvili. 2023; 276 s. Russian.
3. Andreev VI. Pedagogicheskaja jetika: innovacionnyj kurs dlja npravstvennogo samorazvitiya. Kazan'. Centr innovacionnyh tehnologij. 2012; 272 s. Russian.
4. Illarionova IN. Latinskij jazyk v medicinskom obrazovanii: analiz motivacionnyh faktorov. Medicina i jazyki v obrazovanii i nauke: sbornik nauchnyh trudov. Voronezh. Izdatel'sko-poligraficheskij centr «Nauchnaja kniga». 2025; 304 s. Russian.
5. Nechaj MN. Latinskij jazyk dlja pediatricheskih fakul'tetov: uchebnoe posobie. M. KNORUS. 2013; 344 s. Russian.
6. Illarionova IN. O roli slovarj v formirovanii terminologicheskoy gramotnosti studentov-medikov (iz opyta raboty). Inostrannye jazyki v medicinskom vuze: problemy i perspektivy: sbornik materialov konferencii. Voronezh: Izdatel'sko-poligraficheskij centr «Nauchnaja kniga». 2024; 3: 210 s. Russian.
7. Chernjavskij MN. Latinskij jazyk i osnovy medicinskoj terminologii: uchebnik. M. Medicina. 2004; 448 s. Russian.

Литература

1. О воспитании детей и юношества. Традиции русской гуманистической педагогики (по трудам К. Д. Ушинского). Антология гуманной педагогики. М. Амрита-Русь. ИД Шалвы Амонашвили. 2023; 224 с.
2. Культура и личность как факторы воспитания и познания. Ребенок и школа: опыт плодотворного взаимодействия (по трудам П. Ф. Каптерева). Антология гуманной педагогики. М. Амрита-Русь. ИД Шалвы Амонашвили. 2023; 276 с.
3. Андреев В. И. Педагогическая этика: инновационный курс для нравственного саморазвития. Казань. Центр инновационных технологий. 2012; 272 с.
4. Илларионова И. Н. Латинский язык в медицинском образовании: анализ мотивационных факторов. Медицина и языки в образовании и науке: сборник научных трудов. Воронеж: Издательско-полиграфический центр «Научная книга». 2025; 304 с.
5. Нечай М. Н. Латинский язык для педиатрических факультетов: учебное пособие. М. КНОРУС. 2013; 344 с.
6. Илларионова И. Н. О роли словарей в формировании терминологической грамотности студентов-медиков (из опыта работы). Иностранные языки в медицинском вузе: проблемы и перспективы: сборник материалов конференции. Воронеж: Издательско-полиграфический центр «Научная книга». 2024; 3: 210 с.
7. Чернявский М. Н. Латинский язык и основы медицинской терминологии: учебник. М.: Медицина. 2004; 448 с.

ETHICAL ASPECTS OF TECHNOLOGICAL MEDIATION IN THE PROFESSIONAL ACTIVITY OF A FOREIGN LANGUAGE TEACHER AT MEDICAL UNIVERSITIES

Suryaninova JA ✉, Kuznetsova EB

Yaroslavl State Medical University, Yaroslavl, Russia

This paper explores the ethical dimensions of technological mediation into the workflows of foreign language teachers at medical universities. By combining media education, digital didactics, and foreign language teaching, the author presents a model of technology-mediated competence that incorporates an ethical component. The study elucidates the testing principles, educational stages, and teaching techniques used to incorporate ethical concepts into foreign language reading. The text explores the risks and prospects of forming ethically responsible technological mediation in the context of the digitalization of medical education. It highlights the hurdles of adding artificial intelligence (AI) to classrooms and the need to teach critical thinking to all students and teachers.

Keywords: technological mediation, ethics, digital didactics, academic integrity, artificial intelligence, biomedical ethics, and media literacy

Author contribution: Suryaninova JA, Kuznetsova EB — analysis and synthesis of literature on the topic, development of methods for applying technological mediation in higher education, preparation of the text of the article.

✉ **Correspondence should be addressed:** Julia A. Suryaninova
Revolutsionnaya St., 5, Yaroslavl, 150000, Russia; julia.grisch@inbox.ru

Received: 03.06.2026 **Accepted:** 10.06.2026 **Published online:** 18.06.2026

DOI: 10.24075/medet.2026.014

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ЭТИЧЕСКИЕ АСПЕКТЫ ТЕХНОЛОГИЧЕСКОЙ МЕДИАЦИИ В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ ПРЕПОДАВАТЕЛЯ ИНОСТРАННОГО ЯЗЫКА В МЕДИЦИНСКОМ ВУЗЕ

Ю. А. Сурьянинова ✉, Е. Б. Кузнецова

Ярославский государственный медицинский университет, Ярославль, Россия

В статье рассматриваются этические аспекты технологической медиации в профессиональной деятельности преподавателя иностранного языка в медицинском вузе. На основе синтеза медиаобразования, цифровой дидактики и методики преподавания иностранных языков предложена авторская модель компетентности технологической медиации, включающая этический компонент. Выделены принципы диагностики, уровни сформированности и методические приемы внедрения этического компонента при работе с иноязычным текстом. Обсуждаются риски и перспективы формирования этически ответственной технологической медиации в условиях цифровизации медицинского образования, включая вызовы, связанные с интеграцией искусственного интеллекта (ИИ) и необходимостью развития критического мышления у всех участников образовательного процесса.

Ключевые слова: технологическая медиация, этика, цифровая дидактика, академическая честность, искусственный интеллект, биомедицинская этика, медиаграмотность

Вклад авторов: Ю. А. Сурьянинова, Е. Б. Кузнецова — анализ и синтез литературы по теме, разработка методики применения технологической медиации в высшей школе, подготовка текста статьи.

✉ **Для корреспонденции:** Юлия Анатольевна Сурьянинова
ул. Революционная, д. 5, г. Ярославль, 150000, Россия; julia.grisch@inbox.ru

Статья поступила: 03.06.2026 **Статья принята к печати:** 10.06.2026

Опубликована онлайн: 18.06.2026

DOI: 10.24075/medet.2026.014

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

Higher education, especially within the medical field, is undergoing a profound digital evolution. In this new landscape, digital innovations have evolved from basic instructional tools into dynamic, active mediators connecting teachers, learners, and professional knowledge. At a medical university, the language teacher is integral to the curriculum. They equip students both with linguistic and specialized communication skills, enabling them to analyze international educational and scientific literature, contribute to global clinical trials, and engage with diverse patients and peers respectfully. The digital transformation of a higher school teacher is a complex and contradictory process that creates numerous ethical

dilemmas that demand careful consideration and deep insight [1].

Contemporary scientific literature increasingly relies on 'technological mediation' to denote how digital platforms bridge the gap between our learning and professional domains. However, the ethical implications of this form of mediation within the process of teaching foreign languages at medical universities remain insufficiently researched. At the same time, this context gives rise to distinct ethical dilemmas demanding careful scrutiny. Key issues include verifying the accuracy of international health records, managing digital copyright laws, safeguarding patient confidentiality in case

studies, and preventing manipulative digital communication tactics.

The findings [2] demonstrate that implementing new educational technologies into medical curricula frequently disregards moral, social, and philosophical ramifications. Consequently, this creates a fragmented teaching strategy that risks neglecting moral and emotional intelligence. Furthermore, as digital communication expands, it is imperative to establish media ethics for anyone operating prominently in the digital space, including medical teachers and students [3]. The global integration of medical curricula and developing linguistic fluency, as well as the shift toward a digital society dictate strict standards for curriculum design and content delivery, thereby making technological mediation an absolute necessity [4].

The rapid integration of artificial intelligence (AI) into learning environments creates novel ethical challenges, such as the rightful ownership of AI-generated content and the maintenance of academic integrity [5]. The primary threat to modern academic integrity lies not in the utilization of AI, but in the potential loss of the author's original voice when ideas no longer stem from human efforts. This issue is of paramount concern in medical education, a field demanding absolute accuracy and awareness of knowledge.

The primary objective of this paper is to provide a theoretical foundation for the ethical dimension of technological mediation skills of foreign language teachers at medical universities. It introduces the author's conceptual framework and outlines specific teaching techniques for its development, addressing the challenges of the digital era.

MATERIALS AND METHODS

The methodology for this study was based on an instructional design approach. The collected sources featured scientific publications on media education, digital didactics, methods of teaching foreign languages at a medical university sourced from databases like eLibrary, Scopus, and PubMed for 2020–2026, works on the ethical aspects of shifting education to digital platforms and the use of AI, as well as author's developments, including a previously created competence model of technological mediation for a foreign language teacher [6, 7].

To explore the ethical implications of technological mediation in medical curricula, scholars rely on theoretical analysis and synthesis. By utilizing pedagogical modeling alongside with classification and typologization, ethics can be successfully incorporated into the overall competence model. Researchers use content analysis on teaching materials to describe the levels of technological mediation proficiency among higher education teachers and to identify existing methods of working with foreign-language texts that carry ethical weight. The most successful pedagogical approaches are examined and grouped together, helping teachers discover how to seamlessly weave ethics into their teaching.

RESEARCH RESULTS

The ethical foundations governing the use of foreign-language web resources

To select relevant material, a modern foreign language teacher at a medical university daily relies on foreign-language web resources. They also use medical databases, specialized

English portals like Medscape, WebMD, videos of clinical reviews, and online courses from global professional groups. Within this environment, multiple ethical hazards are plausible, driven chiefly by issues of reliability. Foreign publications may present unverified facts, commercially driven content, or completely false information, such as unauthorized medical therapies. Teachers have a moral duty to independently verify information, as well as to nurture capacity of students for analytical evaluation. In this context, technological mediation is manifested through the utilization of digital control tools, like retrieving data from peer-reviewed journals.

As part of their professional practice, a medical university language teacher cultivates students' scientific linguistic cognition by giving conference talks covering both clinical and medical linguistics topics. In this context, there is an ongoing issue regarding intellectual property adherence. The teacher integrates genuine multimedia and textual snippets from overseas sources to craft engaging pedagogical materials, such as digital slides, practice exercises, and web-based tasks. Maintaining ethical mediation practices means acknowledging original authors, securing informed consent for specific materials (e.g., patient photographs), and ensuring all work is completely original.

Another significant hurdle that arises when working with international healthcare documents is the issue of cultural sensitivity. Medical data can comprise religious, ethical or legal principles of various countries, notably in how societies regulate abortion, euthanasia, and transplants. When presenting such foreign-language materials, teachers must refrain from imposing a singular cultural viewpoint, striving instead to foster students' capacity for respectful intercultural exchange. Consequently, the ethical framework for utilizing international medical data is anchored in credibility, legal compliance, and cultural tolerance.

Technology mediated learning in higher education

Technological pedagogical mediation can be defined as the strategic integration of digital resources to facilitate and enhance the educational dynamic between teachers, learners, and subject matter [7]. Within higher education, most notably in medicine, technological mediation adopts a variety of defining traits.

1. A profound obligation to ensure the precision of the communicated data. In the context of medical training, any misinterpretation of foreign medical terminology or clinical guidelines acquired via digital platforms can lead to detrimental outcomes in a graduate's future clinical practice. Consequently, mediation requires an ethical standard; teachers ought to go beyond simply sharing a foreign-language resource by clearly identifying its supporting evidence, potential limitations, and situations where it might apply.
2. The necessity to bridge the gap between availability of data and maintaining academic integrity. Although modern digital originality-verification systems enable greater oversight, they also undermine trust and presume student dishonesty. Ethically responsible technological mediation means using digital tools to cultivate a transparent and balanced classroom, rather than to police student behavior.
3. The necessity of fostering the meta-competence of 'critical media literacy' among students applied to medical discourse. In the modern classroom, the role of

a language teacher goes far beyond translation. They act as mediators who must teach students to deconstruct texts and unmask manipulative language, hidden ads, and fake science. All of this must be accomplished in a foreign language environment, where deep cultural and linguistic differences make assessment incredibly demanding.

The ethical component of technological mediation competence

By adapting the previously developed technological mediation competence framework for foreign language teachers [7], we must add an ethical aspect to its design. This acts as an independent foundational layer that influences every other part of the model (motivation and value-based, cognitive, practical and communication skills). We can examine the ethical dimension by breaking it down into four core parts: regulations and values, cognitive reflection, practical procedures, and communication.

The regulations and values presuppose the teacher's knowledge of professional ethical codes (of teachers, medical professionals), rules of academic citation, copyright laws in the digital environment, as well as internal acceptance of the value of reliability, transparency and respect for intellectual property.

The cognitive reflection entails the capacity to identify ethical risks when using technology such as a student blindly trusting AI to translate a medical document. It also involves the ability to critically evaluate one's own decisions regarding moral accountability.

The practical procedures rely on mastering specific, ethically sound digital skills. These include properly citing external sources, using plagiarism checkers to maintain academic integrity, and limiting access to confidential clinical data for educational purposes.

The communication involves engaging students in thoughtful discussions about digital ethics (debating the appropriate use of ChatGPT for a medical English course) and articulating ethical guidelines and limitations clearly and persuasively.

Rather than treating ethics as a separate entity, it should be woven into every facet of the model's four foundational pillars. For instance, without ethical grounding, mere motivation and value devolve into a mechanistic approach to technology; similarly, cognitive ability without morality reduces to hollow technical expertise, devoid of any ethical reflection.

The stages of developed technological mediation among higher school teachers

Early models of technological motivation outlined three educational stages: reproductive, productive, and creative ones [6]. As applied to a foreign language teacher at a medical university with an emphasis on ethical aspects, these levels can be defined as follows:

At the *reproductive stage*, a teacher relies on digital tools strictly by following set rules. They do not think about the ethics of using them. They follow the rules for citing outside sources, but they ignore the risk of copyright infringement. When ethical problems arise, they stick to a basic script instead of debating the fair use of digital tools.

The *productive stage* involves utilizing technologies mindfully, with a focus on their ethical implications. This means establishing personal guidelines for interacting with

foreign-language digital resources ethically, and integrating ethical perspectives into current lessons while clearly defending one's views on mediation-related ethical issues.

At the highest *creative stage*, the teacher designs scenarios of technological mediation to teach medical ethics tailored to different health specialties. They also direct student projects and research that connect ethics, technology, and medical English. Finally, they invent unique teaching strategies that prove they hold the reflective position of a 'moral mentor'.

Methodological techniques and introduction of an ethical component when working with a foreign language text

Effectively applying the ethical dimension of technological mediation requires teachers at medical universities to design targeted pedagogical tools. When assigning foreign-language medical literature, teachers can ask students to identify ethical issues in the text. Key examples include undisclosed conflicts of interest, irregular methodology, corporate sponsorship, and treatments administered without patient consent.

It is essential that medical students learn to critically analyze linguistic content from an ethical perspective. To achieve this, the teacher pre-selects multiple texts in a foreign language containing deliberate ethical breaches, such as omitting author attributions, misusing clinical visuals, and citing promotional websites as legitimate evidence. Students detect inaccuracies and propose the appropriate alternative.

Students may also be extended the opportunity to serve as peer reviewers for a medical journal. They obtain a concise academic paper written in English, along with a set of moral guidelines to evaluate. By utilizing digital evaluation tools, students decide on whether the information should be published. This process builds their ability to critically assess sources and fosters a strong sense of accountability in sharing scientific data.

Students need to learn how to critically evaluate the tools they use. As a pedagogical strategy, students can be encouraged to maintain a reflective journal documenting their ethical dilemmas when engaging with foreign language materials, which fosters deeper ethical awareness.

DISCUSSION OF RESULTS

The research demonstrates that ethical considerations in technological mediation are not merely optional, but a mandatory professional requirement for foreign language teachers at medical universities. These findings align with contemporary developments in pedagogical ethics and media education. They highlight that digital tools are never truly objective; instead, they inherently amplify or undermine specific moral principles [2].

However, the use of technological mediation presents several debatable issues and downsides. First, it raises the question of how far a teacher's accountability extends regarding the ethical outcomes of mediation, given that students possess unrestricted access to identical technologies beyond the classroom. In our view, while teachers cannot and must not control every aspect of their students' morality, they are tasked with cultivating a reflective environment. In this space, ethical principles are embraced as active choices rather than imposed rules. The second issue is whether obsession with ethics can cause 'mediation paralysis'. The optimal resolution is to foster the teacher's ability to develop the skill of ethical balancing. Third, we must consider how

to effectively leverage generative neural networks, including platforms like ChatGPT and DeepSeek, within the framework of technological mediation [8, 9]. This challenge has to be studied separately. Initially, we suggest that professional ethics require teachers to effectively dictate how neural networks are utilized in academic settings. Teachers must draft ethical guidelines for AI usage in medical communication training. This step is widely viewed as a pressing demand for anyone who organizes novel forms of modern medical education [10, 11]. When compared to the initial framework, the moral obligations at a medical university intensify manifold. The curriculum must incorporate vital features, such as the values of preserving human life, data privacy, and evidence-based practices [12, 13].

CONCLUSIONS

Technological mediation of a modern medical English teacher includes external digital resources, online testing platforms, distance learning software, and generative AI. This operation

is guided by a commitment to integrity, lawful conduct, cultural acceptance, and proprietary rights.

It is highly recommended to integrate an ethical dimension into the framework of technological mediation. This framework consists of regulations and values, cognitive reflection, practical procedures, and communication that span every other aspect of the model.

Considering ethical practices, a university teacher's technological mediation embraces three levels: reproductive (strictly following rules), productive (applying ethical principles), and creative (designing ethical learning and mentoring).

When translating or analyzing foreign texts, integrating ethical principles via versatile pedagogical strategies is essential. These methods can be easily tailored to diverse educational settings and varying student proficiency levels.

Subsequent investigations should focus on empirical verification of the suggested model, designing valid diagnostic tools to evaluate moral development, and analyzing how generative AI impacts the ethical aspects of mediation.

References

- Valeyeva GV. Eticheskiye problemy i riski tsifrovoy transformatsii prepodavatelya vysshey shkoly. Obshchestvo: filosofiya, istoriya, kul'tura. 2024; 5 (121): 86–91. DOI: 10.24158/fik.2024.5.9. Russian.
- Shubina YeV, Danila SL. Evolyutsiya i opredeleniye EdTech v kontekste vysshego meditsinskogo obrazovaniya. Sovremennaya nauka: aktual'nyye problemy teorii i praktiki. Seriya: Gumanitarnyye nauki. 2025; 10/2: 169–172. DOI: 10.37882/2223-2982.2025.10-2.49. Russian.
- Raspopova SS, Kolondayev SA. Mediakommunikatsii v meditsine: k postanovke eticheskikh problem. Voprosy teorii i praktiki zhurnalistiki. 2022; 11(3): 512–528. Russian.
- Al'shuk NA, Abenavoli L, Batirov DYU. Mezhdunarodnoye meditsinskoye obrazovatel'noye prostranstvo v usloviyakh tsifrovoy tsivilizatsii. Bioetika. 2024; 17(1): 44–50. DOI: 10.19163/2070-1586-2024-17-1-44-50. Russian.
- Sizova Ye V. Kontsepty akademicheskoy etiki v usloviyakh tsifrovoy transformatsii obrazovaniya: vliyaniye iskusstvennogo intellekta. Nauchno-metodicheskiy elektronnyy zhurnal «Kontsept». 2025; 7: 324–342. DOI: 10.24412/2304-120X-2025-11146. Russian.
- Kuznetsova YeB, Sur'yaninova Yu A. Eksperimental'nyy proyekt issledovaniya formirovaniya kompetentnosti tekhnologicheskoy mediatsii studentov vuza. Global'nyy nauchnyy potentsial. 2025; 1(12) (177): 216–220. Russian.
- Kuznetsova YeB, Sur'yaninova Yu A. Kompetentnost' tekhnologicheskoy mediatsii v vysshey shkole. Kazanskaya nauka. 2026; 1: 187–191. Russian.
- Arkhipov VV, Naumov VB, Starostenko VA, Nesterov AA. Ispol'zovaniye iskusstvennogo intellekta v vysshem obrazovanii: opyt SPbGU. Transformatsiya informatsionnykh sistem. 2025; 1: 1–15. Russian.
- Burganova LA, Myagkov GP, Yur'yeva OV. Universitet 4.0: Eticheskiye problemy tsifrovizatsii vysshego obrazovaniya. Rossiyskoye obshchestvo segodnya: tsennosti, instituty, protsessy: materialy Vserossiyskoy nauchnoy konferentsii XVII Kovalevskiy chteniye (16–18 noyabrya 2023 goda). SPb.: Stsiyentia, 2023; 781–783. Russian.
- Valeyeva GV. Eticheskiye problemy i riski integratsii tekhnologii iskusstvennogo intellekta v rossiyskoye vyssheye obrazovaniye. NOMOTHETIKA: Filosofiya. Sotsiologiya. Pravo. 2025; 50(4): 958–965. DOI: 10.52575/2712-746X-2025-50-4-958-965. Russian.
- Mironova SP. Spetsifika i sledstviya tsifrovizatsii obrazovaniya. Innovatsii v professional'nom i professional'no-pedagogicheskom obrazovanii: materialy 29-y Mezhdunarodnoy nauchno-prakticheskoy konferentsii. Yekaterinburg: Izdatel'stvo RGPPU, 2024; 113–116. Russian.
- Nazarova Yu V. Sistema professional'noy etiki v vysshem obrazovanii: aksiologicheskoye predposylki formirovaniya i perspektivy razvitiya. Pedagogicheskiy zhurnal. 2023; 13(5A): 358–367. Russian.
- Usov SS, Khorokhorina GA, Yezhova YeV, Rasulov AI, Kosykh DA. Eticheskiye aspekty tsifrovoy transformatsii obrazovaniya. Bulletin of Pedagogical Sciences. 2024; 6: 278–285. Russian.

Литература

- Валеева Г. В. Этические проблемы и риски цифровой трансформации преподавателя высшей школы. Общество: философия, история, культура. 2024; 5 (121): 86–91. DOI: 10.24158/fik.2024.5.9.
- Шубина Е. В., Данила С. Л. Эволюция и определение EdTech в контексте высшего медицинского образования. Современная наука: актуальные проблемы теории и практики. Серия: Гуманитарные науки. 2025; 10/2: 169–172. DOI: 10.37882/2223-2982.2025.10-2.49.
- Распопова С. С., Колондаев С. А. Медиакommunikации в медицине: к постановке этических проблем. Вопросы теории и практики журналистики. 2022; 11(3): 512–528.
- Альшук Н. А., Абенаволи Л., Батилов Д. Ю. Международное медицинское образовательное пространство в условиях цифровой цивилизации. Биоэтика. 2024; 17(1): 44–50. DOI: 10.19163/2070-1586-2024-17-1-44-50.
- Сизова Е. В. Концепты академической этики в условиях цифровой трансформации образования: влияние искусственного интеллекта. Научно-методический электронный журнал «Концепт». 2025; 7: 324–342. DOI: 10.24412/2304-120X-2025-11146.
- Кузнецова Е. Б., Сурьянинова Ю. А. Экспериментальный проект исследования формирования компетентности технологической медиации студентов вуза. Глобальный научный потенциал. 2025; 1(12) (177): 216–220.
- Кузнецова Е. Б., Сурьянинова Ю. А. Компетентность технологической медиации в высшей школе. Казанская наука. 2026; 1: 187–191.

8. Архипов В. В., Наумов В. Б., Старостенко В. А., Нестеров А. А. Использование искусственного интеллекта в высшем образовании: опыт СПбГУ. Трансформация информационных систем. 2025; 1: 1–15.
9. Бурганова Л. А., Мягков Г. П., Юрьева О. В. Университет 4.0: Этические проблемы цифровизации высшего образования. Российское общество сегодня: ценности, институты, процессы: материалы Всероссийской научной конференции XVII Ковалевские чтения (16–18 ноября 2023 года). СПб.: Сциентиа. 2023; 781–783.
10. Валеева Г. В. Этические проблемы и риски интеграции технологий искусственного интеллекта в российское высшее образование. NOMOTNETIKA: Философия. Социология. Право. 2025; 50(4): 958–965. DOI: 10.52575/2712-746X-2025-50-4-958-965.
11. Миронова С. П. Специфика и следствия цифровизации образования. Инновации в профессиональном и профессионально-педагогическом образовании: материалы 29-й Международной научно-практической конференции. Екатеринбург: Издательство РГППУ, 2024; 113–116.
12. Назарова Ю. В. Система профессиональной этики в высшем образовании: аксиологические предпосылки формирования и перспективы развития. Педагогический журнал. 2023; 13(5A): 358–367.
13. Усов С. С., Хорохорина Г. А., Ежова Е. В., Расулов А. И., Косых Д. А. Этические аспекты цифровой трансформации образования. Bulletin of Pedagogical Sciences. 2024; 6: 278–285.

EUPHEMISMS IN MEDICAL DISCOURSE: THE ROLE OF THE LATIN LANGUAGE AND ETHICAL ASPECTS OF COMMUNICATION

Krotova MA ✉

Yaroslavl State Medical University, Yaroslavl, Russia

Euphemisms in medical discourse ensure professionally and ethically sound doctor-patient communication. They are used to replace words and phrases that have a negative and undesirable connotation or appeal to foul language with neutral expressions. The basic areas of their common use are presented; the topics of medical discourse subject to euphemization and the objectives of using euphemisms in doctor-patient communication following the principles of deontology are highlighted. The professional medical language with Latin medical and clinical terms can serve as a means of euphemization. Thus, the issue should be explored to develop the linguistic worldview and communication culture among the future physicians and to communicate with the patient effectively.

Keywords: euphemism; medical discourse; Latin language; medical terminology; speech ethics; deontology

✉ **Correspondence should be addressed:** Marina A. Krotova
Revolutionnaya Str., 5, Yaroslavl, 150000, Россия; krotova-marina@mail.ru

Received: 20.06.2026 **Accepted:** 25.06.2026 **Published online:** 06.07.2026

DOI: 10.24075/medet.2026.017

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ЭВФЕМИЗМЫ В МЕДИЦИНСКОМ ДИСКУРСЕ: РОЛЬ ЛАТИНСКОГО ЯЗЫКА И ЭТИЧЕСКИЕ АСПЕКТЫ КОММУНИКАЦИИ

М. А. Кротова ✉

Ярославский государственный медицинский университет, Ярославль, Россия

Эвфемизация в медицинском дискурсе рассматривается как средство обеспечения профессионально корректной и этически выверенной коммуникации врача и пациента через замену выражений, которые могут вызвать у последнего отрицательные эмоции, обладают нежелательной экспрессией или апеллируют к табуированным темам, нейтральными выражениями. Представлены основные сферы бытования эвфемизмов; обозначены темы медицинского дискурса, подвергающиеся эвфемизации, а также задачи использования эвфемизмов в коммуникации врача и пациента с учетом соблюдения принципов деонтологии. В качестве одного из средств эвфемизации может рассматриваться использование профессионального языка врача, основу которого составляет латинская медицинская (в частности, клиническая) терминология. Это определяет особую актуальность ее изучения для развития лингвистического мировоззрения, формирования коммуникативной культуры будущих врачей, что, в свою очередь, способствует конструктивному взаимодействию с пациентом.

Ключевые слова: эвфемизм, медицинский дискурс, латинский язык, медицинская терминология, речевая этика, деонтология

✉ **Для корреспонденции:** Марина Александровна Кротова
ул. Революционная, д. 5, г. Ярославль, 150000, Россия; krotova-marina@mail.ru

Статья поступила: 20.06.2026 **Статья принята к печати:** 25.06.2026 **Опубликована онлайн:** 06.07.2026

DOI: 10.24075/medet.2026.017

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

Euphemisms (coming from the Greek words εὖ “good” and φημί “speech”) include emotionally neutral words or expressions utilized instead of their synonyms that may seem rude or impolite [1].

In other words, “the process of euphemization consists in a *synonymous replacement* of the linguistic unit, which, when written or pronounced, is inconsistent with the public liking and may shock the interlocutor” [2] According to Kovshova SP, euphemisms are “the expressions, that denote a problem, failure or any lacking resource and are widely found in the culture and language of this particular community” [3]

Euphemization “is associated not only with the rules of politeness, but also with the cultural, social and ideological factors that allow the speaker to select the required designation” [2].

Thus, euphemization facilitates the indirect use of the concepts, which, if designated directly, seem culturally inappropriate or undesirable in a certain situation.

EUPHEMISMS IN MEDICAL DISCOURSE

Krysina LP states that euphemisms are used in diplomacy, politics, army, intelligence service, police, etc. as the spheres [4]. Apparently, euphemization is of particular relevance for medical discourse. Thus, the doctor-patient interaction is meaningful when acute issues such as physicality, intimacy, suffering (fatal diagnoses, severe conditions), disability or death are discussed in a delicate way, “cultivating the patient’s hope for a favorable outcome” [5].

The relevance of the subject is shown in numerous papers covering medical discourse outside Russia [2, 6, 7, 8]. Once the research has been analyzed, euphemization was shown to correlate with certain subject matters equally common to the discourse of both Russian, and non-Russian origin:

- **Lethal outcome** (lost patient, arrested vital signs).
- **Fatal diseases** (malignancy; poor prognosis; life-threatening condition).

- **Severe condition** (a patient's condition raises concern; instable condition; intense surveillance required).
- **Drug and alcohol addiction** (addiction; use of psychoactive substances; substance addiction).
- **Taboo body parts** (pubic area; delicate area; genitals; external sexual organs).
- **Physiological processes** (bodily excretion processes; natural body processes).
- **Physical and mental disorders** (health limitations; developmental disorders; special needs; disturbed functions; cognitive difficulties).
- **Medical procedures** (surgery; surgical correction; invasive surgery; diagnostic testing; therapeutic intervention) [2, 6, 7, 8].

Analysis of the 19th- and 20th- century literary texts has shown that the “medical” euphemisms of that time were primarily correlated with the issues of diseases, death, physicality and “social embarrassment” as well. It proves that euphemization is a lasting event of cultural significance which goes far beyond the medical sphere [5].

EUPHEMISMS AS CLINICAL LATIN TERMS

It should be pointed out that medical discourse is asymmetrical as doctors possess specific expertise, whereas a patient is informed and emotionally influenced by the doctor. Thus, the doctors, regardless of what they say, are responsible for the communication outcome. Euphemisms can make the discourse more effective. In other words, the use of euphemisms “is essential for conscious speech as it controls the course of communication and prevents etiquette-related, ethical and emotional risks” [3].

Therefore, researchers [2] point out two basic reasons why physicians use euphemisms in speech:

- 1) To replace words or phrases that commonly arise *fear* among patients.
- 2) To replace *taboo* or *indecent* words or phrases.

Euphemisms can have different features depending on the type of medical discourse used. Means and tools of euphemization are thoroughly examined by Krysina LP [4]. According to Kovshova ML, euphemization “stems from semantic uncertainty, generalized description of a negative denotation, semantic reduction, namely reduced amount of information within a language unit” [3].

The researcher notes that euphemisms sound as terms that convey the meaning behind the words without any emotional or etiquette-derived “tension” (for instance, sexual signs, genitals, penis, biological fluid, lethal outcome, funeral ceremonies, acne-prone skin, deviant behavior, etc.) [3].

Therefore, Latin terms, which are widely used in medical discourse, form “the basis of a physician's professional language” and serve as “the foundation of a future physician's professional training” [9]. While sounding neutral, they properly denote undesirable events or describe emotionally colored facts thus functioning as the means of euphemization.

During the Latin class, clinical terms are explained and definitions are provided. The students get an opportunity to improve their speaking skills and linguistic feeling. For instance, defining the terms “euthanasia” and “hemophilia” is commonly hampered as students try to grasp the meaning of separate morphemes:

- Euthanasia (*eu* for “normal” and *thanasia* for “death”) means not the “normal death” but *an intentional interruption of a patient's life to avoid physical sufferings due to an incurable disease*;

- Hemophilia (*haem* for “blood” and *philia* for “love”) has nothing to do with “love for blood” but denotes *predisposition to haemorrhage* (the first idea that strikes students' mind is the relation to vampirism).

The term “anesthesiologist” can be used as an example since students can define it as “a doctor who administers anesthesia”. When morphemes are analyzed (*anaesthesiologus* for “absence”, *aesthesio* for “sensitivity” and *logus* for “a doctor”), the definition changes into “*a doctor who ensures the lack of sensation among patients*”.

The euphemisms presented below correspond to the following lexical sets:

- hyperhidrosis (excessive sweating), helminthiasis (infestation by parasitic worms), hyperkeratosis (thickening of the outer layer of the skin on the bottom of the foot) and other abnormal conditions disapproved by the community;
- per rectal, transvaginal, which are the names of the procedures associated with the intimate area;
- exhumation, decapitation require using euphemisms in certain scientific areas such as medicine and forensics to ensure successful communication;
- perforation, resection are surgeries;
- cancerogenic, malignization, melanoma (lipoma) are terms related to severe and incurable diseases;
- infantilism, strobism, and virilism refer to abnormal conditions;
- gerontology, senile are age-related;
- thanatogenesis refers to death.

Despite the fact that euphemisms in medical discourse rather correspond to *clinical* terms, *anatomic* (the terms associated with the lower part of the body such as vagina, penis, anus) and *pharmaceutical* (e.g., *laxative agents* for a group of medicines that treat constipation, which refers to the taboo bodily excretion processes) euphemisms are common too. In turn, a term widely used within the non-medical sphere (*-plastica* i.e., a reconstructive operation) is easily confused by a non-medical person with an esthetic term (*blepharoplasty*, *rhinoplasty*), hindering its proper comprehension (*gastroplasty* means reshaping of the stomach, which is not connected to aesthetics). Owing to euphemisms, interdisciplinary links are updated. Thus, explication of the term *homicidal tendency/ tendency to kill people* (area of law and psychology) makes it easy to grasp the meaning of a pharmaceutical term (*-cid-* in such medicinal preparations as Streptocidum, Gramicidinum makes it clear that they kill viral causative agents).

EUPHEMISMS AND MEDICAL ETHICS

It is noted that a physician uses euphemization not to frighten or shock a patient when an unpleasant diagnosis has to be announced, delicate or private problems and taboo or indecent issues are discussed.

According to Kovshova MP, “the main signs allowing to detect a euphemism in discourse include semantic ambiguity in designating denotation, which is perceived by the speaker as the ‘negative’ one, or taboo topics within the cultural community, on the one hand, and a formal character of denotation improvement without misleading the interlocutors” [3]. Meanwhile, “the need in them [euphemisms] indicates that purposeful discourse is required as it controls the course of communication and prevents risks associated with etiquette, ethics and emotions”. As Moskvina VP states, it is the purpose of use, which is protection instead of misinformation, that differentiates between a euphemism and a lie [5]. Consequently,

it could be considered that using euphemisms doesn't contradict the ideas of medical ethics.

Krysin LP believes that an attempt to avoid communication failures and make the interlocutor feel comfortable serves as the main purpose of euphemization. Euphemisms are intended "to camouflage the substance of the case" [4].

It has to be noted that euphemization is ethically justified if no principle of informed consent is violated, i.e. the patient's condition and related risks are properly understood [7]. Thus, a euphemism aims not to hide the truth but to make it sound acceptable.

Meanwhile, some authors note that the role of euphemization in medical discourse has undergone significant changes due to the growing tendency to being open and fair to patients [6]. Analysis of real-world communication cases has shown that "the underhanded function of euphemisms in medical discourse is extremely insignificant as successful treatment and trustworthy relations require total mutual understanding". According to the researcher, it is the patient who tends to hide taboo terms behind euphemisms to avoid discomfort because they are not keen on medical terms [6]. Dysphemisms pursue a similar aim (*to drop dead* instead of *to die*; *a vegetable* instead of *a critically ill patient*) treating a problem ironically and making communication sound informal with a decline in stylistic nuance.

In complex situation, when, for instance, relatives are informed of the patient's death, euphemization is not useful as "during the tense moment, the physician's words can be interpreted in a wrong way" [6].

Thus, a euphemism in medical discourse should be treated as a balancing tool between humanity and accuracy. Its aim is not to conceal the truth, but to make it acceptable for a patient without violating the doctor's professional responsibility [5].

CONCLUSION

The use of euphemisms in various professional discourses is determined by their functions and how they are commonly used. Improving the negative data, euphemization resolves conflicts and ensures comfortable communication [3]. In this context, medical discourse and doctor-patient communication are the specific areas where euphemisms are used.

As noted above, both parties of communication use euphemisms. However, their means and goals can differ. Thus, a patient tries to be comfortable while discussing sensitive issues, whereas a doctor aims not to embarrass the patient and cushion the blow when an unpleasant diagnosis is announced.

Given the fact that synonymy that rests on semantic ambiguity and semantic reduction belong to the basic means of euphemization, a wish to cushion the blow should not blur the meaning, conceal significant information from the patient and violate the principle of informed consent. In this case, medical terms turn into euphemisms that allow to overcome expressive language while preserving the accuracy and clarity of the message.

Successful treatment definitely requires complete mutual understanding and building trustworthy doctor-patient relations. Consequently, a future physician must not only master specific knowledge, but also develop their speech culture, communication skills and ideas of deontological responsibility. In turn, studying *the Latin language* allows to develop the specified core competencies. As a physician's linguistic mastery means understanding how terminology is utilized in communication, exploring euphemization during the Latin class seems ethically justifiable.

References

1. Arapova NS. Jevfemizmy. Available from: <https://rus-yaz.niv.ru/doc/dictionary/linguistic-encyclopedia/fc/slovar-221.htm#zag-1347> (accessed: 28.05.2026).
2. Andreeva PI, Slyshkin GG. Jevfemizmy v ispanojazychnom medicinskom diskurse. The scientific heritage. 2021; 63: 6–12.
3. Kovshova ML. Jevfemizmy i frazeologizmy: ustojchivye struktury v aspekte jevfemizacii // Vestnik Moskovskogo gosudarstvennogo oblastnogo universiteta. Serija: Russkaja filologija. 2019;4: 35–48.
4. Krysin LP. Jevfemizmy v sovremennoj russkoj rechi. Rusistika. 1994; 1–2: 28–49.
5. Malygina EN. Harakteristika jevfemizmov medicinskoj rechi v hudozhestvennyh tekstah russkoj literatury XIX–XXI vv. Vestnik SamG U. 2006; 10/2 (50): 170–178.
6. Agadzhanjan SA. Jevfemizmy v sisteme sredstv rechevogo vozdejstviya v kommunikativnom prostranstve «vrach — pacient» (na materiale anglijskogo jazyka). Available from: <https://cyberleninka.ru/article/n/evfemizmy-v-sisteme-sredstv-rechevogo-vozdejstviya-v-kommunikativnom-prostranstve-vrach-patsient-na-materiale-anglijskogo-jazyka/viewer> (accessed: 26.05.2026).
7. Romanova OV, Safonkina OS. Lingvisticheskie osobennosti medicinskih jevfemizmov v anglijskom jazyke. Voprosy prikladnoj lingvistiki. 2019; 34: 115–138.
8. Shajhullina Ju R. Jevfemizmy v medicinskom diskurse (na materiale anglojazychnogo foruma "Reddit").
9. Chernjavskij MN. Latinskij jazyk i osnovy medicinskoj terminologii: uchebnik. Moskva: Shiko, 2019; 448 s.

Литература

1. Арапова Н. С. Эвфемизмы. Режим доступа: <https://rus-yaz.niv.ru/doc/dictionary/linguistic-encyclopedia/fc/slovar-221.htm#zag-1347> (дата обращения: 28.05.2026).
2. Андреева П. И., Слышкин Г. Г. Эвфемизмы в испаноязычном медицинском дискурсе. The scientific heritage. 2021; 63: 6–12.
3. Ковшова М. Л. Эвфемизмы и фразеологизмы: устойчивые структуры в аспекте эвфемизации. Вестник Московского государственного областного университета. Русская филология. 2019; 4: 35–48.
4. Крысин Л. П. Эвфемизмы в современной русской речи. Русистика. 1994; 1–2: 28–49.
5. Малыгина Е. Н. Характеристика эвфемизмов медицинской речи в художественных текстах русской литературы XIX–XXI вв. Вестник СамГ У. 2006; 10/2 (50): 170–178.
6. Агаджанян С. А. Эвфемизмы в системе средств речевого воздействия в коммуникативном пространстве «врач — пациент» (на материале английского языка). Режим доступа: <https://cyberleninka.ru/article/n/evfemizmy-v-sisteme-sredstv-rechevogo-vozdejstviya-v-kommunikativnom-prostranstve-vrach-patsient-na-materiale-anglijskogo-jazyka/viewer> (дата обращения: 26.05.2026).
7. Романова О. В., Сафонкина О. С. Лингвистические особенности медицинских эвфемизмов в английском языке. Вопросы прикладной лингвистики. 2019; 34: 115–138.
8. Шайхуллина Ю. Р. Эвфемизмы в медицинском дискурсе (на материале англоязычного форума "Reddit").
9. Чернявский М. Н. Латинский язык и основы медицинской терминологии учебник. Москва: Шико, 2019; 448 с.

PLACEBO AND THE DOUBLE STANDARD OF CARE IN CLINICAL TRIALS: WHEN INEQUALITY BECOMES AN ETHICAL PREMISE USING INEQUALITY AS AN ETHICAL JUSTIFICATION

Gidirim UO, Beliaeva AM 

Pirogov Russian National Research Medical University, Moscow, Russia

The article presents an ethical analysis of randomized placebo-controlled trials (PCTs) conducted in developing countries in situations where effective treatment already exists elsewhere in the world. The authors examine a fundamental contradiction: the use of a placebo often becomes feasible only because of global inequality in access to healthcare, whereby the actual standard of care for the local population is the complete absence of treatment. Through two case studies: trials of drugs for HIV prevention and for the treatment of infant respiratory distress syndrome (IRDS) — the ambiguity of ethical evaluation is demonstrated. The key criterion for the acceptability of a PCT is identified as the degree of potential harm: while in the case of HIV the risk to participants was high but not fatal, in the case of IRDS the use of a placebo directly endangered the lives of infants. To provide a philosophical foundation for the problem, the authors employ John Rawls' thought experiment of the "veil of ignorance" and Gerald Cohen's test of interpersonal justifiability. From Rawls' perspective, PCTs perpetuate injustice, because the standard of care cannot depend on a patient's place of residence, and no one would agree to risk their life due to the contingency of being born in a poor country. Cohen's test reveals the moral deficiency in the pharmaceutical companies' reasoning: they themselves contribute to the inaccessibility of medicines and then use this as a justification for placebo controls. The conclusions argue for the necessity of a differentiated approach: prohibition of PCTs when lethal risks are involved, and permissibility only under the condition that the research is aimed at developing accessible treatment for the same vulnerable population.

Keywords: placebo-controlled trials, clinical research ethics, ethics of placebo use, global health inequality, developing countries, Cohen's interpersonal test, Rawls' theory of justice, vulnerable patient populations

Author contribution: Gidirim UO — concept development and text writing, Beliaeva AM — writing and editing.

 **Correspondence should be addressed:** Anastasia M Beliaeva
Ostrovityanova St., 1, Moscow, 117997, Russia; gurenovitz@gmail.com

Received: 13.03.2026 **Accepted:** 20.04.2026 **Published online:** 15.05.2026

DOI: 10.24075/medet.2026.011

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ПЛАЦЕБО И ПРОБЛЕМА ДВОЙНЫХ СТАНДАРТОВ В КЛИНИЧЕСКИХ ИССЛЕДОВАНИЯХ: НЕРАВЕНСТВО КАК ЭТИЧЕСКОЕ ОПРАВДАНИЕ

У. О. Гидирим, А. М. Беляева 

Российский национальный исследовательский медицинский университет им. Н. И. Пирогова, Москва, Россия

Статья посвящена этическому анализу рандомизированных плацебо-контролируемых исследований (ПКИ), проводимых в развивающихся странах в условиях, когда эффективное лечение уже существует в мире. Авторы рассматривают фундаментальное противоречие: применение плацебо часто оказывается возможным лишь из-за глобального неравенства в доступе к медицине, когда фактическим стандартом помощи для местного населения является ее полное отсутствие. На примере двух кейсов: испытаний препаратов для профилактики ВИЧ и лечения респираторного дистресс-синдрома (ИРДС) у новорожденных — демонстрируется неоднозначность этической оценки. Ключевым критерием допустимости ПКИ становится степень потенциального вреда: если при ВИЧ риск для участников был высок, но не фатален, то в случае с ИРДС использование плацебо напрямую угрожало жизни младенцев. Для философского обоснования проблемы авторы применяют мысленный эксперимент «завеса неведения» Джона Ролза и тест на межличностную оправданность Джеральда Коэна. С позиции Ролза, ПКИ закрепляют несправедливость, так как стандарт лечения не может зависеть от места жительства пациента, и никто не согласился бы рисковать жизнью из-за случайности своего рождения в бедной стране. Тест Коэна показывает моральную ущербность аргументации фармкомпаний: они сами способствуют недоступности лекарств, а затем используют это как оправдание для плацебо-контроля. В выводах обосновывается необходимость дифференцированного подхода: запрет на ПКИ при летальных рисках и допустимость — при условии, что исследование направлено на создание доступного лечения для той же уязвимой группы.

Ключевые слова: плацебо-контролируемые исследования, этика клинических исследований, этика применения плацебо, глобальное неравенство в здравоохранении, развивающиеся страны, межличностный тест Коэна, теория справедливости Ролза, уязвимые группы пациентов

Вклад авторов: У. О. Гидирим — разработка концепции, написание текста; А. М. Беляева — написание и редактирование текста статьи.

 **Для корреспонденции:** Анастасия Михайловна Беляева
ул. Островитянова, д. 1, г. Москва, 117997, Россия; gurenovitz@gmail.com

Статья поступила: 13.03.2026 **Статья принята к печати:** 20.04.2026 **Опубликована онлайн:** 15.05.2026

DOI: 10.24075/medet.2026.011

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

Randomized placebo-controlled trials (PCTs) are considered the most rigorous method for evaluating the efficacy of a treatment. As stated in the Declaration of Helsinki (WHO, 2024), a clinical trial is permissible only when its scientific value and ethical

soundness have been confirmed. A particular ethical burden attaches to the use of a placebo, because randomly assigning participants to a control group exposes them to potential harm due to the absence of active treatment.

The question of justifying the ethical acceptability of placebo controls is critically important, and the Declaration of Helsinki establishes clear criteria for their permissibility:

- 1) when no proven effective treatment exists;
- 2) when there are compelling and scientifically sound methodological reasons for using a placebo, necessary to obtain a reliable assessment of the efficacy of a new intervention, and provided that withholding active treatment does not expose participants to a risk of serious or irreversible harm.

The most contested issue remains the legitimacy of placebo controls in situations where an effective treatment already exists. The problem of placebo-controlled trials conducted in developing countries deserves particular attention. This refers to cases in which the necessary treatment is available but remains inaccessible to the local population due to poverty and the low local standard of healthcare. The present article is devoted to an analysis of the ethical dilemmas associated with the use of placebos in these circumstances.

INEQUALITY AS A PREREQUISITE FOR RESEARCH

A situation often arises in which an effective drug exists but remains inaccessible to patients in need due to its high cost, and this situation is most typical of developing countries. In such cases, pharmaceutical companies may initiate new trials aimed at finding a cheaper and more affordable alternative. These trials are conducted directly in developing countries, where, for economic reasons, a placebo is frequently used as the control rather than the existing effective medication.

A telling example is the case of COVID-19 vaccines. After effective vaccines had been developed in 2021, a special expert group of the World Health Organization concluded that countries with limited or no access to known effective vaccines could ethically justify conducting placebo-controlled trials of new vaccines, even when effective vaccines had already been approved and were being sold in other countries [1]. Subsequently, a number of trials of new COVID-19 vaccines were conducted precisely using placebo controls [2].

TWO CASE STUDIES: HIV AND IRDS

One of the first and most prominent debates regarding the ethics of PCTs in developing countries centered on the prevention of mother-to-child transmission of HIV [3]. In 1994, the efficacy of the drug Zidovudine in preventing infection in newborns was demonstrated in the United States. Subsequently, trials were launched in several African and Asian countries in which researchers sought to evaluate the efficacy of a shorter and cheaper course of the same Zidovudine, while the control group received a placebo [4]. It is important to note that these trials were funded by public funds from developed countries and were approved by World Health Organization (WHO) experts, who concluded that the use of a placebo in this case represented the best way to quickly and scientifically evaluate more affordable treatment regimens for preventing HIV transmission [5].

A different situation, distinct in its ethical outcome though similar in its circumstances, arose around trials of surfactant drugs for the treatment of Idiopathic Respiratory Distress Syndrome (IRDS). This disease accounts for 25% of deaths among premature infants and results from insufficient surfactant production, which leads to disruption of lung structure. In 2001, Discovery Laboratories Corporation proposed conducting a trial

of its drug simultaneously in Europe and Latin America [6]. The fundamental difference lay in the design: in the Latin American arm, the control group of infants was to receive a placebo, whereas the European arm planned to use an active control, i.e., an existing effective drug. At the time, effective treatments for IRDS were widely available in Europe but were absent in Latin America.

Notably, the FDA (U. S. Food and Drug Administration) explicitly stated that conducting a placebo-controlled trial of surfactants for premature newborns with IRDS would be considered unethical in the United States itself [7]. Following an active campaign by activists, Discovery Laboratories revised the trial design and eliminated the use of a placebo, so that all infants involved in the trial could receive effective treatment in one form or another [8].

INEQUALITY AS A PREMISE, HARM AS A CRITERION

The cases described above well illustrate the ethical ambiguity of PCTs in developing countries. A comparative analysis reveals a significant difference. In the case of Zidovudine, the greatest potential harm threatened participants in the placebo group: without treatment, HIV could be transmitted from mother to fetus. However, even if a child was born with HIV, with timely initiation of antiretroviral therapy, that child has a chance to live a long life (although the question arises whether such therapy would be available in a poor country) [9]. Unlike HIV, IRDS is a fatal disease within the first days of life. Here, random assignment to a placebo group would directly threaten the lives of infants. Therefore, despite low local standards of care, the use of a placebo in trials of surfactants when an effective drug already existed was deemed unethical.

This comparison shows that the ethical acceptability of conducting a PCT depends largely on the balance between potential harm and benefit. Note that a similar trial in a developed country would be unethical, because there the effective drug has already become the standard of care. At the same time, in a developing country, the actual standard is often the complete absence of any care (that is, a placebo). In other words, if the trial were not conducted, patients would not receive the effective drug in any case. It thus appears that the ethical acceptability of clinical trials in this context is conditioned by differences in standards of care — that is, by global inequality in access to healthcare. It would seem that the harm is caused not by the use of a placebo per se, but by the socioeconomic conditions in which patients find themselves.

Furthermore, in an ideal model of a PCT, both sides derive benefit. Pharmaceutical companies acquire valuable scientific data. Patients receiving the experimental drug gain access to a treatment that would otherwise be unavailable to them. And patients in the control group typically receive compensation for participation and regular access to medical supervision, which they might not otherwise have had. None of these advantages would arise without conducting the trial. And this remains true even if the exact same protocol would be considered unethical in another country, simply because the standard of care for the control group in poor countries is objectively lower than in rich countries.

In other words, in both cases considered, PCTs became feasible precisely because of inequality in global healthcare. However, ethical acceptability is determined not only by the fact of inequality but also by the degree of potential harm. Whereas in the case of HIV, researchers could appeal to the fact that

these mothers would not have received therapy anyway, in the case of RDS such an argument is inapplicable, because what is at stake is the life of an infant. This brings us to the need for a more rigorous philosophical justification of the permissibility of PCTs.

To assess the moral legitimacy of PCTs in developing countries, we turn to two thought experiments: John Rawls' "veil of ignorance" and Gerald Cohen's test of interpersonal justifiability.

WHY IT MATTERS WHO SPEAKS: COHEN'S TEST IN ETICAL ARGUMENTATION

The philosopher Jamie Webb [10] proposed examining the problem of PCTs precisely through the interpersonal test developed by Cohen [11]. This test examines whether a given claim would sound equally convincing (or equally unconvincing) coming from any person. If a claim sounds reasonable when uttered by one person but begins to raise doubts when uttered by another, then something is wrong with the argument. The strength of a moral reason should not depend on who is presenting it.

The test consists of three sections (or steps).

1. An ethical principle that is uncontroversial. For example, the claim that "pay should correspond to the quality of work."
2. A factual assumption: this is a claim about how things are in reality. It answers the question: "What will happen if we act in such and such a way?" In our example, this would be the assumption that "if a worker is paid little, he will perform poorly."
3. A conclusion: the action that is proposed to be taken, based on the principle and the assumption. We conclude that "this worker's salary should be raised."

The essential point is that the factual assumption often depends on the actions of the speaker themselves, and if the speaker can influence whether this assumption comes true or not, their argument becomes suspect.

Consider the same argument, but advanced by the worker themselves: pay should correspond to the quality of work; if I have a low salary, I will perform worse; therefore, I need a raise. In the first case, when the argument comes from an outside observer, it sounds like an objective statement of fact. But coming from the worker themselves, it acquires a hint of manipulation or even a veiled threat. After all, the quality of work depends on the worker themselves, and it is they who are responsible for confirming or disproving their own assumption.

A MEDICINE FOR SOME, A PLACEBO FOR OTHERS?

Let us now apply this test to the ethics of PCTs in developing countries. Recall that, according to the Declaration of Helsinki, research involving vulnerable groups is justified only when it is directed at supporting the health of precisely these groups and cannot be conducted on other groups, and moreover, the group itself must benefit from the results of the research.

Consider the argument in favor of PCTs advanced, for example, by philosophers at a scientific conference, in an impersonal context:

1. Research in developing countries should benefit both participants and their community.
2. Placebo-controlled trials improve the situation for both participants and the community, even when such trials would be impossible in wealthy countries.
3. Therefore, placebo-controlled trials in developing countries should be allowed.

Now let's imagine that the same argument comes from representatives of a pharmaceutical company planning to recruit volunteers in a poor country, that is, in an interpersonal context.

1. Research in developing countries should benefit participants and their community.
2. If we conduct placebo trials here, it will improve the situation of your community (even if we cannot conduct such trials in rich countries).
3. Therefore, we should be allowed to conduct clinical trials (PCTs) here.

The similarity to the example of the wage increase becomes obvious: both the worker and the pharmaceutical companies act as directly interested parties. They themselves influence the very conditions to which they subsequently appeal in their argument. The heart of the problem is that the impossibility of conducting a placebo-controlled trial in a wealthy country is a consequence of global inequality in healthcare. The cause of this inequality lies in the high cost of effective drugs, which makes them inaccessible to the populations of poor countries. But who sets these prices? It is precisely the pharmaceutical corporations. Thus, a vicious circle arises: the companies themselves set high prices, as a result of which drugs become unavailable in developing countries, and then they come to these countries with a proposal to conduct a placebo-controlled trial, arguing that this will be a benefit for the local population, since they have no access to treatment anyway.

Just as a worker cannot appeal to their own poor quality of work, because that depends on them, pharmaceutical companies cannot simply appeal to inequality, since they themselves perpetuate it through their pricing policies. Of course, the situation is more complex: pharmaceutical companies do not operate in a vacuum but within a global system, and high drug prices are often explained by the need to recoup enormous costs of development and of meeting stringent regulatory requirements. Indeed, without costly research, new drugs would not appear at all, and it is quite understandable why the prices of innovative drugs are so high that poor countries cannot afford them.

Nevertheless, it is difficult to deny that pharmaceutical corporations bear their share of responsibility for this inequality. As part of the system, through their actions they directly influence the truth of their own argument. Therefore, when this argument is voiced on their behalf, it loses moral force, and the test of argumentative neutrality is not passed. In practice, this means that the proposed strategy is not fully, or comprehensively, justified.

PLACEBO THROUGH THE VEIL OF IGNORANCE OF JOHN RAWLS

While Gerald Cohen's test focuses on the personal responsibility of the agent — in this case, the pharmaceutical company — for creating the conditions of inequality, John Rawls' theory of justice allows us to view the problem from the perspective of the structure of the original agreement on the rules of the game. Rawls proposes a thought experiment that he calls the "veil of ignorance" [12]. Its essence is as follows: we design society without knowing what place we will occupy in it — whether we will be rich or poor, healthy or ill, residents of a developed or a developing country. Moreover, even our gender, age, ethnic affiliation, level of intelligence, and other abilities are hidden from us. According to Rawls, only under such conditions can we understand what a just society should be like and create it. Only those rules, laws, and values are just that we would

be willing to approve without knowing what position we will occupy in society.

In essence, Rawls reasons along the same lines as Cohen: in real life, when we reflect on justice, we are unconsciously drawn to choose those rules that will benefit us personally. A rich person will advocate for low taxes, while a poor person will advocate for generous social benefits. Talented people may believe that society should reward talent, while a person with disabilities may believe that caring for the vulnerable is more important. The veil of ignorance eliminates this bias, of which we are not always fully aware when reasoning about justice. Since no one knows who they will turn out to be in the new society, everyone has a powerful incentive to make that society as just as possible for all.

Let us apply Rawls' thought experiment to the problem at hand. Imagine that we are behind the "veil of ignorance" and are developing global principles for conducting clinical trials. We do not know whether we will be born in Zurich, where the best surfactants are available, or in a remote village in Latin America, where the standard of care is limited to paracetamol and hope placed in a local healer. Would we agree that conducting placebo-controlled trials in countries with a low standard of care, when an effective treatment exists elsewhere in the world, is just and ethically justified? Let us rephrase this question in Rawlsian terms: would we agree to the risk of receiving a placebo (and possibly dying, as in the case of IRDS) instead of existing effective treatment, simply because we were unlucky enough to be born in a poor country?

Rawls' answer to these questions would likely be negative. He argues that social and economic inequality is permissible only when it works to the greatest benefit of the least advantaged members of society. For example, if a doctor earns more than a cleaner, this is justified only if such a system ultimately improves the cleaner's position by enabling doctors to treat everyone better, including the least well-off. However, a scheme in which the poor are offered placebo to test a cheap generic on the grounds that they cannot afford the original drug does not maximize benefit for the poorest; rather, it exploits their vulnerability and perpetuates existing inequality.

From the perspective of the "veil of ignorance," a rational individual would never approve a rule that creates a two-tiered system of morality: protection under the Declaration of Helsinki for the rich, and exceptions to it for the poor. The moral rules governing clinical research should be developed from the standpoint of the "veil of ignorance," which precludes knowledge of the geographic and economic position of potential participants, and research should not use those who find themselves in the worst situation as a resource. Thus, from the perspective of ideal theory, PCTs in developing countries when effective treatment exists in developed countries are unjust by definition, because they institutionalize inequality and violate the principle of the universality of human dignity.

Proponents of PCTs start from the factual assumption that the population of developing countries lacks access to expensive treatment, so that even participating in a PCT with the risk of being assigned to a placebo group is beneficial for them, as it provides access to physicians and a chance to receive the new drug. However, from Rawls' critical perspective, no one would agree to the risk of receiving a placebo instead of existing effective treatment simply because they were born in a poor country. Justice requires that the standard of care in a trial be determined not by local poverty and inequality, but by global medical consensus and recognition of the equality of human dignity. It follows from this that permitting placebo controls in developing countries when effective treatment exists

in developed countries is unjust, because it penalizes people for circumstances beyond their control, which contradicts the idea of fair play underlying Rawls' theory.

«PROHIBIT CANNOT PERMIT»: SEARCHING FOR AN ETHICAL BALANCE

The confrontation between Rawls' and Cohen's approaches provides us with a comprehensive picture of the ethical problem. Rawls points to structural injustice: PCTs in developing countries are a symptom of global inequality, and from the perspective of an ideal contract, they should not exist at all, because they violate the principle of universality and use poverty as a resource. Cohen, for his part, shows that even under conditions of this injustice, when pharmaceutical corporations propose PCTs as a solution, their argumentation proves morally deficient, since they themselves bear responsibility for the conditions that make such research "beneficial" for the poor.

What follows from this? Does it mean that PCTs should be prohibited?

Let us return to the analogy of the worker and the employer. Recognizing the worker's argument as unconvincing does not negate the fact that it may be in the employer's interest to raise the worker's salary if the employer truly values the worker's labor. If the employee is valuable and necessary, the employer will likely agree to a raise, because it is in the employer's own interest. Similarly, recognizing the moral deficiency of the pharmaceutical companies' position does not negate the fact that for the population of a developing country, PCTs are often the only hope of gaining access to modern medicine. A ban on PCTs in such a situation would not eliminate inequality; it would merely entrench it, depriving the poor of even the minimal assistance they might otherwise receive.

At the same time, it is important to understand that placebo control is not the only possible methodological option. Alternative approaches exist: for example, one can compare the condition of patients receiving a new drug with data from medical records of similar patients from past years, or assess changes in the condition of the same patients before and after treatment. Such methods have already been successfully applied, particularly in studies of anticancer drugs in developed countries [13].

CONCLUSIONS

Thus, the ethical assessment must be differentiated and take into account the specific circumstances of each case. PCTs appear to be unethical if their sole purpose is to obtain marketing or scientific benefit for the company in the presence of a lethal risk to patients, as was the case with surfactants. Here, a categorical prohibition from Rawls' perspective is applicable. At the same time, PCTs may be deemed permissible if they are aimed at finding a cheaper, more accessible, and adapted treatment specifically for the developing country, and the disease itself does not carry an imminent lethal threat, as in the case of HIV. In this situation, despite the imperfection of the conditions, the research works to mitigate the very inequality that gave rise to it.

The key factors become the intention of the trial and the provision of post-trial access to the resulting drugs. If the outcome of a PCT is a drug that remains inaccessible to the population of the country where the trial was conducted, this represents pure exploitation. If, however, the outcome is an affordable drug, this represents an attempt to rectify injustice within an imperfect world.

References

1. Krause PR, Fleming TR, Longini IM, Peto R, Beral V, Balram Bhargava B, et al. Placebo-Controlled Trials of Covid-19 Vaccines — Why We Still Need Them. *The New England Journal of Medicine*. 2021; 384 (2): e2. DOI: 10.1056/NEJMp2033538
2. FDA Approved Biologics License Application. Grading of Recommendations, Assessment, Development, and Evaluation (GRADE): Moderna COVID-19 Vaccine, 2024. Available from URL: <https://www.cdc.gov/acip/grade/bla-covid-19-moderna-vaccine.html> (accessed: 10.02.2026).
3. Lurie P, Wolfe SM. Unethical trials of interventions to reduce perinatal transmission of the human immunodeficiency virus in developing countries. *The New England Journal of Medicine*. 1997; 337: 853–6.
4. Lallamant M, Jourdain G, Le Coeur S, Kim S, Koetsawang S, Comeau AM, et al. A trial of shortened zidovudine regimens to prevent mother-to-child transmission of human immunodeficiency virus Type 1. Perinatal HIV Prevention Trial (Thailand) Investigators. *The New England Journal of Medicine*. 2000; 343 (14): 982–9.
5. Flory J, Kitcher P. Global health and the scientific research agenda. *Philosophy and Public Affairs*. 2004; 32 (1): 32–65.
6. Public Citizen. Press release: Placebo-controlled drug trial in Latin America Redesign. 2001. Available from URL: <https://www.citizen.org/our-work/health-and-safety/press-release-placebo-controlled-drug-trial-latin-america> (accessed: 10.02.2026).
7. Macklin R. *Double Standards in Medical Research in Developing Countries*. New York: Cambridge University Press. 2004.
8. Shah S. *The Body Hunters: Testing New Drugs on the World's Poorest Patients*. New York: New Press. 2012.
9. The Conference on Retroviruses and Opportunistic Infections (CROI) [Internet]. Available from URL: <https://www.aidsmap.com/bulletin/conference-news/croi-2020/16-march-2020-4> (accessed: 10.02.2026).
10. Webb J. Putting placebo-controlled trials in developing countries to the interpersonal justifiability test. *Developing World Bioethics*. 2019; 19 (3): 139–147.
11. Cohen G. *Rescuing Justice and Equality*. Cambridge, Mass. Harvard University Press. 2008.
12. Rawls J. *The Veil of Ignorance. A Theory of Justice*. Cambridge, Mass. Harvard University Press. 1999; 118–122.
13. Epstein S. *Impure science: AIDS, Activism, and the Politics of Knowledge*. Berkeley, California: Univ. of California Press. 1996.

Литература

1. Krause PR, Fleming TR, Longini IM, Peto R, Beral V, Balram Bhargava B, et al. Placebo-Controlled Trials of Covid-19 Vaccines — Why We Still Need Them. *The New England Journal of Medicine*. 2021; 384 (2): e2. DOI: 10.1056/NEJMp2033538
2. FDA Approved Biologics License Application. Grading of Recommendations, Assessment, Development, and Evaluation (GRADE): Moderna COVID-19 Vaccine, 2024. Available from URL: <https://www.cdc.gov/acip/grade/bla-covid-19-moderna-vaccine.html> (accessed: 10.02.2026).
3. Lurie P, Wolfe SM. Unethical trials of interventions to reduce perinatal transmission of the human immunodeficiency virus in developing countries. *The New England Journal of Medicine*. 1997; 337: 853–6.
4. Lallamant M, Jourdain G, Le Coeur S, Kim S, Koetsawang S, Comeau AM, et al. A trial of shortened zidovudine regimens to prevent mother-to-child transmission of human immunodeficiency virus Type 1. Perinatal HIV Prevention Trial (Thailand) Investigators. *The New England Journal of Medicine*. 2000; 343 (14): 982–9.
5. Flory J, Kitcher P. Global health and the scientific research agenda. *Philosophy and Public Affairs*. 2004; 32 (1): 32–65.
6. Public Citizen. Press release: Placebo-controlled drug trial in Latin America Redesign. 2001. Available from URL: <https://www.citizen.org/our-work/health-and-safety/press-release-placebo-controlled-drug-trial-latin-america> (accessed: 10.02.2026).
7. Macklin R. *Double Standards in Medical Research in Developing Countries*. New York: Cambridge University Press. 2004.
8. Shah S. *The Body Hunters: Testing New Drugs on the World's Poorest Patients*. New York: New Press. 2012.
9. The Conference on Retroviruses and Opportunistic Infections (CROI) [Internet]. Available from URL: <https://www.aidsmap.com/bulletin/conference-news/croi-2020/16-march-2020-4> (accessed: 10.02.2026).
10. Webb J. Putting placebo-controlled trials in developing countries to the interpersonal justifiability test. *Developing World Bioethics*. 2019; 19 (3): 139–147.
11. Cohen G. *Rescuing Justice and Equality*. Cambridge, Mass. Harvard University Press. 2008.
12. Rawls J. *The Veil of Ignorance*. In.: Rawls J. *A Theory of Justice*. Cambridge, Mass. Harvard University Press. 1999; 118–122.
13. Epstein S. *Impure science: AIDS, Activism, and the Politics of Knowledge*. Berkeley, California: Univ. of California Press. 1996.

PRE-BIRTH PHARMACOGENETICS: PERSONALIZED PHARMACOTHERAPY, THE BURDEN OF KNOWLEDGE AND ETHICS OF A PARENTAL DECISION

Demarina SM , Usolkin AA, Balashova YD, Tikhomirova SV

Yaroslavl State Medical University, Yaroslavl, Russia

This review examines the ethical and legal implications of creating pharmacogenetic passports during the preconception (prior to conception) and prenatal (intrauterine) periods. The work is based on a methodological differentiation between the stages of genetic testing.. Preconception screening aims to assess carrier status in prospective parents and ensure their reproductive freedom, while prenatal testing provides fetus-related data, raising bioethical issues regarding the protection of interests and self-determination of the future child. The technologies of non-invasive prenatal testing (NIPT), preimplantation genetic testing (PGT), and prospects for intrauterine pharmacotherapy in severe congenital abnormalities are discussed. Special attention is given to ethical conflicts such as a conflict between the right to health and the right not to know, limits of parental proxy, and risk of genetic stigmatization. Normative approaches are suggested to address the identified ethical tensions (minimum intervention, clinical benefit, and deferred choice). The analysis of the Russian legislation and international instruments (Oviedo Convention, the GINA Act, the GDPR) yields recommendations for the healthcare system and legal regulation.

Keywords: pharmacogenetics, pharmacogenetic passport, prenatal testing, preconception screening, parental proxy, genetic discrimination, intrauterine pharmacotherapy, bioethics, personalized medicine

Author contribution: Demarina SM — literature selection and analysis; writing and editing the manuscript; Usolkin AA — literature selection and analysis; writing the manuscript; Balashova YD — literature selection and analysis; writing the manuscript; Tikhomirova SV — manuscript editing.

✉ **Correspondence should be addressed:** Svetlana M Demarina
Revolyutsionnaya St, 5, Yaroslavl, 150000, Russia; chugsm@yandex.ru

Received: 19.03.2026 **Accepted:** 17.04.2026 **Published online:** 23.05.2026

DOI: 10.24075/medet.2026.012

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ФАРМАКОГЕНЕТИКА ДО РОЖДЕНИЯ: ПЕРСОНАЛИЗИРОВАННАЯ ФАРМАКОТЕРАПИЯ, БРЕМЯ ЗНАНИЯ И ЭТИКА РОДИТЕЛЬСКОГО РЕШЕНИЯ

С. М. Демарина , А. А. Усолкин, Ю. Д. Балашова, С. В. Тихомирова

Ярославский государственный медицинский университет, Ярославль, Россия

В настоящем обзоре рассматриваются этические и правовые аспекты формирования фармакогенетического паспорта на прекоцепционном (до зачатия) и пренатальном (внутриутробном) периодах. Методологическое разграничение этапов генетического тестирования положено в основу работы. Прекоцепционный скрининг направлен на оценку статуса носительства у будущих родителей и обеспечения их репродуктивной свободы, тогда как пренатальное исследование предоставляет данные о плоде, ставя биоэтические вопросы о защите интересов и самоопределении ребенка в будущем. Обсуждаются технологии неинвазивного пренатального тестирования (НИПТ) и преимплантационной генетической диагностики (ПГД) и перспективы использования внутриутробной фармакотерапии при тяжелых врожденных аномалиях. Особое внимание уделяется этическим конфликтам: дилеммой между «правом на здоровье» и «правом на незнание», границам родительского решения и риском генетической стигматизации. Предложены нормативные подходы для баланса выявленных противоречий (минимальное вмешательство, клиническая польза, отложенный выбор). В результате анализа российского законодательства и международных документов (Конвенция Овьедо, Закон GINA, Регламент GDPR) сформулированы рекомендации для системы здравоохранения и правового регулирования.

Ключевые слова: фармакогенетика, фармакогенетический паспорт, пренатальное тестирование, прекоцепционный скрининг, родительское представительство, генетическая дискриминация, внутриутробная фармакотерапия, биоэтика, персонализированная медицина

Вклад авторов: С. М. Демарина — подбор и анализ литературы, написание и редактирование текста рукописи; А. А. Усолкин — подбор и анализ литературы, написание текста рукописи; Ю. Д. Балашова — подбор и анализ литературы, написание текста рукописи; С. В. Тихомирова — редактирование текста рукописи.

✉ **Для корреспонденции:** Светлана Михайловна Демарина
ул. Революционная, д. 5, г. Ярославль, 150000, Россия; chugsm@yandex.ru

Статья поступила: 19.03.2026 **Статья принята к печати:** 17.04.2026 **Опубликована онлайн:** 23.05.2026

DOI: 10.24075/medet.2026.012

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

Modern medicine is shifting from reactive, post-manifestation care toward a predictive and anticipatory model that prioritizes forecasting and active prevention [1–3]. Key

focus areas of these changes are preconception testing (at the stage of pregnancy planning), prenatal testing (during pregnancy), and pharmacogenetic testing for expanded

prevention, early diagnosis, and personalized therapy selection [4, 5].

Preconception and prenatal stages should be differentiated from a methodological point of view. During the preconception stage, parental genetic screening identifies potential recessive disorders, respecting the autonomy of adult individuals who make informed reproductive decisions. Conversely, prenatal diagnosis obtains information directly about the fetus, which lacks legal capacity, and it is the parents who decide on the child's future. The central focus is thus shifted to parental proxy and protection of the child's future autonomy, which fundamentally alters the ethical landscape [6–8].

This review aims to critically examine the ethical and legal implications of creating pharmacogenetic passports during pre-conception and prenatal care. It includes a comparative analysis of international and Russian regulatory frameworks and development of normative models that balance between the child's "right to health" and the "right not to know".

LITERATURE SEARCH METHODOLOGY

A comprehensive search of the PubMed/MEDLINE, Scopus, eLibrary.ru and Google Scholar databases was conducted from January 2023 to March 2026. The following search queries were employed (both in English and Russian): "preconception carrier screening ethics", "prenatal pharmacogenomics", "fetal pharmacotherapy ethics", "right not to know genetic information", "pharmacogenetic passport", "genetic discrimination GINA", "Oviedo Convention genetics", "noninvasive prenatal testing", "pharmacogenetic passport", "right not to know". Inclusion criteria: peer-reviewed original and review articles, monographs, regulatory legal acts, international conventions, and professional society guidelines, published primarily in 2009–2026, and devoted to ethical, legal, and clinical aspects of genetic testing at pre- and perinatal stages, and pharmacokinetics. Exclusion criteria: unreviewed materials, not directly relevant to the review topic, and duplicate sources. Twenty-five sources were included in the final list.

PRECONCEPTION SCREENING: POSSIBILITIES AND ETHICAL RISKS

At the preconception stage, genetic testing assessing the genetic profile of parents or prospective parents prior to pregnancy. Academic sources define clear clinical guidelines for testing carriers of genetic mutations, focusing mainly on autosomal recessive conditions. It enables prospective parents to identify risks of transmitting severe inherited monogenic conditions before pregnancy [6, 9]. This technology is particularly relevant for populations with a high frequency of pathogenic variants. According to the European Society of Human Genetics (ESHG), Expanded Carrier Screening (ECS) is currently being offered to an increasingly wider range of couples, regardless of their ethnic background or personal history [10]. Preconception diagnostics expands reproductive autonomy. Thus, genetic information makes it possible for couples to consciously select among natural conception, assisted reproductive technologies (ART), donation, or choosing to be childfree [9, 11]. Nevertheless, broad-scale genetic screening is associated with the risks of establishing standards for a "normal genome" and increasing marginalization of individuals with disabilities, as well as applying moral pressure on parents whose reproductive

choices diverge from societal expectations [10, 12]. Provision of a full informed consent while detecting variants of uncertain significance (VUS) remains a principal problem [6, 9]. Religious and worldview aspects that make parents feel social pressure even within the framework of voluntary programs add extra tensions [6, 9].

PRENATAL DIAGNOSTICS AND PHARMACOGENETIC FETAL PROFILE

Prenatal diagnostics involves invasive methods (chorionic villus sampling, amniocentesis) and non-invasive prenatal testing (NIPT) using cell-free fetal DNA in maternal blood. NIPT enables the detection of detect chromosomal abnormalities with up to 99% sensitivity for trisomy 21 and over 96% for trisomy 18 and 13 [12], and a series of monogenic disorders. Preimplantation genetic testing (PGT) makes it possible to select embryos without detected genetic defects before they are transferred into the uterus [6]. In Russia, NIPT has been included into clinical recommendations on perinatal diagnostics since 2012–2013, whereas the current procedure for providing obstetric-gynecological care is established by Order of the Ministry of Health No. 1130H as of 20.10.2020 [13]. Experts are still debating its widespread inclusion in the state guarantee system [14, 15].

Expanding prenatal diagnostics into a full-fledged fetal pharmacogenetic (PGx) profile is a promising area in medicine. Pharmacogenetics studies the impact of genotype on pharmacokinetics and pharmacodynamics of drugs: polymorphisms of the *CYP2D6*, *CYP2C19*, *SLCO1B1*, *ABCG2*, and other genes determine the risk of adverse reactions and the variability of therapeutic response in cardiology, oncology, psychiatry, and other specialties. According to data from the Clinical Pharmacogenetics Implementation Consortium (CPIC), clinically significant pharmacogenetic variants are identified in 85–95% of the population [16].

The pharmacogenetic profile of the fetus allows for the adjustment of maternal medication therapy based on the child's metabolic characteristics, reducing the risks of teratogenic effects and adverse reactions through the placenta [16]. In cases of severe congenital disorders such as congenital adrenal hyperplasia, hemolytic disease of the fetus or several metabolic disorders, intrauterine pharmacotherapy is increasingly gaining real clinical significance, and the fetal pharmacogenetic passport is becoming a tool for selecting safe and effective treatment regimens [17, 18]. Given that technological advancements are significantly outpacing the regulatory response, an ethical and legal examination of the limitations for such interventions is urgently required [17].

REGULATING GENETIC INFORMATION: RUSSIAN LEGISLATION AND INTERNATIONAL STANDARDS

Within the Russian Federation, genetic information is classified as a category of biometric personal data subject to stringent regulatory oversight under Federal Law No. 152-FZ "On Personal Data". The Law requires informed consent, strict purpose limitation, and robust data protection measures. Presidential Decree No. 680 of November 28, 2018 "On the Development of Genetic Technologies in the Russian Federation" accelerates genetic research in Russia and states that genetic data rigorous control and security measures are

required. Federal Law No. 323-FZ “On the Basics of Health Protection of Citizens in the Russian Federation” serves as the foundational legal framework governing patient rights, access to medical information, and medical confidentiality, encompassing matters relating to genetic testing. The prospects for developing predictive medicine within the current normative context are extensively discussed in Russian literature [19].

Domestic rules, however, are significantly less comprehensive than international standards. The European Convention on Human Rights and Biomedicine, commonly known as the Oviedo Convention (1997), is recognized as the first legally binding international instrument in the biomedical field. Specifically, Article 11 prohibits genetic discrimination, Article 12 states that genetic testing is allowed exclusively for medical purposes or health-related scientific research, whereas Specifically, Article 10 establishes both the right to access and the right to refuse genetic information [7]. Russia has not ratified the Oviedo Convention, which creates a gap in the legal protection of citizens regarding the use of genomic technologies.

In the USA, it is the Genetic Information Nondiscrimination Act (GINA, 2008) that provides protection against discrimination on the basis of genetic information. The Act prohibits insurers and employers from using genetic data when making decisions about insurance coverage and hiring [7]. The EU General Data Protection Regulation (GDPR, 2018) classifies genetic data as special categories requiring enhanced legal protection and explicit consent from the data subject. The domestic legislator will have to develop mechanisms ensuring a comparable level of guarantees, including those related to pharmacogenetic data obtained in the prenatal period [19, 20]. The establishment of centralized genomic databases exacerbates the tension between individual confidentiality and governmental imperatives, necessitating a tailored legal framework [20, 21].

THE PHARMACOGENETIC PASSPORT: FROM POSTNATAL TO PRENATAL PERSONALIZED MEDICINE

In clinical practice, the concept of a “pharmacogenetic patient passport”, which is a structured document containing information on genetic variants that are clinically significant for drug therapy, is actively developing. It includes data on polymorphisms of genes encoding xenobiotic metabolism enzymes (CYP family), transport proteins, and molecular targets of drugs, including anticoagulants, statins, and psychotropic agents, which allows for the customization of drug selection and dosage [8, 16, 22, 23]. By 2025, the Clinical Pharmacogenetics Implementation Consortium (CPIC) has developed guidelines for more than 34 genes and 164 drugs, covering the most critical therapeutic areas [16]. Pharmacogenetic data retain their predictive value throughout the patient's life and are relevant for biological relatives.

A fundamentally new approach is the transitioning from the postnatal application of this approach to the pre-birth creation of an individual pharmacogenetic passport. The prospects for development of postnatal pharmacotherapy in pediatrics and perinatal treatment are expanded. Correction of maternal therapy regimens has become possible, taking into account the pharmacokinetic characteristics of the fetus, along with direct intrauterine therapy when clinically justified [17, 18]. The focus is shifting from the diagnosis of monogenic hereditary diseases to the creation of an expanded pharmacogenetic

profile, which increases the clinical significance of prenatal testing while simultaneously complicating its ethical and legal regulation [5, 21].

ETHICAL AND LEGAL DIFFICULTIES OF PRENATAL PHARMACOGENETICS

The implementation of pharmacogenetic data into medical practice and their development from the prenatal period raise a number of fundamental legal and ethical issues.

Confidentiality and secondary use. Pharmacogenetic data have a dual predictive value: not only do these elements delineate the individual's metabolic state, but they can also serve as latent precursors to future medical conditions. This creates a threat of discrimination by insurance companies or employers, a vulnerability that the US GINA and EU GDPR were specifically enacted to prevent, whereas Russian legislation does not yet provide for a similar mechanism [7, 21]. Pharmacogenetic records necessitate legally mandated safeguards as restricted, highly classified medical information.

Informed consent under conditions of uncertainty. As genetic science continuously advances, informed consent must be treated as a fluid, evolving dialogue rather than a singular agreement that encompasses the patient's prerogative to be updated as scientific discoveries emerge [6, 24]. The emergence of variants of uncertain clinical significance (VUS) dramatically complicates this process, especially in the prenatal context [14, 15, 24].

Parental proxy and fetal rights. Prenatal or preconception testing affects the interests of a person not yet possessing legal capacity. According to the ethical principles formulated by V. S. Baranov, prenatal creation of a genetic profile is permissible exclusively when there is direct clinical benefit for the child at an early age and must be accompanied by mandatory genetic counseling. This approach is consistent with the position of the European Society of Human Genetics (ESHG) [10, 11] regarding the prohibition of screening children for conditions that manifest in adulthood.

THE RIGHT NOT TO KNOW WITHIN THE CONTEXT OF A CHILD'S PHARMACOGENETIC PASSPORT

The concept of the “right not to know” one's own genetic information holds a significant place in modern bioethics. The right is understood as the manifestation of personal autonomy when a person has the right to remain uninformed to protect themselves from psychological harm and preserve their freedom of choice [21]. At the international level, this right is enshrined in Article 10 of the Oviedo Convention, which recognizes both the right to know and the right not to know information about one's own health [7]. In the context of Russian jurisprudence, this concept lacks definitive statutory recognition, although a number of researchers believe that it is firmly grounded in the constitutional right to privacy and the broader principle of personal inviolability [21].

At the same time, the right to absolute ignorance is not absolute. When genetic information yields immense clinical significance and makes it possible to prevent a serious disease, an ethical obligation to know arises both in relation to oneself and to biological relatives [7, 21]. Scientific discussion indicates that the “right not to know” conflicts with the duty of healthcare professionals to inform the

patient, as well as with the interests of third parties, family members who may share a similar genetic risk [21, 25]. The problem is particularly acute in the era of expanding genomic databases: an individual patient's choice has consequences for others.

PRENATAL PARENTAL DECISIONS: PROXY LIMITS

If a pharmacogenetic profile is created before birth, the decision to perform testing and its scope is made by the parents or legal representatives. Within the framework of pediatric ethics, it is assumed that parents have the right to use available medical technologies to prevent harm and ensure the optimal development of the child [6, 7]. However, the collection and long-term storage of genetic information without the possibility for the child to subsequently refuse its use can be qualified as a violation of their right to future autonomy [7, 21].

The problem becomes particularly acute when a pharmacogenetic passport includes data not only with immediate clinical significance in childhood, but also information on late-onset, potentially incurable diseases. Such information can influence the development of a young person's identity [7, 25]. In pediatric genomics, the concept of the "right to an open future" is widely applied: a child should have the opportunity to make decisions about their own genetic information upon reaching maturity. For this reason it is standard practice to restrict prenatal genetic testing to conditions where early detection allows for treatment and prevention during childhood [7]. Simulating the child's future retrospective perspective helps define the ethical dilemma. In the first scenario, an adult retrospectively criticizes their parents' decision to create a genetic passport, viewing it as a violation of the right to choose and perceiving this document as a psychological burden. In the second scenario, by contrast, the absence of personalized pharmacogenetic profiling is interpreted as a missed opportunity if a person has experienced severe, preventable adverse drug reactions. In certain situations, the right to health makes medicine act: if the harm is predictable and preventable, the healthcare system cannot remain passive. It means that the right to not to know is not absolute as in clinically significant cases it may be reasonably restricted in the patient's best interest [5, 21].

NORMATIVE MODELS OF BALANCING THE RIGHTS AND INTERESTS

Based on literature analysis, the conflict between the child's "right to health" and the "right not to know" regarding a pharmacogenetic passport can be resolved through three main normative approaches.

The minimal intervention model limits prenatal and early childhood genetic testing to data which are significant for prevention and treatment in childhood. Advanced testing is deferred until the individual reaches the age of majority and is able to provide independent informed consent. This approach most fully protects the future adult's autonomy; however, it entails the risk of missed clinical benefit.

The clinical utility model is based on a simple principle: if genetic information helps to prevent a disease or select treatment, it is acceptable to disclose and use it for medical purposes. It is a strict requirement to ensure secure protection of the data against insurers, employers, and third parties [21].

In practice, the model is applied when an identified genetic variant changes the treatment strategy. For instance, it can indicate intolerance to a specific drug or a high risk of a severe adverse reaction.

The deferred choice model involves creating an enhanced pharmacogenetic passport with differentiated access. Critical health-related data are made available to clinicians and parents, whereas supplementary information remains inaccessible until the individual decides to access it. This model preserves the patient's future autonomy without forgoing clinically significant preventive benefits..

The deferred choice model involves creating an enhanced pharmacogenetic passport with differentiated access. Critical health-related data are made available to clinicians and parents, whereas supplementary information remains inaccessible until the individual decides to access it. This model preserves the patient's future autonomy without forgoing clinically significant preventive benefits. [7, 21]. A similar approach is implemented through the recommendations of ESHG related to enhanced preconception screening [10] and of ESHG-ESHRE concerning the practice of enhanced carrier screening in reproductive centers [11].

CONCLUSIONS

1. The preconception and prenatal stages require strict differentiation: the former involves parental autonomy, while the latter concerns the autonomy and rights of the future child. Conflating these stages leads to errors in ethical analysis.
2. A pharmacogenetic (PGx) passport created before birth offers significant clinical advantages, ranging from the optimization of postnatal therapy to, under sound indications, intrauterine pharmacotherapy. These possibilities necessitate specialized ethical and legal safeguards.
3. The right not to know one's genetic status is anchored in the Oviedo Convention as an element of personal autonomy. This right may be reasonably restricted in the interest of the patient's health when the timely use of genetic information can genuinely prevent harm.
4. Russian legislation requires specialized regulation of pharmacogenetic data including mechanisms for differentiated, data retention periods, rights of patients to correct and erase data, and protect from genetic discrimination similar to GINA and GDPR.
5. The ethically most balanced approach is the deferred choice model, which ensures access to clinically significant data during childhood while preserving the adult's right to independently decide on the disclosure of the remaining genetic information.
6. It is recommended as follows: a) to conduct prenatal and neonatal genetic testing exclusively for those conditions that can be prevented and treated in childhood; b) to ensure mandatory genetic counseling when creating a fetal pharmacogenetic passport; c) to consolidate the "right not to know" within the Russian law as a mechanism to protect patient information autonomy.

Thus, establishing a prenatal pharmacogenetic passport demands structured procedural guidelines rather than restrictive bans. It requires clearly specifying exactly which information is available, to whom, and at what stage while strictly prioritizing the welfare of the unborn child.

References

1. Baranov VS. Polimorfizm genov, ekogeneticheskiye bolezni i geneticheskiy pasport. *Ekologicheskaya Genetika*. 2011; 9(3): 3–14. Russian
2. Baranov VS. Genomika na puti k prediktivnoy meditsine. *Acta Naturae*. 2009; 1(3): 77–88. Russian.
3. Baranov VS, ed. *Geneticheskiy pasport — osnova individual'noy i prediktivnoy meditsiny*. Saint Petersburg. Izd-vo N-L. 2009; 528 p. Russian
4. Solomon BD, Jack BW, Feero WG. The clinical content of preconception care: genetics and genomics. *Am J Obstet Gynecol*. 2008; 199(6 Suppl 2): S340–S344.
5. Raymond M, Critchlow J, Rice SM, et al. Fetal pharmacogenomics: a promising addition to complex neonatal care. *Mol Genet Metab*. 2022; 137(1–2): 140–145.
6. Kihlborn U. Ethical issues in preconception genetic carrier screening. *Ups J Med Sci*. 2016; 121(4): 295–298.
7. Council of Europe. Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine (Oviedo Convention). Oviedo; 1997. Available from: <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/164> (accessed: 18.03.2026).
8. Kaye DK. Addressing ethical issues related to prenatal diagnostic procedures. *Matern Health Neonatol Perinatol*. 2023; 9(1): 1.
9. De Wert GM, Dondorp WJ, Knoppers BM. Preconception care and genetic risk: ethical issues. *J Community Genet*. 2012; 3(3): 221–228.
10. Henneman L, Borry P, Chokoshvili D, et al. Responsible implementation of expanded carrier screening. *Eur J Hum Genet*. 2016; 24(6): e1–e12.
11. Capalbo A, Ramos-Alcalá L, Cimadomo D, et al. ESHG-ESHRE survey on the current practice of expanded carrier screening in European MAR centres. *Hum Reprod*. 2024; 39(8): 1844–1855.
12. De Jong A, Dondorp WJ, de Die-Smulders CE, et al. Non-invasive prenatal testing: ethical issues explored. *Eur J Hum Genet*. 2010; 18(3): 272–277.
13. Ministry of Health of the Russian Federation. Order No. 1130n of 20.10.2020 on the procedure for providing medical care in obstetrics and gynaecology [Ob utverzhdenii Poryadka okazaniya meditsinskoy pomoshchi po profilu «akusherstvo i ginekologiya»]. Available from: https://www.consultant.ru/document/cons_doc_LAW_367763/ (accessed: 18.03.2026). Russian.
14. Baranova EE, Izhevskaya VL, Efremova EE. Eticheskiye aspekty neinvazivnogo prenatal'nogo testirovaniya: avtonomiya i informirovannyi vybor. *Meditsinskaya Genetika*. 2024; 23(3): 12–20. Russian.
15. Potapov AA, Kaplanova MT, Galaktionova AM, et al. Eticheskiye aspekty primeneniya polnogenomnogo neinvazivnogo prenatal'nogo testirovaniya. *Meditsinskaya Genetika*. 2023; 22(11): 3–12. Russian.
16. Rim JH, Kim JH, Park JH, et al. Clinical pharmacogenetic testing and application: a guideline update. *Ann Lab Med*. 2024; 44(6): 494–512.
17. Meslin EM, Kant C, Mazzuri S, Knoppers BM. Prenatal therapies: a Points to Consider framework for responsible innovation. *BMC Med Genomics*. 2025; 18(1): 191.
18. Lynn AY, Farmer DL. The technical and ethical framework of fetal therapy. *Curr Opin Pediatr*. 2024; 36(3): 367–373.
19. Aseyev MV, Baranov VS, Baranova EV, et al., eds. *Evolutsiya prediktivnoy meditsiny Saint Petersburg*. Eko-Vektor. 2021; 359 p. Russian.
20. Baranov VS. Genomika i prediktivnaya meditsina. *Sibirskiy zhurnal klinicheskoy i eksperimental'noy meditsiny*. 2021; 36(4): 14–28. Russian.
21. Kurskaya SA. Pravo ne znat' geneticheskuyu informatsiyu o sebe: imeyet li mesto v rossiyskom zakonodatel'stve. *Yuridicheskiy mir*. 2025; (4): 32–35. Russian.
22. Guan ZW, Wu KJ, Bian HJ, et al. Pharmacogenetics of statins treatment: efficacy and safety. *J Clin Pharm Ther*. 2019; 44(6): 858–867.
23. Raymond J, Dooley M, Singl N, et al. Pharmacogenetics of direct oral anticoagulants: a systematic review. *J Pers Med*. 2021; 11(1): 37.
24. Muflih S, Al-Husein BA, Karasneh R, et al. Physicians' attitudes and ethical obligations to pharmacogenetic testing. *J Multidiscip Healthc*. 2020; 13: 249–258.
25. Greene BL, Nichols K, Parsons DW. Ethical considerations of genetic and genomic testing in pediatric oncology. *CA Cancer J Clin*. 2026; 76(2): e70005.

Литература

1. Баранов В. С. Полиморфизм генов, экогенетические болезни и генетический паспорт. *Экологическая генетика*. 2011; 9(3): 3–14.
2. Баранов В. С. Геномика на пути к предиктивной медицине. *Acta Naturae*. 2009; 1(3): 77–88.
3. Баранов В. С. Генетический паспорт — основа индивидуальной и предиктивной медицины. Под ред. В. С. Баранова. СПб. Изд-во Н-Л. 2009; 528 с.
4. Solomon BD, Jack BW, Feero WG. The clinical content of preconception care: genetics and genomics. *Am J Obstet Gynecol*. 2008; 199(6 Suppl 2): S340–S344.
5. Raymond M, Critchlow J, Rice SM, et al. Fetal pharmacogenomics: a promising addition to complex neonatal care. *Mol Genet Metab*. 2022; 137(1–2): 140–145.
6. Kihlborn U. Ethical issues in preconception genetic carrier screening. *Ups J Med Sci*. 2016; 121(4): 295–298.
7. Совет Европы. Конвенция о защите прав человека и человеческого достоинства в связи с применением биологии и медицины (Конвенция Овьедо). Овьедо; 1997. Режим доступа: <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/164> (дата обращения: 18.03.2026).
8. Kaye DK. Addressing ethical issues related to prenatal diagnostic procedures. *Matern Health Neonatol Perinatol*. 2023; 9(1): 1.
9. De Wert GM, Dondorp WJ, Knoppers BM. Preconception care and genetic risk: ethical issues. *J Community Genet*. 2012; 3(3): 221–228.
10. Henneman L, Borry P, Chokoshvili D, et al. Responsible implementation of expanded carrier screening. *Eur J Hum Genet*. 2016; 24(6): e1–e12.
11. Capalbo A, Ramos-Alcalá L, Cimadomo D, et al. ESHG-ESHRE survey on the current practice of expanded carrier screening in European MAR centres. *Hum Reprod*. 2024; 39(8): 1844–1855.
12. De Jong A, Dondorp WJ, de Die-Smulders CE, et al. Non-invasive prenatal testing: ethical issues explored. *Eur J Hum Genet*. 2010; 18(3): 272–277.
13. Об утверждении Порядка оказания медицинской помощи по профилю «акушерство и гинекология»: приказ Минздрава России от 20.10.2020 № 1130н. Режим доступа: https://www.consultant.ru/document/cons_doc_LAW_367763/ (дата обращения: 18.03.2026).
14. Баранова Е. Е., Ижевская В. Л., Ефремова Е. Е. Этические аспекты неинвазивного пренатального тестирования: автономия и информированный выбор. *Медицинская генетика*. 2024; 23(3): 12–20.
15. Потапов А. А., Капланова М. Т., Галактионова А. М. и др. Этические аспекты применения полногеномного неинвазивного пренатального тестирования. *Медицинская генетика*. 2023; 22(11): 3–12.

16. Rim JH, Kim JH, Park JH, et al. Clinical pharmacogenetic testing and application: a guideline update. *Ann Lab Med.* 2024; 44(6): 494–512.
17. Meslin EM, Kant C, Mazzuri S, Knoppers BM. Prenatal therapies: a Points to Consider framework for responsible innovation. *BMC Med Genomics.* 2025; 18(1): 191.
18. Lynn AY, Farmer DL. The technical and ethical framework of fetal therapy. *Curr Opin Pediatr.* 2024; 36(3): 367–373.
19. М. В. Асеев, В. С. Баранов, Е. В. Баранова и др. Эволюция предиктивной медицины. Под ред. М. В. Асеева СПб. Эко-Вектор. 2021; 359 с.
20. Баранов В. С. Геномика и предиктивная медицина. Сибирский журнал клинической и экспериментальной медицины. 2021; 36(4): 14–28.
21. Курская С. А. Право не знать генетическую информацию о себе: имеет ли место в российском законодательстве? *Юридический мир.* 2025; (4): 32–35.
22. Guan ZW, Wu KJ, Bian HJ, et al. Pharmacogenetics of statins treatment: efficacy and safety. *J Clin Pharm Ther.* 2019; 44(6): 858–867.
23. Raymond J, Dooley M, Singl N, et al. Pharmacogenetics of direct oral anticoagulants: a systematic review. *J Pers Med.* 2021; 11(1): 37.
24. Muflih S, Al-Husein BA, Karasneh R, et al. Physicians' attitudes and ethical obligations to pharmacogenetic testing. *J Multidiscip Healthc.* 2020; 13: 249–258.
25. Greene BL, Nichols K, Parsons DW. Ethical considerations of genetic and genomic testing in pediatric oncology. *CA Cancer J Clin.* 2026; 76(2): e70005.

ETHICAL VIEWS OF KARL F. FUCHS, A PROMINENT 19TH-CENTURY THERAPIST FROM THE CITY OF KAZAN, RUSSIA (IN CELEBRATION OF THE 250TH ANNIVERSARY OF HIS BIRTH)

Abrosimova MYu ✉

Kazan State Medical University, Kazan, Russia

The article is dedicated to Karl Fuchs, a distinguished medical practitioner, scientist, public figure and professor within the Department of Therapy, Pathology, and Clinical Medicine, who served as both the Dean of the Faculty of Medicine and the Rector of Imperial Kazan University. Born in Germany, Karl Fuchs committed his life's work to the advancement of Kazan and well-being of its population. The central focus rests on the scientist's character traits, ethical views and his contributions to the medical, educational, and public spheres. It is shown how eminent 19-century public figures in Kazan evaluated Karl Fuch's life and work. The conclusions regarding the contemporary significance of his ethical principles are made.

Keywords: Karl Fuchs, history of medicine, medical ethics, Imperial Kazan University

✉ **Correspondence should be addressed:** Marina Y. Abrosimova
Butlerova St., 49, Kazan, 420012, Russia Republic of Tatarstan; marabro@yandex.ru

Received: 15.06.2026 **Accepted:** 24.06.2026 **Published online:** 05.07.2026

DOI: 10.24075/medet.2026.016

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

ЭТИЧЕСКИЕ ВЗГЛЯДЫ ИЗВЕСТНОГО КАЗАНСКОГО ТЕРАПЕВТА ПЕРВОЙ ПОЛОВИНЫ XIX ВЕКА КАРЛА ФЕДОРОВИЧА ФУКСА (К 250-ЛЕТИЮ СО ДНЯ РОЖДЕНИЯ)

М. Ю. Абросимова ✉

Казанский государственный медицинский университет, Казань, Россия

Статья посвящена Карлу Федоровичу Фуксу — выдающемуся врачу, ученому, общественному деятелю, профессору кафедры терапии, патологии и клиники, декану медицинского факультета, ректору Императорского Казанского университета. Родившись в Германии, он посвятил всю свою жизнь Казани и ее жителям. Основное внимание уделено особенностям личности и этических взглядов ученого, тесно связанным с фактами его биографии, с врачебной, педагогической и общественной деятельностью. Приведены сведения об оценке деятельности К. Ф. Фукса известными представителями казанской общественности XIX в., сделаны выводы о значении его этических взглядов для современного общества.

Ключевые слова: Карл Фукс, история медицины, медицинская этика, Императорский Казанский университет

✉ **Для корреспонденции:** Марина Юрьевна Абросимова
ул. Бултерова, д. 49, г. Казань, 420012, Россия Республика Татарстан; marabro@yandex.ru

Статья поступила: 15.06.2026 **Статья принята к печати:** 24.06.2026

Опубликована онлайн: 05.07.2026

DOI: 10.24075/medet.2026.016

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

For every resident of Kazan, the name of Karl Fuchs has a sacred meaning. He is remembered as an eminent physician whose fame extended far beyond Kazan and its surrounding province. He is also known as a distinguished scientist at Kazan University who profoundly shaped its institutional growth, serving as a department head, dean of the Medical Faculty, and rector of the Imperial Kazan University. Finally, he is recognized as an ethnographer who provided the first comprehensive account of the Tatars' culture and way of life. Famous for his diverse interests, he complemented his studies in medicine and physiology with a passion for botany, zoology, ethnography, local history, archaeology, and numismatics.

The significance of this topic stems from the growing scholarly interest in the historical roots of how society's ethical values first developed. Examining Fuchs' ethical perspectives offers a deeper look into the era's intellectual climate and helps follow the development of moral philosophy in early 19th-century Russia.

This paper aims to examine the moral principles of K. Fuchs, exploring how they developed and shaped the history

of medical ethics and the moral standards of Russian doctors. To achieve this goal, the following objectives were established: to investigate the scientist's background, to analyze his written works for ethical insights, to identify his core moral principles, and to evaluate the long-term impact of his views on both his contemporaries and future generations.

Unfortunately, none of the available sources include Karl Fuchs's specific texts on medical ethics or direct quotes revealing his ethical views. However, his personal and professional legacy, coupled with observations from those who knew him, allow us to draw conclusions about his worldview and values.

Karl Friedrich Fuchs was born in Herborn (Germany) on September 6 (18), 1776, into an esteemed academic family. His father was a professor of theology, history, and eloquence, while his mother was the daughter of a professor of medicine who established the town's botanical garden. Having graduated from the University of Göttingen in 1797, he secured a medical degree from the University of Marburg the following year based on his research into the prominent Renaissance natural philosopher Andrea Cesalpino.

In 1800, Karl Fuchs came to Russia, where he first worked for a short time as a private practitioner in St. Petersburg, and then went on a trip to the Urals and Eastern Siberia, studying the local flora. In 1805, he began teaching natural history and botany as a professor at the newly founded Imperial Kazan University. From 1806, he served as a doctor at the gymnasium and university hospital. Between 1805 and 1818, as well as from 1827 to 1828, he also taught zoology. From 1818 until 1833, he worked as a professor in the Department of Therapy, Pathology, and Clinic. After Professor Brown's death in 1819, he was additionally requested to lecture on anatomy, physiology, and forensic medicine.

Between 1820 and 1823, Karl Fuchs headed the Medical Faculty, and he subsequently served as Kazan University's rector from 1823 to 1827.

Having received the title of honorary professor on May 6, 1833, Karl Fuchs retired, without losing his close ties with the university until his death. As noted by the distinguished historian N. P. Zagoskin in his *Biographical Dictionary of Professors and Teachers of the Imperial Kazan University (1804–1904)*, he passed away in Kazan on April 24, 1846, remaining deeply engaged in his scholarly research and highly sought-after medical practice until the very end [1].

Thousands of people came to see Karl Fuchs off on his last journey. Observers noted that the funeral procession extended across several avenues, with spectators occupying not only the streets but also residential windows, fences, and roofs [2]. Many famous people of Kazan delivered farewell words over his grave. The people of Kazan profoundly honor his legacy today: an avenue bears his name, a beautifully landscaped park features a statue of the professor at its center, and his former residence has been restored.

Throughout his lifetime, Fuchs earned broad recognition by dedicating his existence to the welfare of humanity. His multifaceted character and moral principles were forged by deeply rooted familial values, classical German philosophy (most notably the ideas of Kant and Hegel), the 18th-century Enlightenment, and a lifetime of engaging with diverse cultures and individuals.

As a contemporary of MYa Mudrov, it is inconceivable that Karl Fuchs would have inevitably been acquainted with the core ethical principles advocated by the forefather of Russian medical ethics. Examination of the literary evidence indicates profound parallels. According to MYa Mudrov, KF Fuchs possessed all the necessary attributes of an outstanding doctor, such as selflessness, empathy, readiness to help, professional integrity, etc.

Fuchs' legacy is fundamentally rooted in his interaction with the people of Kazan and its neighborhood, and investigation of the rich history and traditions of the Volga basin. The scientist respected the traditions and customs of different nations, which reflects such aspects of his ethical views as respect for the national, cultural and religious characteristics of patients.

In his anthropological research, he documented the existence of various ethnic groups, stressing their fundamental role in driving urban development. Furthermore, he articulated the significance of cultural heterogeneity and need in empathy and mutual understanding.

In the late eighteenth to early nineteenth centuries, Tatar residents of Kazan were confined to designated residential districts, specifically the Old Tatar Quarter (dating back to the 1552 conquest) and the New Tatar Quarter (1751). They differed from other districts of the city in their way of life, religion, national traditions, etc. [3]. Karl Fuchs specially settled in the not prestigious Old Tatar settlement to live among the Tatars.



Fig. 1. Karl Fuchs

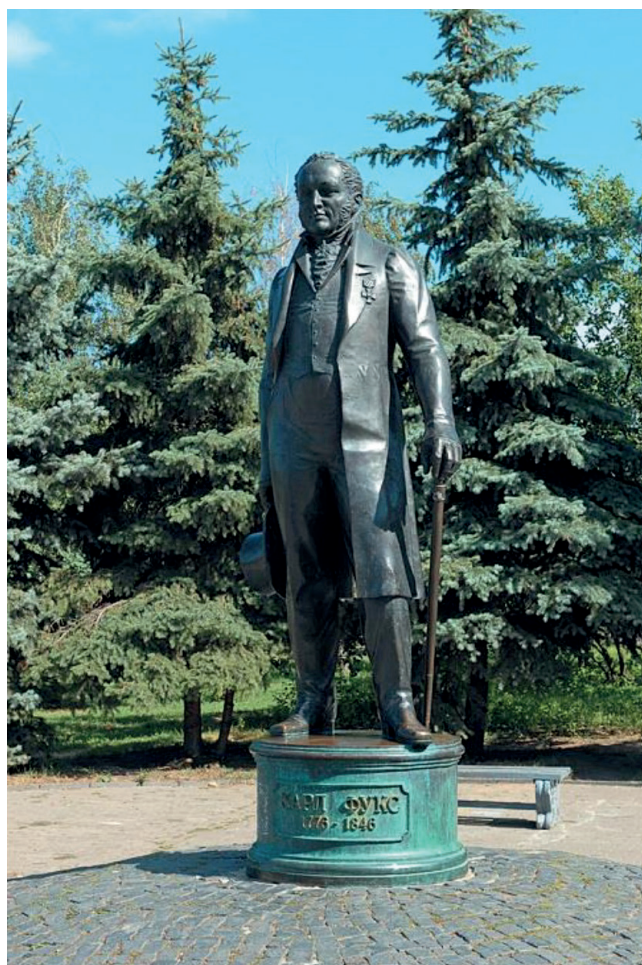


Fig. 2. Monument to Karl Fuchs

He examined their daily routines and living conditions, which proved essential for comprehending the etiology of various diseases and the nuances of their progression. Knowing more than 10 languages, Karl Fuchs gained the trust of Kazan residents by communicating with them in their native language. Consequently, he was even issued a personalized *Tabib Fuchs* (Doctor Fuchs) seal and was granted special permission to treat Tatar women, which was an unprecedented privilege for a non-Muslim physician at that time. He held profound empathy for Tatar women, describing them as “pitiable figures of the oppressive Orient” and “eternal prisoners” [4].

Karl Fuchs was distinguished by his cheerful, good-natured disposition, sociable nature and curiosity. These qualities facilitated the professor's integration into the Kazan society. According to his peers, he quickly built a wide network, visited many families, and established a highly sought-after reputation as a physician. After the great fire in Kazan in September 1856, thousands of residents were left homeless, urgently seeking basic necessities and support. Professor Fuchs invited the gymnasium inspector N. M. Ibragimov and his family to live in his big house [6]. During the 1930s and 1940s, the residence of Karl Fuchs and his wife, Alexandra Andreevna — a prominent local author and poet — served as “the intellectual hub for the city's entire cultural elite”, as noted by NP Zagoskin [1]. AS Pushkin subsequently visited the area in late 1833, gathering historical accounts to document the Pugachev revolt [7].

K. Fuchs extended the exact same standard of care to every patient, without exception, irrespective of their socioeconomic background, financial situation, or origin. At Fuchs's funeral, Professor EF Aristov noted that “the brightest light crowning the sacred memory of Karl Fuchs was his tangible compassion for his neighbors. He drew no lines between people, offering a profound, boundless devotion to all” [8].

Mikhail Rybushkin, an eminent historian of Kazan who was personally acquainted with Fuchs, noted: “On numerous occasions, I have observed Fuchs' consulting room packed with poor people battling severe ailments, yet every single one of them would depart his home visibly uplifted, hoping for their recovery. They all trusted in Karl Fuch's mastery profoundly. Was this not the very reason Fuchs' countenance consistently radiated warmth and genuine benevolence?” [9] K Fuchs consistently refrained from exploiting his patients for personal financial gain, dedicating his own resources to supporting the underprivileged instead. Upon his appointment as a trustee for the Kazan Committee of the Imperial Humane Society in 1816, he committed to donating 50 rubles to the fund annually and providing complimentary medical care for the organization's underprivileged beneficiaries. At his request, many poor families received assistance from the city authorities [5]. Whenever patients lacked the financial means, Karl Fuchs directed them to a specific pharmacy where they could acquire medication free of charge, as he had already settled their tabs out of pocket. Since the local peasants were inherently distrustful of pharmaceutical drugs, Fuchs used traditional folk remedies whenever possible, making sure he was always equipped with a ready stock of therapeutic herbs. “To show their thankfulness”, the locals could assist him by harvesting the plants he sought.

NN Bulich, who studied the history of the formation of Kazan University in the early years of its existence (1805–1819), wrote: “With his extensive practice and universal respect he enjoyed for his knowledge of the matter and the actual multitude of lucky cures, Fuchs could have made a large fortune. Instead, he was a selfless physician, who dedicated his time to the poor, often providing them with the fees he reluctantly collected from wealthy patients” [6].

Karl Fuchs was dedicated to continuous professional growth and made a major impact on the rise of medical education in Kazan. He was convinced that the purpose of education extends beyond mere knowledge acquisition, functioning instead as a vital catalyst for moral growth and development of an ethically mature character. In his doctoral thesis, he claimed that a comprehensive general education is essential for anyone aspiring to be a skilled physician. Unlike many early foreign professors at Kazan University who taught in Latin, French, or German, Karl Fuchs viewed it as an ethical responsibility to teach in Russian. He affectionately referred to Russian as the language of his second homeland, a choice that earned him deep admiration from his students [10]. He was the sole non-Russian to hold membership in the “Society of Lovers of Russian Literature.” [5].

Professor treated his students with love and respect. Based on the memoirs of Sergey Aksakov, one of the earliest students at Kazan University who went on to become a prominent writer and critic, the school's “exams felt like friendly, informal family gatherings, where professor Karl Fuchs excelled specifically in natural history” [11]. By presenting his lectures as interactive dialogues and addressing questions, he captured his students' interest, resulting in high and enthusiastic attendance.

His name is associated with the introduction of new diagnostic methods, specifically auscultation. He was a pioneer of clinical education at Kazan University. He oversaw the expansion of the university hospital and championed innovative teaching methods. For instance, he introduced the role of the clinical resident, directing students to actively manage patient care and maintain detailed medical records. He introduced outpatient case studies into therapy education, establishing practical polyclinic training for students. By inviting students to his consultations, Karl Fuchs passed on to them not only knowledge about medicine, but also taught them the art of communicating with patients [12].

Throughout his articles and speeches, he highlighted the need for the compassionate care of patients. Eyewitnesses reported that Dr. Fuchs's bedside manner promoted healing and inspired hope: “Upon hearing his voice, patients experienced immediate pain relief, renewed optimism, and a restored will to live” [8].

The scientist found his purpose in dedicating his life to science and the community. He believed scientists have a duty to use their expertise to benefit society and enhance daily life. Fuchs highlighted that researchers are heavily accountable for their innovations and theories. The application of knowledge must not cause injury to society, and empirical research should always be governed by moral integrity. He also prioritized public health by regularly publishing statistical reports on the medical status of Kazan residents in *Kazanskiye Izvestia* and other periodicals. These updates kept the public informed about ongoing epidemics, specifically detailing the devastating 1830 cholera outbreak in Kazan alongside the measures used to combat it. KF Fuchs's public lectures on Kazan's sanitary conditions were highly popular [13].

CONCLUSION

Fuchs' ideas undoubtedly impacted Kazan's scholarly community in the first half of the 19th century. His teachings and publications motivated peers and learners, helping to shape a society centered on humanistic principles. His dedication to his medical practice and ethical duties — rooted in deep respect, compassion, and accountability for patient well-being — has inspired countless generations of medical professionals. In modern medical training, the concept of

education as a tool for building moral character remains essential. Fuchs actively promoted cultural and religious tolerance, fostering the shared understanding that became the cornerstone of peaceful coexistence among the Volga region's diverse communities. They are essential in today's environment of globalization, ethnic conflicts, and migration. In light of ongoing advancements in biotech and AI, his remarks

regarding a researcher's ethical obligations for the outcomes of their research are particularly significant.

By exploring the work of KF Fuchs, we can better grasp the beginnings of Russian medical ethics and find solutions to modern ethical issues. His life and his ideas can serve as a guide for doctors, scientists, teachers and all those who strive to build a humane and just society.

References

1. Zagoskin NP. Biograficheskij slovar' professorov i prepodavatelej Imperatorskogo Kazanskogo universiteta (1804–1904). Kazan'. 1904;2: 368. Russian.
2. Ternovskij VN. Fuks Karl Fedorovich. V kn. Zhizn' zamechatel'nyh lyudej v Kazani. Kazan'. Tatgosizdat. 1940; 2:135–147. Russian.
3. Valiullin IR. K voprosu o vzaimodejstvii tatarskogo naseleniya v sociokul'turnom prostranstve Kazani vo 2-j polovine XVIII — nachale XIX vv. Problemy i tendencii razvitiya sociokul'turnogo prostranstva Rossii: istoriya i sovremennost': materialy XII mezhdunar. nauch.-prakt. konf. Bryansk. Bryanskij gosudarstvennyj inzhenerno-tehnologicheskij universitet. 2025; 15–19. Russian.
4. Fuks KF. Kazanskije tatary v statistich eskom i ehtnograficheskom otnosheniyah. Kratkaya istoriya Kazani. Reprint, vospr. Kazan'. Fond TYAK. 1991; 30–31 Russian.
5. Garzavina AV. «V Kazan', professoru K. F. Fuksu ...» Kazan'. Tatarskoe kn. Izd-vo. 1987; 23; 57. Russian.
6. Bulich NN. Iz pervyh let Kazanskogo universiteta (1805–1819): rasskazy po arhivnym dokumentam: Kazan': Tip. Imperatorskago un-ta.1887–1891. 1887; 1:112. Russian.
7. Daminova FK. Pushkin v Kazani. Nauchnyj Tatarstan. 2013; 4; 116–118. Russian.
8. Polovcov AA. Karl Fedorovich Fuks. Tekst ehlektronnyj. Russkij biograficheskij slovar'. Tom 21. Available from URL: <https://azbyka.ru/otchnik/Spravochniki/russkij-biograficheskij-slovar-tom-21/> (accessed: 29.04.2026). Russian.
9. Milashevskij G. Russkij nemec Karl Fuks. Tekst ehlektronnyj. Vremya i den'gi. Sajt Yuriya Alaeva. Available from URL: <https://e-vid.ru/index-m-192-p-63-article-24548.htm> (accessed: 29.05.2026). Russian.
10. Amirov N. H., Al'bickij VYu. Karl Fuks — vydayushchisya deyatel' otechestvennoj mediciny pervoj poloviny XIX veka. Kazanskij medicinskij zhurnal. 1997; 78 (1): 71–73. Russian.
11. Zagoskin NP. Istoriya Imperatorskago kazanskago universiteta za pervye sto let ego sushchestvovaniya. 1804–1904; 2: 1814–1819. Kazan'. Tipo-litogr. Imp. kazanskago un-ta. 1902–1904, 1902 (obl. 1903); 698. Russian.
12. Sozinov AS, Abdalganieva DI, Galyavich AS, Hamitov RF, Husnutdinova LA, Halfina TN, et al. K istorii Kazanskoy shkoly terapevtov (k 200-letiyu Kazanskogo gosudarstvennogo medicinskogo universiteta). Terapevticheskij arhiv. 2014; 5; 120–122. Russian.
13. Mihajlova SM, Korshunova ON. Missiya universitetov v Rossii: vek HIIH. Uchenye zapiski Kazanskogo gosudarstvennogo universiteta. 2006; 148(4) Gumanitarnye nauki; 86. Russian.

Литература

1. Загоскин Н. П. Биографический словарь профессоров и преподавателей Императорского Казанского университета (1804–1904). Казань. 1904;2: 368.
2. Терновский В. Н. Фукс Карл Федорович. Жизнь замечательных людей в Казани. Казань. Татгосиздат. 1940; 2:135–147.
3. Валиуллин И. Р. К вопросу о взаимодействии татарского населения в социокультурном пространстве Казани во 2-й половине XVIII — начале XIX вв. Проблемы и тенденции развития социокультурного пространства России: история и современность: материалы XII междунар. науч.-практ. конф. Брянск. Брянский государственный инженерно-технологический университет. 2025; 15–19.
4. Фукс К. Ф. Казанские татары в статистическом и этнографическом отношениях. Краткая история Казани. Репринт, воспр. Казань. Фонд ТЯК. 1991; 30–31
5. Гарзавина А. В. «В Казань, профессору К. Ф. Фуксу ...» Казань. Татарское кн. Изд-во. 1987; 23; 57.
6. Булич Н. Н. Из первых лет Казанского университета (1805–1819): рассказы по архивным документам: Казань. Типогр. Императорского ун-та. 1887–1891.1887; 1:112.
7. Даминова Ф. К. Пушкин в Казани. Научный Татарстан. 2013; 4; 116–118.
8. Половцов А. А. Карл Федорович Фукс. Русский биографический словарь. Том 21. Режим доступа: <https://azbyka.ru/otchnik/Spravochniki/russkij-biograficheskij-slovar-tom-21/> (дата обращения 29.04.2026).
9. Миласhevский Г. Русский немец Карл Фукс. Время и деньги. Сайт Юрия Алаева. Режим доступа: <https://e-vid.ru/index-m-192-p-63-article-24548.htm> (дата обращения 29.05.2026).
10. Амиров Н. Х., Альбицкий В. Ю. Карл Фукс — выдающийся деятель отечественной медицины первой половины XIX века. Казанский медицинский журнал. 1997; 78(1): 71–73.
11. Загоскин Н. П. История Императорского казанского университета за первые сто лет его существования. 1804–1904; 2: 1814–1819. Казань. Типо-литогр. Имп. казанского ун-та. 1902–1904, 1902 (обл. 1903); 698.
12. Созинов А. С., Абдулганиева Д. И., Галевич А. С., Хамитов Р. Ф., Хуснутдинова Л. А., Халфина Т. Н. и др. К истории Казанской школы терапевтов (к 200-летию Казанского государственного медицинского университета). Терапевтический архив. 2014; 5; 120–122.
13. Михайлова С. М., Коршунова О. Н. Миссия университетов в России: век XIX. Ученые записки Казанского государственного университета. 2006; 148(4). Гуманитарные науки; 86.