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Opinion Article

Algorithms Need Ethics Too: A Hippocratic Approach to Artificial Intelligence Use in Healthcare

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ABSTRACT

Artificial intelligence (AI) is becoming deeply embedded in healthcare. To follow, ethical oversight must leap ahead. Here, we introduce a Hippocratic-inspired AI Commitment. that will help orient towards ethical responsibilities and challenges of medical AI. Such oath is critical for students, new entrants, or AI developers. Furthermore, it is equally essential for the academic community: as educators, researchers, curriculum designers, and institutional policy contributors leading to interdisciplinary collaboration.

By engaging with the oath, we reinforce ethical awareness in our own work and guide the next generation responsibly back to human-centered values. These include bias and fairness, transparency, privacy and consent, accountability, justice, and patient safety.

This oath, modeled similar to the Physician's Hippocratic Oath, is concise, memorable, and repeatable. Furthermore, it promotes early internalization of a practical, values-driven framework rather than having abstract principles. It is suitable for education; by being part of ethics curricula, medical training modules, as well as in institutional pledges, team-based reflective exercises, and ceremonial adoption in graduation.

For future directions, we propose piloting the oath in academic and professional programs, conducting iterative Delphi-based workshops with interdisciplinary stakeholders, and establishing an open-access platform for continuous refinement and community feedback. These steps aim to transform the oath from symbolic principle into a living, actionable framework, ensuring that as AI reshapes medicine, it does so with conscience, inclusivity, and accountability at its core.

Keywords: AI in healthcare, Bioethics, Hippocratic oath, AI governance, Medical education, Health equity, AI ethics.

1. Introduction

The accelerating integration of artificial intelligence into healthcare (1), and society has driven an urgent focus on ethics (2). Evidence of this growing concern could be simply sensed from a PubMed search (28th November 2025) using the terms "AI and ethics," which returned 9,291 results. Remarkably, 8,989 were published between 2015 and 2025, with 5,566 appearing in just the last year. Such a surge signals not only rising attention, but also mounting apprehension about the ethical implications of AI's rapid expansion, especially in the health-care field.

Medical AI, in particular, is designed to enhance diagnostic accuracy, personalize treatment, and optimize healthcare delivery (3). However, its integration raises critical ethical concerns as issues regarding algorithmic bias, which can perpetuate or even amplify health disparities; opacity and lack of

transparency in decision-making processes. These challenges are particularly serious in medicine, where decisions directly affect human lives and the foundation of patient trust. Moreover, this makes it difficult for clinicians and patients to understand or challenge outcomes; and accountability gaps, where responsibility for errors or harm becomes unclear (4).

Published ethical frameworks for AI, while valuable, often remain abstract and inaccessible to early-career professionals and students entering the healthcare and technology sectors (5). The language of these ethical standards is highly specialized, as they are written for policymakers, developers, or senior clinical leaders. Such level leaves a gap for practical guidance that resonates with newcomers responsible for shaping the future of medical AI (6). This gap is especially problematic for medical students, engineering students, and junior researchers who are increasingly involved in interdisciplinary AI development and deployment projects.

In response to this need, we propose a Hippocratic-inspired ethical commitment for responsible AI in healthcare. Drawing from the long-standing tradition of professional oaths in medicine, such as the Hippocratic Oath, this AI commitment is designed as a ceremonial and reflective pledge. It serves as both an entry-point and a reminder of ethical responsibilities throughout one's professional journey. The oath addresses unsolved ethical challenges in medical AI, particularly in areas of bias, privacy, explainability, justice, and patient safety (7).

The proposed commitment, here, addresses six unresolved ethical risks in medical AI: bias and fairness, transparency, privacy and consent, accountability, justice, and patient safety. Rather than presenting abstract principles, it offers a pragmatic, values-driven framework that supports ethical awareness in training, onboarding, and project development. Suggested applications include integration into AI ethics curricula, medical education modules, institutional pledges, and team-based reflective practices. It may also be used in graduation ceremonies and onboarding rituals, instilling a shared ethical compass among newcomers. Its versatility has the potential to promote an enduring culture of ethical awareness and action throughout the lifecycle of AI in healthcare.

By combining emotional ceremony with intellectual rigor, this oath offers a unique ethical tool. The essence of care— deep personal reflection, humility, empathy, collective responsibility, long-term awareness, and interdisciplinary trust (8) - must remain intact, even as we all step into an era of precision and automation. It reminds our students, new workers, and interdisciplinary teams that while they shape AI applications, they must not allow to reshape their values, as we all should remain Hippocratic, not hypocritical.

2. The Ethical AI Oath for Healthcare Professionals

Figure 1 shows the actual text for the oath.

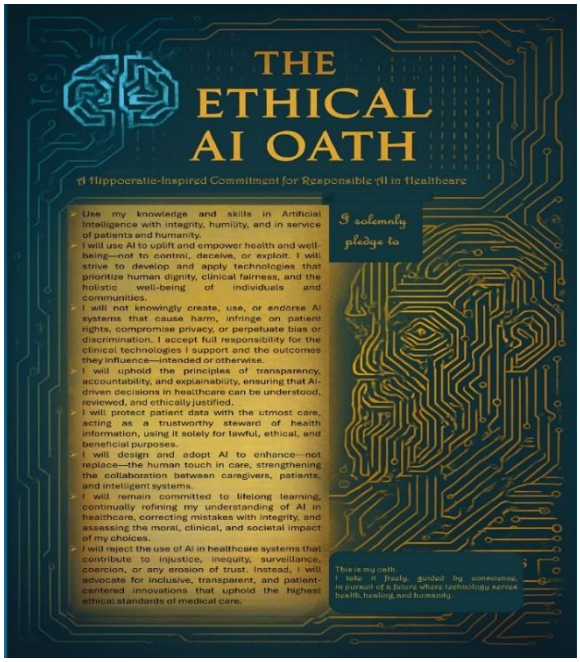

Figure 1: The Hippocratic-inspired commitment for responsible AI in healthcare

It includes the following:

- I pledge to use my knowledge and skills in Artificial Intelligence with integrity, humility, and in service of patients and humanity.
- I will use AI to uplift and empower health and well-being, not to control, deceive, or exploit. I will strive to develop and apply technologies that prioritize human dignity, clinical fairness, and the holistic well-being of individuals and communities.
- I will not knowingly create, use, or endorse AI systems that cause harm, infringe on patient rights, compromise privacy, or perpetuate bias or discrimination. I accept full responsibility for the clinical technologies that I support and the outcomes that they influence, intended or otherwise.
- I will uphold the principles of transparency, accountability, and explainability, ensuring that AI-driven decisions in healthcare can be understood, reviewed, and ethically justified.
- I will protect patient data with the utmost care, acting as a trustworthy steward of health information, using it solely for lawful, ethical, and beneficial purposes.
- I will design and adopt AI to enhance-not replace-the human touch in care, strengthening the collaboration between caregivers, patients, and intelligent systems.
- I will remain committed to lifelong learning, continually refining my understanding of AI in healthcare, correcting mistakes with integrity, and assessing the moral, clinical, and societal impacts of my choices.
- I will reject the use of AI in healthcare systems that contribute to injustice, inequity, surveillance, coercion, or any erosion of trust. Instead, I will advocate for inclusive, transparent, and patient-centered innovations that uphold the highest ethical standards of medical care.
- This is my oath. I take it freely, guided by conscience, in pursuit of a future where technology serves health, healing, and humanity.

3. Discussion

In an era marked by the rapid advancement of artificial intelligence, particularly in healthcare, we find ourselves equipped with tools of unprecedented precision. Yet amid these technological triumphs, one critical element remains conspicuously absent: an ethical oath—a unifying commitment for those involved (9). This serves as an ethical commitment relevant not just to those physicians who help design, develop, and deploy AI systems, but also to every hand shaping, guiding, or interpreting AI in the health domain (10). While the discourse around AI ethics continues to expand, it often lacks a shared, ritualized promise that can ground practitioners in a collective sense of responsibility. This paper proposes such a promise: The Ethical AI Oath.

Much like physicians have long relied on the Hippocratic Oath to orient their practice around human welfare, we argue that AI health professionals and their collaborating team members - as engineers, clinicians, data scientists, and researchers alike- deserve an equivalent ethical anchor. As AI becomes embedded in diagnostics, clinical decision-making, and even trust between patients and care providers, we must ask ourselves: what principles tether us to the imperative of "do no harm"? What moral compass do we offer those entering this field? While regulations and policies are essential, they often fall short in guiding the everyday decisions and moral reflections of individuals working at the frontlines of care and innovation (11).

Physicians' strong attachment to the Hippocratic Oath has led to the development of updated versions, reframed as tools to address contemporary medical practice. Over time, the enduring significance of the Oath has inspired multiple publications and reinterpretations, each aimed at promoting values better aligned with the ethical challenges of the modern era (12,13), one of them was proposed to guide the ethical development and use of artificial intelligence (14).

Although ambitious and grounded in broad principles, like beneficence, responsibility, and global safety (14), this pledge faces valid criticism for its lack of specificity. It overlooks pressing challenges in medical AI—bias, transparency, privacy, accountability, and patient safety—and remains too generalized to guide the daily ethical decisions of clinicians, developers, and researchers. Without clear, actionable commitments, it risks becoming symbolic rather than a practical framework for today's rapidly evolving healthcare landscape.

A revised Hippocratic Oath had also been proposed (15), aiming to modernize medical ethics. However, it remains largely symbolic and physician-focused,

overlooking systemic AI challenges. Its poetic language lacks enforceable commitments and relevance for broader stakeholders. To be meaningful in the AI age, an oath must provide a shared, actionable framework for all involved in shaping intelligent healthcare systems.

The Ethical AI Oath, proposed here, answers that call. It is not merely a list of guidelines, but also a ceremonial pledge; concise, memorable, and cross-disciplinary. It asks practitioners to commit to human benefit, fairness, transparency, respect for autonomy, and resistance to misuse. These values are not abstract; they are pragmatic guardrails designed to foster conscientious development in real-world contexts.

The proposed oath holds powerful potential as both a teaching and cultural tool. It can be embedded in ethics education, recited at medical and dental graduations, or included in white coat ceremonies to remind future clinicians of their responsibilities with AI. In tech bootcamps, interdisciplinary programs, and conferences, it can frame projects and keynotes with a shared ethical vision. Research teams may use it to anchor accountability, while regulatory bodies could weave it into compliance training, grounding rules in human-centered values.

Now is the ideal moment to introduce such an initiative, not as a finished product, but as a foundation that invites critique, collaboration, and co-ownership. More than symbolic, it offers a clear, resonant framework with the power to shape the culture surrounding AI in healthcare. Let it become a shared tradition where ethics are not only taught, but also spoken, remembered, and lived.

It may further gain real power when it is formally adopted by professional and educational institutions. Here are some bodies that could serve as effective adopters and promoters (Table 1).

Table 1. Possible bodies that could serve as effective adopters and promoters of the oath, after proposed verification steps and consensus

Institutional Adopters	Examples
Academic Institutions	Medical, dental, and nursing schools; engineering departments
Professional Associations	AMA, ADA, Royal Colleges, FDI World Dental Federation
Public Health Bodies	WHO, CDC, Ministries of Health
Healthcare Providers	Hospitals, clinics, telehealth companies
Technology Firms	Developers of health AI tools and platforms
Regulatory Agencies	FDA, EMA, national medical councils

Such organizations can incorporate the oath into training, licensing, or onboarding processes to deepen its impact.

Despite its promise, the oath is not without challenges. It is inherently non-binding and depends on personal and institutional commitment to carry weight. There is a risk that without continual reinforcement, it may be treated as mere ceremony. Cultural variations in values may also affect how the oath is received globally. Furthermore, measuring its practical influence remains a methodological challenge, especially in contexts where ethical lapses may be systemic or incentivized.

To refine, localize, and institutionalize this oath, a Delphi consensus methodology is recommended, promoting diverse stakeholder participation and structured feedback to evolve it from a prototype into a globally relevant ethical standard. Proposed steps include:

1. **Round 1** – Internal feedback from ethicists, clinicians, and AI developers.
2. **Round 2** – Broader international consultation through surveys and workshops.
3. **Round 3** – Integration and publication of a community-vetted version.
4. **Continuous** – Open-access digital platform for ongoing evolution.

While symbolically powerful, the oath cannot replace legal or technical safeguards, resolve stakeholder conflicts, or ensure accountability on its own. To enhance its impact, we recommend consensus workshops involving students, practitioners, ethicists, and patients; iterative feedback across cultures, regions, and disciplines; and research into its influence on ethical decision-making.

4. Conclusions

As AI becomes ever more integral to healthcare, ethical guidance must keep pace. A Hippocratic-inspired oath offers a unifying compass-simple, reflective, and cross-disciplinary-embedding moral responsibility into the very identity of those who create, deploy, or use medical AI. Unlike reactive regulations, it cultivates proactive ethical awareness from the earliest stages of training, ensuring that human values shape design, data, and decision-making. Broad adoption across institutions and professions, supported by a culturally inclusive, consensus-driven process, can transform the oath from words into a living tradition: a ceremony of conscience that aligns innovation with humanity, safeguarding patient trust and societal well-being in the AI era.

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