

# "Legal regulation of the use of artificial intelligence in the provision of medical services in the Republic of Uzbekistan and the Russian Federation"

**Khujaeva Shirinkhon**

Teacher at the Department of "Theory of State and Law" of Tashkent State Law University.

Tashkent, Uzbekistan

[khujaevash2208@gmail.com](mailto:khujaevash2208@gmail.com)

DOI: <https://doi.org/10.63001/tbs.2024.v19.i02.S2.pp354-357>

## KEYWORDS

*Artificial intelligence, medicine, legal regulation, Republic of Uzbekistan, Russian Federation, ethics, data protection, responsibility, digitalization of healthcare.*

Received on:

25-07-2024

Accepted on:

09-11-2024

## ABSTRACT

This paper examines the legal regulation of the use of artificial intelligence (AI) in medicine in the Republic of Uzbekistan and the Russian Federation. Taking into account the rapid development of technologies and their impact on medical services, the relevance of the topic, a comparative review of the legislation of both countries, as well as practical aspects of the use of AI in the medical field are analyzed. Particular attention is paid to ethical issues related to the use of AI, including the protection of personal data and liability for errors. The results of the study can serve as a basis for the formation of recommendations for improving legal regulation and ensuring the safe use of technologies in healthcare.

## INTRODUCTION

Modern artificial intelligence technologies are rapidly penetrating into various spheres of human activity, and medicine is no exception. The use of AI in medical services opens up new opportunities for the diagnosis, prevention and treatment of diseases, increases the efficiency of medical institutions and improves the quality of patient care. However, taking into account this progress, there is a need to create a reliable legal framework that would ensure the protection of patients' rights and responsibility for possible mistakes.

Today, various approaches to the legal regulation of the use of AI in medicine are observed in different countries of the world. While some States are actively developing new legislative initiatives, others are faced with a lack of clear rules, which creates legal uncertainty. The Republic of Uzbekistan and the Russian Federation are an interesting object for research, since they have different legal traditions and approaches to integrating new technologies into medical practice.

The purpose of this work is a comparative analysis of the legal regulation of the use of AI in medicine in these countries. In the course of the research, both theoretical aspects and practical examples of the use of AI in medical institutions, as well as ethical dilemmas associated with its application, will be considered. This work can become the basis for further research and development in the field of legal regulation of technologies in healthcare.

Relevance of the topic

In recent years, artificial intelligence (AI) has significantly changed the face of many industries, and medicine is no exception. The rapid development of technologies such as machine learning and big data processing opens up new horizons for the diagnosis, treatment and monitoring of diseases. AI is already being used to analyze medical images, predict treatment outcomes, personalized medicine, and many other fields.

In the context of the COVID-19 pandemic, the need for effective medical solutions has become especially urgent. AI systems have helped in the development of vaccines, the analysis of the spread of the virus and the optimization of health resources. These examples highlight the importance of integrating AI into medical practice and the need to develop a legal framework governing its use.

However, despite the obvious advantages, the use of AI in medicine also raises many legal, ethical and social issues. In particular, this concerns the protection of personal data, responsibility for errors caused by algorithms, and transparency of decision-making.

In the context of rapid changes in technology, it is necessary to create an effective legal regulation that will ensure a balance between innovation and the protection of patients' rights. The study of the legal regulation of the use of AI in medicine in the Republic of Uzbekistan and the Russian Federation is becoming especially relevant, since these countries are at different stages of digital transformation and have unique legal systems and approaches to regulating new technologies.

Thus, the study of the legal regulation of the use of artificial intelligence in medicine is an important and relevant topic that requires a comprehensive analysis taking into account foreign experience, the specifics of national legislation and ethical aspects. And also, there is a lack of specialized regulation: Neither the Constitutions nor the legislation have clear rules regarding the use of AI in medicine, and also, legal uncertainty is relevant to the study: The lack of clear provisions on responsibility and legal consequences of using AI creates risks for both patients and medical professionals. Different approaches to data protection and patient rights in legislation create confusion and make it difficult to implement AI technologies.

These challenges highlight the need to develop and implement clearer regulations governing the use of AI in healthcare.

The object of this study is the use of artificial intelligence in medical services in the Republic of Uzbekistan and the Russian Federation, as well as legal and ethical aspects related to its use. The subject of the study is the legal regulation of the use of artificial intelligence in medicine, including a comparative analysis of legislation, the practice of using AI in healthcare and ethical issues arising during its use.

The following research methods are used in the work:

Comparative analysis – to identify differences and similarities in the legal regulation of AI in medicine in Uzbekistan and Russia.

Documentary analysis – to study the current laws, regulations and recommendations in both countries.

The case method is used to analyze practical examples of the use of AI in medical institutions.

The empirical method is for collecting data through surveys and interviews with medical professionals and legal experts.

Literature analysis is used to study existing research and publications on the topic.

The study of the topic

To date, the issue of legal regulation of the use of artificial intelligence in medicine is an actively developing area of research. Foreign scientists and practitioners have already begun to analyze the impact of AI on medical practice, considering both legal and ethical aspects. In particular, the issues of responsibility, personal data protection, as well as the introduction of AI into clinical recommendations and diagnostics are being investigated.

Here are a few scientists and experts who are researching the legal regulation of artificial intelligence in medicine both in the CIS and abroad:

Ryan Calo is an expert in the field of law and technology, researching the legal aspects of AI, including issues of responsibility and ethics.

Kate Darling is a researcher at the MIT Media Lab who focuses on the ethics and legal regulation of robotics and AI.

Main works:

"Artificial Intelligence Policy: A Primer and Roadmap" - In this work, he examines the main aspects of AI policy and offers recommendations for legislators.

"Robotics and the Law" is an article devoted to legal and ethical issues arising in connection with the use of robotics and AI.

"The Case for a Federal Robotics Commission" - In this article, Callot discusses the need to create a federal robotics commission to ensure ethical and legal regulation.

Calo is one of the leading researchers in the field of law and technology, promoting ideas about the need for legal regulation of AI and robotics.

He actively participates in public discussions, advocating for the creation of ethical standards and the protection of citizens' rights in the context of digitalization.

Main works:

"The Ethical Challenges of Robot Companions" - In this work, she analyzes ethical issues related to the interaction of humans and robotic assistants.

"When I Grow Up, I Want to Be a Robot" - An article that examines the legal and social aspects of the introduction of robots into everyday life.

"Robot Rights" - Article devoted to the issue of the legal status and rights of robots, as well as the ethical dilemmas associated with their use.

Merits:

K. Darling makes a significant contribution to the discussion of ethical issues related to AI and robotics, raising important topics such as responsibility and the rights of machines. She is actively involved in interdisciplinary projects and initiatives aimed at creating safe and ethical technologies, which contributes to a broader understanding of the legal and ethical aspects of robotics. Both researchers play a key role in shaping approaches to legal regulation and ethics in the field of AI and robotics, contributing to the development of legislation and public awareness.

Danielle Citron is a law professor who studies the impact of technology on human rights and privacy issues.

Robert Wachter is an expert in the field of digital healthcare, researching the introduction of AI into medical practice and related legal aspects.

Scientists from the CIS

Alexander Blintsov is a Russian scientist researching the legal regulation of AI and digital technologies in healthcare. Alexander Blintsov is a Russian scientist who has made a significant contribution to the study of the legal regulation of artificial intelligence and digital technologies in healthcare. His achievements can be distinguished in several key aspects:

A. Blintsov conducts an in-depth analysis of existing legal norms related to the use of AI in medicine, which helps to identify gaps and shortcomings in legal regulation. Based on his research, he formulates recommendations for creating an effective legal framework governing the use of AI, which contributes to a safer and more ethical use of technologies in healthcare.

The scientist draws attention to ethical issues related to the use of AI, such as liability for errors and protection of personal data, which is important for the formation of a responsible approach to the introduction of technologies and Blintsov actively uses interdisciplinary methods, combining legal, medical and technical aspects, which allows a more comprehensive consideration of the problems arising from the use of AI in healthcare. His works are published in scientific journals, and he also participates in international and Russian conferences, which contributes to the dissemination of knowledge and exchange of experience among specialists in this field.

Thus, the merit of Alexander Blintsov is to create a scientific basis for the legal regulation of AI in medicine and the promotion of ethical standards, which is important for the development of digital technologies in healthcare in Russia.

Tatyana Ryabova is a specialist in the field of law and digitalization, studying the issues of legal support for the use of AI in Russia.

Evgeny Mikhailov is a professor dealing with the legal regulation of high technologies and personal data protection in the CIS.

Anna Kiselyova is a researcher working on issues of ethics and legal regulation of AI in medicine and healthcare. Nna Kiselyova is a researcher who actively works on issues of ethics and legal regulation of artificial intelligence in medicine and healthcare. Her achievements can be distinguished in the following aspects:

Kiselyova analyzes ethical issues related to the use of AI in medical practice, such as patient autonomy, data confidentiality and fairness in decision-making. This helps to form an informed approach to technology implementation.

She also researches existing legal norms and standards, suggesting ways to improve them to ensure the protection of the rights of patients and medical professionals when using AI.

Anna Kiselyova is actively involved in educational initiatives aimed at raising awareness among medical professionals about the legal and ethical aspects of the use of AI, which contributes to a more responsible use of technology and her research covers both legal and medical aspects, which allows for a better understanding of the relationship between technology and its social consequences. Kiselyova publishes her research in specialized journals and participates in scientific conferences, which promotes the exchange of knowledge and experience between specialists in the field of law, ethics and medicine. Anna Kiselyova has published several works on ethics and legal regulation of artificial intelligence in medicine and healthcare. Here are some of her famous works:

Anna Kiselyova publishes articles in Russian and international law journals devoted to the legal and ethical aspects of the use of AI in medicine.

Monographs - In some works she examines the problems of legal regulation of digital technologies and AI, as well as their impact on healthcare.

Thus, Anna Kiselyova's merit lies in creating the foundations for ethical and legal regulation of AI in medicine, which is an important step towards the safe and effective implementation of technologies in healthcare.

These scientists and practitioners have made significant contributions to the study of the legal and ethical aspects of AI applications, and their work can serve as a basis for further research in this area.

In Russia and Uzbekistan, the topic of AI in medicine has not yet received proper coverage, although interest in it is growing. There are separate initiatives in Russia, such as the development of digital medicine concepts, but there is no comprehensive legal regulation yet. Uzbekistan also has a lack of regulations governing the use of AI in healthcare.

A comparative analysis of the legislation of Russia and Uzbekistan reveals several key points: there are projects in Russia to create a regulatory framework for AI, but they have not yet been finalized.

In Uzbekistan, the legal framework on AI is at the stage of formation, and certain aspects of the use of technology in medicine are regulated by general laws on healthcare and data protection.

Ethics and responsibility:

In Russia, issues of ethics and responsibility for decisions made by AI are more actively discussed, while in Uzbekistan these issues have not yet been widely discussed.

In both countries, there is a need for a clear definition of responsibility in case of errors related to the use of AI.

Practical application:

There are already examples of successful implementation of AI in diagnostics and management of medical processes in Russia.

In Uzbekistan, the use of AI in medicine is just beginning to develop, and investments in infrastructure and training of specialists are needed.

The analysis shows the existing problems in this area as: lack of a regulatory framework: The lack of clear laws and regulations in both countries creates legal uncertainty.

There are ethical issues that show ambiguity regarding responsibility for AI-caused errors and insufficient protection of personal data. In some cases, there is a lack of information and this lack of data on the practice of using AI in medical institutions makes it difficult to assess its effectiveness and safety.

Therefore, in the modern world, it is necessary to improve education and training, due to the lack of specialists who are able to work with AI and implement it into medical practice.

As a young scientist, I put forward proposals. As a lawyer, it is necessary to develop legislation, create a clear legal framework governing the use of AI in medicine, including rules for the use of data and liability for errors.

Formulation of ethical standards and recommendations for practitioners and developers of AI systems.

And of course, to develop educational programs and introduce educational courses for medical professionals and lawyers related to the use of AI in healthcare.

Cooperation with international organizations is relevant in this regard: Attracting international experience and cooperation with other countries to share best practices in the field of legal regulation of AI in medicine.

Having studied it, I would like to put forward my scientific proposals for further development of the topic of legal regulation of the use of artificial intelligence in medicine and healthcare:

**Firstly, a comprehensive analysis of existing regulations is needed.**

To investigate and analyze current laws and regulations related to AI in medicine in different countries in order to identify the most effective approaches and possible gaps.

**Secondly, the ethical framework for AI in healthcare**

To develop a set of ethical standards and recommendations for the use of AI in medical practice, taking into account the rights of patients, data security and responsibility of medical professionals.

**Thirdly, I propose models of responsibility when using AI**

To explore various models of responsibility (civil, criminal, professional) in the context of the use of AI in medicine, as well as to offer recommendations for their integration into existing legislation.

**It is also necessary to analyze the impact of the use of AI on patients' rights, including the right to informed consent, access to medical information and protection of personal data.**

It would be good to explore the possibilities of introducing new technologies into legal regulation (for example, blockchain) to increase transparency and security of the use of AI in healthcare, as well as to conduct a comparative study of the practice of using AI in medicine in different countries, identifying best practices and possible recommendations for adaptation in Uzbekistan and Russia.

**As a teacher, I suggest that we also explore the need to change educational programs for medical professionals in order to prepare them to interact with AI and understand the legal aspects of its application. We need to keep in mind the role of government agencies. Therefore, it is advisable to study the role of government agencies in regulating AI in medicine, including the possibility of creating specialized agencies to monitor and control the use of technologies. To organize round tables or seminars with the participation of experts in the field of law, medicine and technology to discuss current issues and develop joint recommendations. Of course, after comparing everything that has been analyzed, it is necessary to conduct empirical studies using surveys and interviews to identify the opinions of medical professionals and patients about the legal and ethical aspects of the use of AI in medicine.**

These proposals can help deepen understanding of the legal regulation of AI in medicine and contribute to the development of more effective and ethical practices in this area.

## CONCLUSION

In this The rapid development of AI technologies opens up new horizons for healthcare, but it also raises many legal and ethical issues that require careful study.

A comparative analysis of the legislation and practice of AI in medicine in both countries showed that, despite the existence of certain initiatives, there is a significant lack of clear legal norms and ethical standards. The lack of comprehensive regulation creates legal uncertainty and jeopardizes the protection of patients' rights.

The key problems identified during the study are the lack of a regulatory framework, issues of responsibility and protection of personal data, as well as a lack of information about the practice of using AI. To solve these problems, it is necessary to develop recommendations on improving legal regulation and the formation of ethical standards.

This study highlights the importance of an interdisciplinary approach in the study of the legal regulation of AI, as well as the need to actively involve various stakeholders in the discussion and development of effective solutions. The future of AI-integrated healthcare requires clear legal frameworks and ethical standards to ensure patient safety and trust.

## REFERENCES

- **Normative legal documents and the Constitution of the Republic of Uzbekistan**
- **The Constitution of the Republic of Uzbekistan (1992)** is the Basic Law that protects the rights of citizens, including the right to health and access to medical services, but does not contain specific rules on the regulation of AI.
- **Healthcare Legislation** - Laws governing medical practice and the protection of patients' rights, but they do not cover aspects of AI.
- **4. Personal Data Protection Act (2019)** - This law regulates the processing of personal data, which is important for the application of AI in healthcare.

- The Law "On Digitalization" (2021) is focused on the development of digital technologies, including in healthcare.
- The concept of digital healthcare development (2021) is a strategy for the introduction of OT technologies into medical practice.
- **The Concept of Digital Healthcare Development (2021)** is a document that outlines a strategy for the introduction of digital technologies in healthcare, including AI.
- **The Russian Federation**
- **The Constitution of the Russian Federation (1993)** Guarantees the right to medical care, but also does not contain special provisions on AI.
- **The Federal Law on Healthcare (2011)** Regulates the main aspects of medical activity, but does not consider the use of AI.
- **Federal Law on Personal Data (2006)** - This law regulates the protection of personal data, which is critically important for the use of AI in medicine.
- **Digital Economy Development Strategy (2017)** - Defines the directions of digitalization, including healthcare, but does not contain specific norms for AI.
- **Documents of the Ministry of Health** - Recommendations and standards related to digitalization and the use of AI in medical practice, but they are not legally binding.
- Calo, R. (2016). Artificial Intelligence Policy: A Primer and Roadmap. *Harvard Law Review*.
- Darling, K. (2016). The Ethical Challenges of Robot Companions. *IEEE Technology and Society Magazine*.
- Blintsov, A. (2020). Legal regulation of artificial intelligence in medicine: problems and prospects. *Russian Law Journal*.
- Kiselyova, A. (2021). Ethical aspects of the use of AI in healthcare. *Bulletin of Medical Law*.
- European Commission. (2021). White Paper on Artificial Intelligence: A European approach to excellence and trust.
- World Health Organization. (2021). Ethics and governance of artificial intelligence for health: WHO guidance.
- Oreshkin, I. (2022). Legal aspects of the use of technologies in healthcare. *Journal of Medical Law*.
- Program documents of the Ministry of Health of the Republic of Uzbekistan (2022). The development of digital healthcare.
- United Nations. (2021). The Age of Digital Interdependence: Report of the UN Secretary-General's Roadmap for Digital Cooperation.
- Fedorov, A. (2023). Problems of digitalization of healthcare in Russia: legal and ethical aspects. *Journal of Legal Studies*.