IS THERE A RIGHT FOR THE HUMAN TOUCH? AI AND THE FUTURE OF THE PHYSICIAN-PATIENT RELATIONSHIP

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Abstract: This paper explores the multifaceted impact of artificial intelligence (AI) on the physician-patient relationship, which remains a normative and functional cornerstone of healthcare systems. While current medical AI systems are primarily used for diagnostic support, administrative tasks, and predictive modelling, their increasing autonomy and integration raise urgent legal, ethical, and practical questions. The paper analyses how AI may affect core elements of this relationship, including informed consent, patient dignity, confidentiality, equity, and patient-centric care, drawing on relevant norms of international law and the four-principle framework of biomedical ethics (beneficence, non-maleficence, justice, and autonomy).

The study categorises concrete AI use cases in medicine (from diagnostic accuracy enhancement and clinical decision support to robotic care, personalised virtual assistants, or administrative automation) and evaluates their potential to either erode or enrich human interaction in healthcare. It argues that AI can help address long-standing structural deficits such as physician time constraints and system fragmentation, thereby enabling deeper communication, shared decision-making, and a potential revalorisation of generalist medical practice. However, these developments carry risks related to algorithmic bias, data privacy, technocratic paternalism, and professional deskilling, which require a thoughtful approach by all relevant stakeholders.

Ultimately, this paper calls for an intentional integration of AI that strengthens human agency on both sides of the therapeutic alliance. In this way, the growing technical sophistication of medicine can be matched not by dehumanisation, but rather by a deepening of presence, empathy, and trust.

Resumé: Tento článek zkoumá mnohovrstevný dopad umělé inteligence (AI) na vztah mezi lékařem a pacientem, který zůstává normativním i funkčním pilířem zdravotních systémů. Současné systémy medicínské AI jsou primárně využívány k podpoře diagnostiky, administrativním úkolům a prediktivnímu modelování, avšak jejich rostoucí autonomie a míra integrace vyvolávají naléhavé právní, etické i praktické otázky. Článek analyzuje, jakým způsobem může AI ovlivnit klíčové prvky vztahu lékař-pacient, a to včetně informovaného souhlasu, důstojnosti pacienta, důvěrnosti, rovného přístupu ke zdravotní péči a konceptu péče zaměřené na pacienta. Opírá se přitom o příslušné normy mezinárodního práva a principlismus jako výchozí rámec biomedicinské etiky (princip beneficence, neškodění, spravedlnosti a autonomie).

Studie kategorizuje konkrétní způsoby využití AI v medicíně (od zvýšení přesnosti diagnostiky a podpory klinického rozhodování přes robotickou péči, personalizované virtuální asistenty až po automatizaci administrativních procesů) a hodnotí jejich potenciál buď oslabit, nebo naopak obohatit lidskou interakci ve zdravotnictví. AI může přispět k řešení

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dlouhodobých strukturálních problémů, jako je nedostatek času lékařů nebo fragmentace péče, a tím umožnit hlubší komunikaci, sdílené rozhodování a případnou renesanci generální lékařské praxe. Tyto změny však zároveň nesou rizika algoritmické předpojatosti, narušení soukromí, technokratického paternalismu a profesní degradace, která si vyžadují citlivý přístup relevantních aktérů.

Článek vyzývá k vědomé integraci AI způsobem, který posiluje lidskou autonomii na obou stranách terapeutického vztahu. Rostoucí technická sofistikovanost medicíny tak může být provázena nikoli odlidštěním, ale naopak prohloubením přítomnosti, empatie a důvěry.

Key words: medical AI, physician-patient relationship, doctor-patient relationship, medical law, health law, medical ethics

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Introduction

> *"We can choose a technological solution to the profound human disconnection that exists today in healthcare; a more humane medicine, enabled by machine support, can be the path forward. (…) It's our chance, perhaps the ultimate one, to bring back real medicine: Presence. Empathy. Trust. Caring. Being Human. (…) We may never have another shot like this. Let's take it."*[1]
>
> ***Eric Topol***

Artificial intelligence has flooded the media and captured the public imagination in much the same way as if someone had flipped a switch and lit a darkened hall with electric chandeliers. What was once a field reserved for a handful of highly specialised experts suddenly became, almost overnight, one of the most widely discussed topics across continents. It hardly requires oversimplification to date this explosion – this firework of interest, hope, and fear – quite precisely: we mean November 2022, when OpenAI publicly launched its highly successful chatbot, ChatGPT.

Since then, public interest has focused primarily on large language models that generate text outputs. In the background, however, other types of AI have been developing: systems capable of identifying and interpreting patterns in images, predicting molecular structures,[2] exploring the universe, creating meteorological models… and healing.

Medicine is among the areas where the rise of AI is most pronounced. In certain medical disciplines (especially radiology and diagnostics) AI systems already often match, and sometimes surpass, the precision and reliability of experienced physicians. The transformations that AI is poised to bring to medicine carry tremendous potential.

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1 See TOPOL, Eric. *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again.* New York: Basic Books, 2019, pp. 309-310.

2 See VARADI, Mihaly, HASSABIS, Demis, VELANKAR, Sameer (eds.). AlphaFold Protein Structure Database: massively expanding the structural coverage of protein-sequence space with high-accuracy models. *Nucleic Acid Research. (*2022), Vol. 50, Issue D1, pp. 439-444. doi: 10.1093/nar/gkab1061.

At the same time, however, they come with non-negligible risks and as yet unresolved questions. Some of these are concrete in nature, such as the risk of algorithmic bias exacerbating existing inequalities, the need to protect personal data, or questions of legal liability. Other issues are highly contextual and harder to grasp, and yet (or perhaps precisely for that reason) they are crucial for the future of healthcare. One such issue is the impact of AI deployment on the evolving physician–patient relationship.

Will AI lead to the dehumanisation of medicine, or, conversely, to its humanisation? How can we help bring about the latter? This paper certainly does not offer a definitive answer, but it aims to examine the issue from multiple perspectives and raise the fundamental legal, ethical, and practical questions involved.

1. The physician-patient relationship and international law

Although the physician-patient relationship (sometimes referred to as the therapeutic relationship) is not explicitly governed by international legal instruments, certain of its partial aspects are reflected in both international law and international soft law instruments. Several of these elements can be identified:

- **Informed consent**.[3] A quality physician-patient relationship can lead to genuine informed consent, rather than the mere completion of pre-printed forms, which unfortunately often replaces true consent in practice. In the near future, it will also be necessary to define criteria for determining when a patient must be informed about the involvement of AI in the care provided, and when their express consent should be obtained.
  It may be argued that the protection of patient autonomy requires an approach to informing the patient that is more extensive rather than overly restrictive.[4] On the other hand, it is not appropriate to explicitly inform the patient of the presence of AI in all cases if this constitutes a routine technical solution and the ultimate interpretation is performed by a human physician (such as when AI is embedded in software interpreting imaging results).
- **Protection of patient dignity.**[5] Although defining dignity with precision is difficult,[6] it is generally perceived as a fundamental value. A perceived lack of dignity can be psychologically deeply distressing for the patient and, as a result, may undermine their compliance with treatment and adversely affect clinical outcomes.

[3] See for example Articles 5-10 of the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine (Convention on Human Rights and Biomedicine), Article 6 of the Universal Declaration on Bioethics and Human Rights, and Article 3 of the Charter of Fundamental Rights of the European Union, or Principle 3 of the World Medical Association Declaration of Lisbon on the Rights of the Patient.

[4] See *Report on the Application of Artificial Intelligence in Healthcare and Its Impact on the "Patient-Doctor" Relationship.* Council of Europe. Steering Committee for Human Rights in the fields of Biomedicine and Health (CDBIO). 2024, p. 15.

[5] See for example Article 1 of the Convention on Human Rights and Biomedicine and Article 3 of the Universal Declaration on Bioethics and Human Rights, but also Article 8 (the right to the respect for private and family life) of the European Convention on Human Rights.

[6] See a controversial take on the ever-present but never clearly defined concept of dignity in MACKLIN, Ruth. Dignity is a useless concept. *British Medical Journal.* (2003), Vol. 327, Issue 7429, pp. 1419–1420. doi: doi.org/10.1136/bmj.327.7429.1419.

- **Confidentiality and personal data protection.**[7] At its core, the physician-patient relationship is either based on trust or it does not function at all. Trust is a prerequisite for all other aspects and benefits of the relationship to develop. This trust must encompass not only confidence in the physician's expertise, integrity, and willingness to help, but also in the assurance of professional confidentiality. A patient who is afraid to share the whole truth with their physician may withhold crucial information and will likely be unable to fully engage in the therapeutic relationship.
  The Explanatory Report to the Convention on Human Rights and Biomedicine uses the term *"therapeutic alliance"* to denote the trust-based relationship between physician and patient that can be achieved when patient rights are fully respected.[8] When patient does not feel safe, a healthy therapeutic relationship can hardly be formed.
- **Prohibition of discrimination.**[9] The fundamental equality of all human beings lies at the very core of the concept of human rights. Patients, too, intuitively expect their physician to treat them the same as other patients, regardless of their financial status, ethnicity, religion, political beliefs, or other characteristics. Any deviation from this principle disrupts the therapeutic relationship and may rightly be perceived by the patient as a betrayal by the healthcare provider.
  In this respect, the deployment of AI in medicine may have ambivalent consequences. There is a risk of algorithmic bias, which can significantly reinforce existing social and economic inequalities or prejudices, particularly where certain population groups are underrepresented in the relevant medical literature. On the other hand, if genuinely representative and large-scale training data are used, AI systems may mitigate pre-existing biases (based on sex, race, and other characteristics) that unfortunately continue to afflict modern medicine.[10]
- **Patient-centric care.**[11] The emphasis on the patient, as opposed to broader societal interests, as the primary focus of medical care dates back to mediaeval medicine.[12] It also resonates with the Kantian principle of treating the human being as an end in themselves and not merely as a means to an end.[13]
  Patient-centric care has a second, though closely related, meaning: care should be directed towards the patient as a whole, considering their individual biological, psychological,

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7 See Article 8 (the right to the respect for private and family life) of the European Convention on Human Rights, Article 22 of the World Medical Association International Code of Medical Ethics, and Article 9 of the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation, GDPR).

8 See Explanatory Report to the Convention on Human Rights and Biomedicine, par. 33.

9 See for example Article 2(2) of the International Covenant on Economic, Social and Cultural Rights, Article 2 of the Convention on the Rights of the Child, and Article 21 of the Charter of Fundamental Rights of the European Union.

10 See *Report on the Application of Artificial Intelligence in Healthcare and Its Impact on the "Patient-Doctor" Relationship*. Council of Europe. Steering Committee for Human Rights in the fields of Biomedicine and Health (CDBIO). 2024, pp. 26–28.

11 See for example World Health Organization. *Framework on integrated, people-centred health services.* 15 April 2016, or the World Health Organization Declaration of Alma-Ata of 12 September 1978.

12 See MUNZAROVÁ, M. *Lékařský výzkum a etika. [Medical Research and Ethics.]* Praha: Grada Publishing, 2005, p. 11.

13 See KANT, Immanuel. *Groundwork of the Metaphysics of Morals.* Cambridge: Cambridge University Press, 2012.

social, and spiritual characteristics, not merely their diagnosis. A physician who has a functioning therapeutic relationship with their patient, and who knows at least the basic context of their life, is treating the person rather than just the illness.

- **Quality of care.**[14] In a broader sense, the therapeutic relationship is a cornerstone of healthcare delivery: without trust between physician and patient, the provision of high-quality care is difficult. Technically sound care can scarcely be applied meaningfully to a given patient in the absence of that trust.

Thus, even a seemingly intangible, unquantifiable, and primarily ethical concept such as the physician–patient relationship has clear international legal implications. It is therefore a legally relevant question whether, and how, the use of AI in medicine can contribute to the development of this relationship, and thereby to the fulfilment of its various aforementioned benefits.

2. The physician-patient relationship at the crossroads

The emergence of artificial intelligence in clinical practice may significantly alter the physician–patient relationship. Yet this relationship has undergone transformations throughout the history of medicine, more markedly so over the past century. Where is the trajectory of its development headed, and how might AI influence it?

2.1 The Doctor in the Room of Pain and the Timeless Hope

It has been over 130 years since the British painter Luke Fildes unveiled his large canvas, simply titled The Doctor. At the centre of the painting, in a poor rural interior dimly lit from the left by a kerosene lamp, a physician sits on a chair, leaning over a sick child lying limp on makeshift bedding spread across two chairs and covered with a worn blanket. In the background, barely emerging from the shadows, the child's father stares fixedly at the scene; his hand rests on the shoulder of a woman collapsed over a table, her face buried in her forearm, so that her sobbing is only implied to the viewer. Through a small window, a faint, pale light filters in – perhaps dawn is approaching. The doctor's face is shown in profile: like a dignified thinker, with fingers thoughtfully supporting his chin, he gazes at the child with calm concentration. As though nothing else existed in the world but his patient and the thoughts of how to save them.

It is not difficult to understand why this painting is sometimes considered one of the most beautiful tributes to the medical profession. It is hardly relevant that a family in such poverty could likely not afford a doctor's visit at the time. The painting captures an ideal, a timeless hope held by the sick and their loved ones. The hope for a physician who is both educated and wise, and who genuinely cares about the patient: who is fully present with their entire being.

Interestingly, the doctor holds none of the tools that, by the late 19th century, were already commonplace – no stethoscope, no thermometer. On the table, under the lamplight, there is only a glass vial with an amber-coloured liquid and a mug with a spoon; further off, an object that may represent a mortar and pestle for preparing ancient medicines. The

[14] See for example Article 4 of the Convention on Human Rights and Biomedicine (the duty to carry out any medical intervention in accordance with relevant professional obligations and standards), Article 12 of the International Covenant on Economic, Social and Cultural Rights, Article 24 of the Convention on the Rights of the Child, Article 11 of the European Social Charter, and the World Health Organization Constitution.

achievements of then-modern medical science, which helped save lives, are deliberately omitted. Some critics see this as an intentional artistic choice: an emphasis on the intimate relationship between physician and patient, undisturbed by instruments. Nothing intrudes upon the almost physical closeness between the two.[15]

According to Fildes' son, the choice of subject was inspired by a personal experience. In his father's biography, he recalls how the great artist was deeply moved by the empathy shown by a certain doctor who had cared for his other, dying young son many years earlier.[16] Though the outcome was tragic, the doctor's sincere care convinced the grieving family of his devotion, and perhaps helped them to accept their pain.

2.2 The Advent of the Machine, the Age of Consent

Over the past century, medicine has undergone several revolutionary periods. In the early decades of the 20th century, physicians began to abandon the repertoire of ancient yet often ineffective remedies and instead focused on the systematic study of disease. The fruits of this effort soon appeared in a harvest of new discoveries, leading to previously unseen therapeutic successes.[17] In the latter half of the century, medicine was transformed by the introduction of new, complex machines into clinical practice – devices that enabled previously unimaginable diagnostic capabilities, and that could keep alive a patient who once would have stood no chance: computed tomography, magnetic resonance imaging, ECMO, and others. Around the same time, medicine, buoyed by its triumphs, brought the age-old paternalistic approach to the patient to its most exalted form. In response to the darker side of these indisputable achievements, the public's fear of sudden death seemed to be replaced by a new anxiety: fear of prolonged dying, of a body kept alive by tubes and machines.

It was in the 1960s and 1970s that a new approach to the patient began to emerge. Triggered by shocking revelations of unethical and dangerous research conducted on unsuspecting patients in the United States,[18] as well as by the legacy of crimes against humanity during the Second World War, calls for reforming the physician–patient relationship grew louder, first in the USA and West Germany.[19] The patient was no longer to be regarded as a passive recipient of help from a wise physician but rather as an equal partner, even though they could not typically match their physician's medical knowledge. The highest moral law guiding the physician was no longer the patient's health per se, but the patient's own will.[20] The doctor was now expected to fully and clearly inform the patient of all significant facts, and the final decision – what treatment to undergo, or whether to be treated at all – was entirely up to the patient. As it is sometimes said: the doctor is an expert in medicine, but the patient is

[15] See FRIEDLAENDER, Linda K, FRIEDLAENDER, Gary E. Art in Science: The Doctor by Luke Fildes: Putting the Patient First. *Clinical Orthopaedics and Related Research.* (2015), Vol. 473, No. 11, pp. 3355–3359. doi: https://doi.org/10.1007/s11999-015-4527-z.

[16] See KAO, Audiey C. What is Represented "Worthily" in Luke Filde's The Doctor? *AMA Journal of Ethics.* (2022), Vol. 24, Issue 7, p. 698. doi: 10.1001/amajethics.2022.697.

[17] See MUKHERJEE, Siddhartha. *The Laws of Medicine. Field Notes from an Uncertain Science.* New York: Simon & Schuster, 2015, pp. 12–16.

[18] See BEECHER, Henry K. Ethics and Clinical Research. *The New England Journal of Medicine.* (1966), Vol. 274, Issue 24, pp. 1354–1360. doi: 10.1056/NEJM196606162742405.

[19] See ŠOLC, Martin. *Právo, etika a kmenové buňky. [Law, Ethics, and Stem Cells.]* Praha: Wolters Kluwer, 2018, pp. 44–45, 154.

[20] See ŠUSTEK, Petr. Zdravotnické právo. [Health Law.] In ŠUSTEK, Petr, HOLČAPEK, Tomáš (eds.). *Zdravotnické právo. [Health Law.]* Praha: Wolters Kluwer, 2016, p. 32.

an expert in their own life.[21] From these value-based premises arose the modern focus on autonomy of will and informed consent as central concepts in contemporary medical ethics and healthcare law.

Even this partnership-oriented (or client-oriented) model of the physician–patient relationship is not without its pitfalls. For centuries, medicine had been shaped by a combination of personal attention to the patient and what Jay Katz, in his famous 1984 book, called the silent world of doctor and patient.[22] From a curative perspective, there was often little a physican could do; hence they served more as confidant and psychosomatic healer, even at the cost of withholding critical information. Patient recovery was believed to rely on absolute trust in the physician; excessive information was practically contraindicated.[23]

The sudden emphasis on informed consent gradually adopted around the world collided with deeply rooted ideas of what constituted good medical practice. Legal systems began requiring informed consent even though physicians and patients were not always sure how to handle the new reality.[24] The issue is not merely that informed consent is, contrary to its intended purpose, frequently reduced to a formality with pre-printed forms no one reads. It is also that, due to overwhelming workloads, many physicians do not have the time or energy to engage in deeper conversations with patients. As a result, many patients feel abandoned, as if the physician is no longer truly engaging with them but instead leaving them alone with an impossible dilemma. They may feel forced to make a major decision whose consequences they can scarcely foresee. In such cases, the right to informed consent can devolve into a tyranny of autonomy,[25] which leads not to liberation, but to frustration.

2.3 AI and the Human Connection: The Final Executioner, or the Saviour?

With a certain simplification, we might see the development of medicine over the past 150 years as a progression towards ever more effective prevention, diagnosis, and therapy – advances that have saved countless lives. Yet at the same time, this progress has also meant a gradual narrowing of the human connection between physician and patient. If artificial intelligence lives up to its promise and truly brings about another transformation in healthcare, we seem to be standing at a crossroads where the paths lead in opposite directions.

AI could become the final executioner of the human bond between patient and physician, a tool of ultimate alienation, potentially even replacing the physician in direct contact with the patient. On the other hand, AI may help to reverse the trend described above: advancing medicine while also reviving the human relationship between physician and patient. But how can we steer AI towards fulfilling this potential?

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21 See TUCKET, David, BOULTON, Mary, OLSON, Coral, WILLIAMS, Anthony. *Meeting Between Experts. An Approach to Sharing Ideas in Medical Consultations.* London: Tavistock Publications, 1985.

22 See KATZ, Jay. *The Silent World of Doctor and Patient.* Baltimore: The John Hopkins University Press, 2002.

23 See in a similar sense ibid., p. 6.

24 See ibid., pp. 2–3.

25 For a critical discussion on the perceived "tyranny of autonomy" in contemporary medical law and ethics, see FOSTER, Charles. *Choosing Life, Choosing Death: The Tyranny of Autonomy in Medical Ethics and Law.* Portland: Hart Publishing, 2009.

3. AI use cases in medicine

There are countless potential applications of AI in medicine. Nevertheless, it is possible to outline a brief categorisation covering broadly defined use cases that appear the most promising in terms of transforming medical care and healthcare systems, ranging from the individual level to broader societal impact.

- **Diagnostics.** In the context of healthcare delivery to individual patients, the most promising results of AI today are found in the field of diagnostics. In certain narrowly defined areas of medicine, the diagnostic outputs of some AI models already match or even exceed the accuracy of expert physicians. From a practical standpoint, it is even more important that AI demonstrably enhances human physicians' performance in many cases.[26]

  At least for the foreseeable future, it would be inappropriate to fully automate the diagnostic process (if that time ever comes at all). Risks such as automation bias and depersonalisation must be considered, particularly in a hypothetical system where patients only meet a doctor after several fully automated diagnostic procedures. On the other hand, improvements in diagnostic accuracy and the reduction of the time burden associated especially with interpreting imaging results may have a positive impact on the physician–patient relationship, provided that physicians embrace their role as patient guides and care coordinators from start to finish.
- **Treatment.** Software solutions known as clinical decision support systems are not limited to diagnostics; they can also assist with therapeutic decision-making. Admittedly, outcomes in this area do not yet reach the level observed in diagnostic tasks. Nonetheless, partial successes in several fields – such as planning radiotherapy for brain tumour patients,[27] dosing medication for sepsis treatment in intensive care units,[28] or personalised drug dosing[29] – suggest that AI also holds significant potential here.

  A distinct area is medical robotics, which has so far seen successes primarily in experimental settings,[30] but holds major potential for improving the efficiency and safety of many surgical and interventional procedures. For the physician-patient relationship,

[26] See AL ZO'UBI, Mazen. Review of 2024 publications on the applications of artificial intelligence in rheumatology. *Clinical Rheumatology.* (2025), Vol. 44, Issue 4, pp. 1427–1438. doi: 10.1007/s10067-025-07382-3, NORI, Harsha, DASWANI, Mayank, KELLY, Christopher (eds.). Sequential Diagnosis with Language Models. *ArXiv*. doi: 10.48550/arXiv.2506.22405.

[27] See TSANG, Derek S., TSUI, Grace, SANTIAGO, Anna T. (eds.). A Prospective Study of Machine Learning-Assisted Radiation Therapy Planning for Patients Receiving 54 Gy to the Brain. *International Journal of Radiation Oncology, Biology, Physics.* (2024), Vol. 119, Issue 5, pp. 1429–1436. doi: 10.1016/j.ijrobp.2024.02.022.

[28] See KOMOROWSKI, Matthieu, CELI, Leo A., BADAWI, Omar (eds.). The Artificial Intelligence Clinician learns optimal treatment strategies for sepsis in intensive care. *Nature Medicine.* (2018), Vol. 24, Issue 11, pp. 1716–1720. doi: 10.1038/s41591-018-0213-5.

[29] See RUI XUAN GAN, Tiffany, TAN, Lester W. J., EGERMARK, Mathias (eds.). AI-assisted warfarin optimisation with CURATE.AI for clinical impact: Retrospective data analysis. *Bioengineering & Translational Medicine.* (2025), Vol. 10, Issue 3. doi: 10.1002/btm2.10757.

[30] See KIM, Ji Woong, CHEN, Juo-Tung, HANSEN, Pascal, KRIEGER, Alex (eds.). SRT-H: A Hierarchical Framework for Autonomous Surgery via Language-Conditioned Imitation Learning. *Science Robotics.* (2025), Vol. 10, Issue 104. doi: 10.1126/scirobotics.adt5254, GRAHAM, Catherine. Robot Performs First Laparoscopic Surgery Without Human Help. *John Hopkins University. The Hub* [online]. 26.1.2022 [2025-08-02]. Available at: <https://hub.jhu.edu/2022/01/26/star-robot-performs-intestinal-surgery/>.

another application of robotics may be particularly relevant: care robots[31] that can assist with basic personal care tasks and relieve overworked staff, especially nurses. While the mechanisation of personal care might seem like a step toward its dehumanisation, the opposite may be true. With fewer staff overburdened by routine tasks, middle-level healthcare professionals could instead focus on coordinating care and providing emotional support to patients, thereby increasing the humaneness of life on many otherwise dreary hospital wards.

AI systems may be particularly significant in the field of mental health. In many countries, there is a tragic shortage of qualified professionals even in highly sensitive areas such as child psychiatry. Access to care is in some places so limited that it effectively restricts the right to healthcare. The increasing rates of suicide and violent crime among young people in some (though not all) countries[32] reflect the interaction of multiple societal factors, and the lack of access to quality psychiatric and psychotherapeutic care certainly does not help. AI is already being used, for example, to predict suicide risk based on users' activity on social media,[33] to personalise therapy based on smartphone interactions,[34] or to alleviate symptoms of depression and anxiety through specialised chatbots.[35] Even in psychiatry and psychotherapy, the physician–patient relationship should not be replaced (except in emergency situations where patients cannot access help in time), but rather enhanced.

- **Reduction of administrative burden.** Large language models could make a significant contribution to medicine by reducing administrative workload. Currently, many physicians spend a large part of their working time on medical documentation, communication with health insurance providers, and other bureaucratic tasks. One of the greatest barriers to the development of the therapeutic relationship is often said to be the lack of time for direct communication with the patient.

  Allowing AI to access medical records and to create and update entries in them would, of course, require a high degree of system reliability and robust personal data protection and cybersecurity measures. However, if physicians were freed from a substantial part of their administrative burden and could once again dedicate more time to their patients,

[31] See ADEYEMO, Aminat, COFFEY, Alice, KINGSTON, Liz. Utilisation of robots in nursing practice: an umbrella review. *BMC Nursing*. (2025), Vol. 24, Article no. 247. doi: 10.1186/s12912-025-02842-2.

[32] For example in the United States and, to a lesser degree, in the Czech Republic. See CURTIN, Sally C., GARNETT, Matthew F. Suicide and Homicide Death Rates Among Youth and Young Adults Aged 10 – 24: United States, 2001 – 2021. *National Center for Health Statistics* [online]. 2023 [2025-08-02]. Available at: <https://www.cdc.gov/nchs/products/databriefs/db471.htm?utm_source=chatgpt.com>, FRAŇKOVÁ, Ruth. Number of suicides up in 2022. *Radio Prague International* [online]. 9.6.2023 [2025-08-02]. Available at: <https://english.radio.cz/number-suicides-2022-8793586>.

[33] See KAMINSKY, Zachary, McQUAID, Robyn J., HELLEMANS, Kim G. C. (eds.). Machine Learning-Based Suicide Risk Prediction Model for Suicidal Trajectory on Social Media Following Suicidal Mentions: Independent Algorithm Validation. *Journal of Medical Internet Research.* (2024), Vol. 26. doi: 10.2196/49927.

[34] See WANG, Helena, FARB, Norman, SAAB, Bechara. Scalable Precision Psychiatry with an Objective Measure of Psychological Stress: Prospective Real-World Study. *Journal of Medical Internet Research.* (2025), Vol. 27. doi: 10.2196/56086.

[35] See HEINZ, Michael V., MACKIN, Daniel M., TRUDEAU, Brianna M. (eds.). Randomized Trial of a Generative AI Chatbot for Mental Health Treatment. *NEJM AI.* (2025), Vol. 2, Issue 4. doi: 10.1056/AIoa2400802.

this could become one of the most significant contributions AI makes to the renaissance of the physician–patient relationship.

- **The patient's virtual assistant.** Another potential use of large language models is the operation of reliable virtual assistants, which the public could consult with their questions, especially to assess whether medical care is indicated in a given situation and to receive practical advice for further steps.

  These assistants will likely be highly personalised, bringing key advantages such as awareness of the patient's medical condition, personal and family history, and the ability to communicate with that particular patient clearly and appropriately. Maintaining quality and reliability of such responses, however, will be a challenge.

  Even today, this role is partly fulfilled by general-purpose large language models such as GPT, Claude, or Gemini. Provided that output reliability and data protection can be ensured, such virtual assistants may become a valuable complement to care provided by healthcare professionals.
- **Big data processing for public health.** AI development allows for the previously unthinkable rapid and effective processing of large volumes of data, which can be used to gain insights into disease spread and development, to build epidemiological models, and to better understand prevention strategies.

  The processing of big data could also soon accelerate and enhance the development of telemedicine. Using continuous data on patients' health status from wearable technologies (whether certified medical devices or everyday tools like smartwatches) will allow for the collection of valuable scientific data and further training of AI systems, for instance to detect early signs of life-threatening conditions. Reliable large-scale datasets can also be obtained from medical devices used during hospital stays.[36]
- **AI as a catalyst for biomedical development.** AI holds great promise in pharmaceuticals and biotechnology. The 2024 Nobel Prize in Chemistry was awarded in part to Demis Hassabis and John Jumper of Google DeepMind for developing the AI system AlphaFold2, which for the first time in history performed the formidable task of predicting the structure of nearly all 200 million known proteins.[37] AI is expected to play an increasing role in pharmaceutical research, for example in identifying candidate molecules that could serve as the basis for new medicines.[38] While this may not be directly linked to the physician–patient relationship, the advancement of medicine via AI is likely to have wide-ranging effects.

[36] See the first study providing evidence of reduced patient mortality through the prediction of sudden health crises in inpatients based on their ECG: LIN, Chin-Sheng, LIU, Wei-Ting, TSAI, Dung-Jang (eds.). AI-enabled electrocardiography alert intervention and all-cause mortality: a pragmatic randomized clinical trial. *Nature Medicine.* (2024), Vol. 30, Issue 5, pp. 1461–1470. doi: /10.1038/s41591-024-02961-4.

[37] See The Nobel Committee for Chemistry. Scientific Background to the Nobel Prize in Chemistry 2024. Computational Protein Design and Protein Structure Prediction. *The Nobel Prize* [online]. 9.10.2024 [2025-08-04]. Available at: <https://www.nobelprize.org/prizes/chemistry/2024/press-release/>.

[38] See VORA, Lalitkumar K., GHOLAP, Amol D., JETHA, Keshava (eds.). Artificial Intelligence in Pharmaceutical Technology and Drug Delivery Design. *Pharmaceutics.* (2023), Vol. 15, Issue 7, p. 1916. doi: 10.3390/pharmaceutics15071916.

- **Increasing effectivity and rationality in health systems.** Large datasets analysed using AI can significantly aid in the organisation of healthcare systems,[39] as well as in internal processes such as health insurance management.[40]
  However, the promising opportunities mentioned above come with a number of major risks, particularly concerning algorithmic bias against certain demographic groups, and the protection of patients' personal data and privacy. A pressing question is the extent to which participation in health data-sharing networks for insurance purposes should be voluntary and, in the case of an opt-out system, what kind of sanctions or disincentives might be appropriate for non-participation. For instance, one could imagine offering significant health insurance discounts or other bonuses to patients who agree to participate and demonstrably meet certain criteria, such as regular medical visits, healthy lifestyle habits, and so on.
  When seeking optimal solutions, not only short-term economic effects should be considered, but also the broader social context, including the long-term economic impact and, crucially, the anticipated effect on the physician–patient relationship.

4. Ethical considerations

The physician–patient relationship is inextricably linked with ethical considerations. Although this relationship can be viewed through the lens of various ethical theories, this paper focuses on the implications of what is arguably the most influential framework in contemporary applied medical ethics: the four principles of medical ethics (also known as *principlism*) as developed by Tom Beauchamp and James Childress.[41]

These four principles, each of equal moral weight and to be balanced proportionately in case of conflict, can serve as a foundation for assessing whether and how the use of AI may enhance the therapeutic relationship.

- **The principle of beneficence.** The purpose of medicine is to benefit the patient's health, and more broadly, to support the integral development of their personhood. A quality physician–patient relationship can contribute to patient compliance, better information sharing, and ultimately more favourable treatment outcomes. Yet this relationship also yields benefits in and of itself, especially in terms of the patient's mental and emotional wellbeing.
- **The principle of non-maleficence.** Above all, the physician must do no harm. This does not mean, of course, that the patient may never be exposed to any risk; every medical procedure inherently involves some degree of risk. However, such risks must always be carefully weighed against the expected benefits. Combining the principles of beneficence and non-maleficence leads to the conclusion that measures aimed at strengthening the therapeutic relationship should be weighed against their potential risks and any negative

[39] See for example STEEL, Peter A. D., WARDI, Gabriel, HARRINGTON, Robert A. (eds.). Learning health system strategies in the AI era. *npj Health Systems.* (2025), Vol. 2, Article no. 21. doi: 10.1038/s44401-025-00029-0.

[40] See for example ALAM, Ashrafe, PRYBUTOK, Victor R. Use of responsible artificial intelligence to predict health insurance claims in the USA using machine learning algorithms. *Exploration of Digital Health Technologies.* (2024), Vol. 2, pp. 3–45. doi: 10.37349/edht.2024.00009.

[41] See BEAUCHAMP, Tom L., CHILDRESS, James F. *Principles of Biomedical Ethics.* 8th ed. Oxford: Oxford University Press, 2019.

impacts on the efficiency or safety of healthcare delivery. For example, a physician may not act in a way that deviates from the standard of care solely for the sake of enhancing patient trust.

- **The principle of justice.** In the principlist framework, justice is closely aligned with the prohibition of discrimination, particularly the right to equal access to healthcare, as also recognised by international law. While the physician–patient relationship is formed between two individuals, it is influenced by the broader context of access and equity. This is especially true if a patient perceives that they are being treated less favourably than others. On the other hand, ensuring broad access to care is one of the primary reasons why physicians often face severe time constraints in their communication with patients. Alleviating this relentless inverse relationship – between accessibility of care and time available per patient – is one of the most promising contributions AI could make to medicine.
- **The principle of autonomy.** Closely tied to the legal concept of informed consent, patient autonomy is the foundational paradigm of modern medical ethics. As principlism convincingly demonstrates, autonomy is a value of fundamental importance, though not necessarily absolute. For instance, a patient cannot demand services from a physician that deviate from the standard of care, nor can they act in ways that endanger others.
  Within the physician–patient relationship, autonomy of will functions ambivalently. On one hand, the former paternalistic model was firmly rooted in trust in the physician's expertise. On the other, the contemporary patient, who rightly wishes to make decisions about their own care, may lose trust in a doctor if they perceive their autonomy to be restricted. They would potentially grow to see the physician as an adversarial or threatening figure.
  AI deployment in healthcare could risk undermining patient autonomy, especially if it introduces a form of technocratic paternalism, in which the recommendations of highly autonomous AI systems are applied uncritically. On the other hand, AI has the potential to empower patient self-determination, especially by strengthening the therapeutic relationship, allowing physicians (in their role as care coordinators) more time and space for genuine shared decision-making grounded in in-depth conversations about the patient's personal needs and preferences.

Some parts of the literature also emphasise trust **as a fifth, overarching principle**. David B. Resnik sees trust as a valuable tool for resolving conflicts between the four main principles in the context of moral dilemmas.[42] To yield positive social outcomes, trust must connect all key actors in the healthcare system.[43] In this view, the physician–patient relationship becomes a necessary condition for the smooth functioning of the healthcare system and a crucial means of resolving value conflicts on a case-by-case basis.

5. On the path to a human relationship

5.1 The Most Precious Item: Time

In 1895, the famous Canadian physician William Osler wrote that *"[a] case cannot be satisfactorily examined in less than half an hour. A sick man likes to have plenty of time spent*

[42] See RESNIK, David B. *The Ethics of Research with Human Subjects. Protecting People, Advancing Science, Promoting Trust.* Springer, 2018, p. 87.

[43] As cited in ibid., pp. 89–92.

over him, and he gets no satisfaction in a hurried ten or twelve minute examination."[44] Today, a twelve-minute consultation would be considered a good standard. It must be said, however, that most patients in Osler's time could not afford his services. Likewise, today there are premium healthcare providers who, for a direct fee, offer patients their time and exclusive attention. It would appear, then, that the accessibility of care and the depth of human connection between physician and patient stand in clear opposition.

One of the greatest promises of AI in medicine lies in its potential to break this iron law. Merely by reducing physicians' administrative burden (which has increased over time due to evolving medical record-keeping regulations and, ironically, also due to digitalisation) AI could already free up a considerable amount of time for direct patient care. If we add to this the improved speed and efficiency of many diagnostic and therapeutic procedures, and the reduced need for physician involvement in some of them, the resulting time savings appear to be a very real benefit.

Not only dialogue, but also physical examination has been fading from clinical practice over recent decades. This fundamental ritual of the physician-patient encounter has become increasingly brief and neglected. The reason is not only that better information about a patient's condition can often be obtained through modern imaging methods. In a certain sense, the physician's physical examination of a patient remains irreplaceable. Moreover, it constitutes a meaningful ritual that, in many cases, helps to build and strengthen the bond between physician and patient. The decline of such contact is due in large part to a simple lack of time.[45]

The reduction in time allocated to each patient is associated with a range of negative consequences. From a legal perspective, it undermines patient-centred care and the overall quality of care, as required by international legal obligations. Time devoted to the patient also affects the clinical quality of care. According to a 2018 American study, each additional minute that a healthcare professional spends with a patient during a home visit statistically reduces the likelihood of hospital readmission by 8 %.[46] Other studies suggest that increasing the time physicians spend with patients, or improving the accessibility of physician–patient contact, can lead to a 20 % decrease in hospitalisation rates.[47]

Reducing the workload of physicians may also enhance the quality of care in less direct ways. It is often said that a deeper interest in other fields, particularly the arts or unrelated scientific disciplines, can improve a physician's medical performance. This does not appear to be a myth, but rather a demonstrable principle. For example, a 2017 randomised study in the United States found that regular museum visits by first-year medical students measurably

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44 As cited in ibid., p. 286.

45 See ibid., p. 299.

46 See ANDREYEVA, Elena, DAVID, Guy, SONG, Hummy. The Effects of Home Health Visit Length on Hospital Readmission. *National Bureau of Economic Research.* (2018). doi: https://doi.org/10.3386/w24566. As cited in TOPOL, Eric. *Deep Medicine. How Artificial Intelligence Can Make Healthcare Human Again.* Basic Books, New York 2019, p. 286.

47 See TINGLEY, Tim. Trying to Put a Value on the Doctor-Patient Relationship. *The New York Times Magazine* [online]. 16.5.2018 [2025-06-15]. Available at: <https://www.nytimes.com/interactive/2018/05/16/magazine/health-issue-reinvention-of-primary-care-delivery.html>. As cited in TOPOL, Eric. *Deep Medicine. How Artificial Intelligence Can Make Healthcare Human Again.* Basic Books, New York (2019), p. 286.

improved their observational skills.[48] A doctor who has more time for personal growth outside their profession may well become a better doctor as a result.

5.2 Integration of AI into the Process of Shared Decision-Making

Compared to informed consent in its narrower sense, the concept of shared decision-making is increasingly gaining ground today. Whereas traditional informed consent consists of a sequence of separate steps – information provided by a physician followed by the patient's decision – shared decision-making involves the intensive collaboration of both parties in reaching a decision about the next steps in treatment.[49] A key prerequisite for shared decision-making is that physicians develop greater skill in conducting meaningful conversations that effectively involve patients in the decision-making process.[50]

Artificial intelligence could assist in this regard in two ways that appear, at first glance, paradoxical. By being suitably integrated into the communication process between physician and patient, AI could help collect relevant data about the patient's life, including their subjective fears and wishes. In addition to aggregating personal data from various sources (typically from different healthcare providers), one might imagine, for example, an interactive chat through which patients can express their concerns and preferences at times when the physician is unavailable. The physician could then use a transcript or AI-generated summary of this interaction as the basis for a subsequent personal conversation. Most importantly, the time savings mentioned earlier could enable doctors not only to conduct longer and deeper dialogues with patients, but also to undergo more intensive training in the art of such conversation.

The American cardiologist and AI-in-medicine expert Eric Topol has suggested that medical education should be reoriented at the university level. Future physicians, he argues, should be trained much more extensively in empathy, communication, and relationship-building skills, even, to some extent, at the expense of factual knowledge and scientific competencies. Topol believes that while scientific and mathematical skills will remain necessary for physicians – especially to supervise and verify algorithmic outputs – the relative importance of these skills will decline with the development of AI, to be partially replaced by emotional intelligence and related capabilities.[51] He also predicts the need to develop new communication and ethical standards for telemedicine; what he calls, with a touch of humour, "webside manner".[52]

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[48] See GURWYN, Jaclyn, REVERE, Karen E., NIEPOLD, Suzannah et al. A Randomized Controlled Study of Art Observation Training to Improve Medical Student Ophthalmology Skills. *Ophthalmology.* (2018), Vol. 125, No. 1, pp. 8–14. doi: https://doi.org/10.1016/j.ophtha.2017.06.031. Cit. dle TOPOL, Eric. *Deep Medicine. How Artificial Intelligence Can Make Healthcare Human Again.* Basic Books, New York (2019), p. 297.

[49] See ŠOLC, Martin. *Nové metody v medicíně a právo. [New Methods in Medicine and the Law.]* Praha: Wolters Kluwer, 2022, p. 107.

[50] See ČERNÝ, David, DOLEŽAL, Adam, DOLEŽAL, Tomáš. Informovaný souhlas v medicíně. Mýtus, pohádka, nebo pouhý právní požadavek? [Informed Consent in Medicine. A Myth, a Fairy-Tale, or a Mere Legal Requirement?] In PTÁČEK, Radek, BARTŮNĚK, Petr, MACH, Jan (eds.). *Informovaný souhlas. Etické, právní, psychologické a klinické aspekty. [Informed Consent. Ethical, Legal, Psychological, and Clinical Aspects.]* Praha: Galén, 2017, pp. 198–199; PTÁČKOVÁ, Hana, VŇUKOVÁ, Martina, PTÁČEK, Radek. Od informovaného souhlasu ke sdílenému rozhodování. [From Informed Consent to Shared Decision-Making.] In ibid., p. 290.

[51] See TOPOL, Eric. *Deep Medicine. How Artificial Intelligence Can Make Healthcare Human Again.* Basic Books, New York (2019), pp. 305–306.

[52] See ibid., p. 308.

The future envisaged by Topol may still be distant, and his recommendations for medical education might seem exaggerated. One must also bear in mind the risk of too rapid a loss of still-clinically-relevant skills (so-called deskilling) and the potential increase in the vulnerability of heavily tech-dependent health systems.[53] Nonetheless, it seems reasonable to support greater emphasis not only on digital literacy, statistical competence, and communication skills in physicians, but also on a humanistic approach: one that treats the patient as a whole person rather than a mere diagnosis.[54] At present, such a perspective may already serve as a partial remedy for the darker side of medical super-specialisation. In the era of AI, it may also help prepare the ground for a partial return to generalist care.

5.3 The Rebirth of the Generalist

One of the consequences of the growing complexity of medicine over the past century has been the fragmentation of the medical profession into an ever more elaborate system of specialisations and subspecialisations. The notion of a general practitioner who knows the patient in the broad context of their life and coordinates their care accordingly is, in many cases, more of a nostalgic ideal than a current reality. On the one hand, continued specialisation raises the quality of highly expert care; on the other, it can contribute to a weakening, or even alienation, of the physician–patient relationship.

The development of AI models that achieve excellent results within individual medical specialisations may paradoxically lead to a reversal of the super-specialisation trend. The generalist – no longer focused narrowly on a particular sub-area of medicine, but instead trained across a broader field, capable of identifying relationships between seemingly unrelated issues and synthesising the patient's problems into a meaningful whole – might regain prestige and demand. The result of such work would be a genuinely holistic approach, not in an esoteric sense, but in the true meaning of the word.

Just as a nurse on a robot-assisted ward may focus more on coordination and human presence, a physician equipped with AI tools trained in the necessary subspecialties could primarily assume the role of care coordinator. In doing so, they would naturally move closer to the patient as a human being, seeing them not as a set of symptoms or fragmented diagnoses but as a person within the context of their unique life story. Within this renewed relationship between the generalist and the patient, one essential role of the physician – providing psychological support – might also be naturally restored.

5.4 The Future of Empathy

Until recently, we tended to believe that empathy was a uniquely human trait, something machines would never be able to fully imitate. Today, all signs suggest that we were mistaken.

Large language models are increasingly capable, though not yet consistently, of detecting human motivations and emotions during communication, and of expressing empathy in a convincing way. Of course, it is possible to define compassion and similar qualities as properties of consciousness, arguing that empathy requires a conscious being to truly

[53] See *Report on the Application of Artificial Intelligence in Healthcare and Its Impact on the "Patient-Doctor" Relationship.* Council of Europe. Steering Committee for Human Rights in the fields of Biomedicine and Health (CDBIO). 2024, p. 18.

[54] See TOPOL, Eric. *Deep Medicine. How Artificial Intelligence Can Make Healthcare Human Again*. Basic Books, New York (2019), pp. 306-308.

experience it. If one adopts such a definition, then software can offer only a simulation of empathy (at least until it attains consciousness, if that ever happens). However, to what extent should this distinction matter to us?

Let us imagine two fully human, living physicians. One of them feels deep compassion for their patients but struggles to express it. Their words are clumsy, their nonverbal communication weak. Though they care genuinely about their patients, their poor communication skills occasionally lead them to cause unintentional harm. The other physician is a master communicator, yet inwardly feels little concern for their patients. This physician can meet a patient's gaze with just the right mix of firmness and warmth, can fill the room with a reassuring presence, and say exactly what the patient needs to hear. The moment the patient leaves the office, the doctor's mind is already elsewhere.

Which of these physicians would we consider better? We might feel more warmth toward the first if we knew their story. But patients would likely regard the second as the better doctor; and indeed, in practical terms, it is the second who provides more benefit. Some might argue that the second physician is lying to the patient through feigned concern. But is that truly important, as long as they are genuinely attending to the patient's needs? Their attention is real, it simply does not align perfectly with their internal emotional experience. But does that misalignment really matter? A doctor's quality lies not in what they feel, but in what they do.

In the case of AI, everyone knows there is no real consciousness: no entity capable of experiencing the patient's fate, no one to feel sadness, concern, or joy. Yet AI outputs filled with empathic content may still genuinely help the patient. The patient's consciousness and subconsciousness respond to words of understanding, to acknowledgement of their inner fears and questions, even when there is no actual consciousness on the other end.

Is there, then, any space left for the presence of a living human physician? We believe that despite everything said above, the answer is yes. A certain parallel can be drawn from an entirely different field of human activity: the arts.

No one can say with certainty whether AI-generated art will one day reach the quality of the greatest human masterpieces. It seems increasingly likely that at least the majority of artistic production will soon be cheaply and quickly replaceable by AI-generated content. What may become decisive is AI's ability to create fully personalised works. Most of us have felt the vague desire to read a book similar to one we loved twenty years ago, or to see a film reminiscent of one we watched last summer, but not quite the same. With generative AI, such desires could soon be met easily and instantly. One would simply enter key elements – the outline of the story, mood, setting – and the AI could, based on deep knowledge of the individual, prepare a film, book, or musical piece perfectly tailored to their current mood and circumstances, without the need for elaborate explanation.

Yet we still believe that there will remain a place for human creators. Precisely because they offer a different kind of experience: a journey into another person's world, one that is unpredictable, imperfect, sometimes uncomfortable, always accompanied by the knowledge that the creator is a real, living consciousness. An AI-generated essay may be more readable, objective, and factually accurate; but the reader may still care about the personal perspective of a particular commentator. A generated film may be, by every measure, of higher quality; yet audiences will still look forward to new films from their favourite director, reflecting

that filmmaker's personal development; a film they have to wait for, one imbued with that rare aura of uniqueness. Much like how, despite the unprecedented scale of music streaming via platforms like Spotify, live concerts – with all their discomfort, expense, and human imperfection – are more popular than ever.

Human art will no longer sell itself on craftsmanship, but on its story.

Likewise, the human physician will remain with the patient not primarily for their technical skills or scientific knowledge, nor even for their awkwardly human way of expressing empathy, but above all because of the intrinsic quality of being a unique, perceiving human being. The subjective understanding that my pain and hopes are shared, recognised, and experienced by another human consciousness is a need that no imitation of consciousness will ever truly fulfil.

Conclusion

At the very heart of medicine, for millennia, lies the relationship between physician and patient. While its fundamental importance remains constant, its form has changed throughout history. In recent decades, this relationship has undergone a paradigmatic shift from paternalism towards a partnership or client-oriented approach based on equality and the patient's autonomy of will. Yet even today, the physician–patient relationship remains burdened by a range of challenges, many of which stem from a lack of time, administrative overload, and diminishing physical contact between physician and patient. As a result, many patients perceive modern healthcare as dehumanised.

This is also a legal issue, as the quality of the physician–patient relationship is connected to a range of subjective rights and obligations under international law, for instance, the right to access (quality) healthcare, the right to informed consent, and the right to dignity.

The rise of artificial intelligence touches directly on many aspects of healthcare, from diagnosis and treatment planning to the reduction of administrative burdens, the development of personal virtual assistants for patients, and the analysis of large datasets for systemic planning or pharmaceutical research. Each of these domains may, and almost certainly will, have a direct or indirect impact on the physician–patient relationship. It seems highly likely that this relationship will undergo further historical transformation. The key question of our time is whether that development will lead to further dehumanisation, or whether it will enable scientific and technological progress while simultaneously strengthening the human connection between physician and patient.

The path to achieving the latter will be far from easy. It will undoubtedly be accompanied by many difficulties and partial failures. New practical challenges will have to be addressed concerning the reliability of AI outputs, personal data protection, cybersecurity, and other areas. As automation progresses, the roles of key actors in the healthcare system will need to be redefined. Above all, the transformation of healthcare through AI must be navigated in a way that strengthens, rather than weakens, the agency of both patients and healthcare professionals.

Yet the potential reward is too valuable, and the cost of failure too high, to justify abandoning this demanding task. It will not be a challenge for the state as regulator alone, but also, perhaps above all, for the medical professional community and all actors in the system, from healthcare administrators to individual physicians, nurses, and, of course, patients themselves.

If the process is guided well, we may arrive at a model of care in which doctors have more time for patients and for their own personal development. Patients, in turn, may be empowered through the expansion of shared decision-making: not merely giving yes-or-no answers to standardised information, but making decisions in the context of real dialogue with the physician about their personal needs. A new model of care could emerge in which healthcare workers do not simply repair individual diagnoses but act as coordinators of care for the patient as a whole person. The human touch – the knowledge that I am not facing illness alone, but accompanied by another person in whose consciousness my hopes and fears are held – could, in synergy with the technical quality of medicine, make healthcare not only more efficient, but also more humane.

This is an ideal vision of the future, but it is not a utopia. We dare to hope that one day, such a vision might become part of the substance of the right to accessible healthcare.