Gracheva Rada Olegovna, senior lecturer of the department
Department of Public Health, Organization and Economics
of Health Care of the Institute of Continuing Education
Kursk State Medical University, Kursk, Russia

Ng Zhao Shian, 4th year student
International Medical Institute,
Kursk State Medical University

ЭТИЧЕСКИЕ РУБЕЖИ В ЗДРАВООХРАНЕНИИ: ИСПОЛЬЗОВАНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В МЕДИЦИНЕ РОССИЙСКОЙ ФЕДЕРАЦИИ И МАЛАЙЗИИ ETHICAL FRONTIERS IN HEALTHCARE: LEVERAGING ARTIFICIAL INTELLIGENCE FOR MEDICINE IN THE RUSSIAN FEDERATION AND MALAYSIA

Аннотация: В этой статье рассматривается взаимодействие искусственного интеллекта (ИИ), биоэтики и медицины, а также вопросы, такие как принятие решений, права пациентов на прозрачность, точность и надежность, конфиденциальность и безопасность данных.

Abstract: This article contains exploration of how Artificial intelligence (AI), bioethics and medicine interact with one another, such as in decision making, the patient's rights to transparency, accuracy and reliability, patients privacy and data security, and the regulatory oversights in this rapidly evolving field of technology.

Keywords: Artificial intelligence, autonomy, Medical bioethics, decision-making, moral dilemmas.

In this article we set off to delve deeper into the questions regarding the usage of AI in the field of medicine and bioethics. We will be explaining what AI is and how it works. Furthermore, we will be looking at what ethical concerns we may face when using AI in making the best decisions in regards to patients' health.

For the unconscious, underage without a guardian, not in the correct state of mind (e.g. irritated, anxious, depressed, disorientated, paranoid, hallucinating, unable to focus and fatigued). Would an AI make the more ethically correct choice than a human being in a state of emergency? Would AI even be capable of comprehending the complexity of human ethics, incorporating rules of bioethics, common sense, cultural norms and laws into its decision? Are there any use of AI in this field in the present and how are they utilized? And finally, after giving pros and cons, would people be willing to bet their life on AI to make medical choices that will be best for them?

In the article published on 2019, Dec 10 by the Intensive Care Med Exp titled "Ethical considerations about artificial intelligence for prognostication in intensive care," several key ethical concerns and principles are highlighted.

1. Principle of beneficence and non-maleficence – In short, the principle means to do good and to do no harm. These principles are especially important in the field of medicine as it is essential we respect human dignity and sanctity of life while ensuring the helpfulness of emerging technology outweighs the potential harm. As AI is not perfect in its ability to make ethical decisions 100 percent of the time, the risk that these principles may be violated. Giving false prognosis may give a sense of false hope or false despair to the patients. Hence it is vital that the Language Model is not used as a sole decision maker to prevent uncomfortable situations.

2. Principle of Justice. This principle deals with the fairness of distribution of resources. As AI language models are trained with data, it contains biases as it does not account for the intricacies of different races and genders. For example, it may have cultural biases if it is trained with data collected from 1 major culture, overlooking the complexity of human society regarding cultural norms or implicit rules. Hence it is vital that the language model is taught to consider the culture and laws of the specific location it is being used in when making ethical decisions.

3. Principle of patient's autonomy. The principle of autonomy refers to the acknowledgement of the rights the patient has to make their own calls in regards to decisions affecting their health. A concern is with regards to the beliefs and values of the individual that may not be considered by AI when making decisions for the patient. For example, the patient may refuse treatment for certain diseases as it contrasts with their core beliefs. If the AI carries out the decision to treat it, who will take responsibility for it? Hence it is vital that the AI have the capacity to consider the best course of action when faced with an individual with unknown set of values.

4. Privacy and confidentiality. It is a fundamental right for individuals to keep information confidential. Hence is it a must for AI language models to not share explicit personal information regarding individuals who utilize it.

5. Transparency. A concern about AI is the aspect of transparency. This refers to the ability to peer into the workings of an AI model and understand how it reaches its decisions. Transparency is important as it allows us to access each factor the AI takes into account when making a decision. For example, how much weight does the AI put on the law compared to your well being when helping in decision making?

In the paper published on 2019, Dec 10 by the Intensive Care Med Exp. titled "Ethical considerations about artificial intelligence for prognostication in intensive care," a few do's and don'ts are highlighted when implementing AI-based prognostication models. I believe these are worthy of consideration in the models used for decision making.

In the article published on 2019 Sept by Sage Journals titled "Artificial intelligence in healthcare: An essential guide for health leaders", AI is evolving rapidly in healthcare as many applications have been developed to solve some of the most pressing problems that this field faces. A few things that can be accomplished by incorporating AI use in healthcare includes:

1.   Unlock the power of big data and gain insight into patients;
2.   Support evidence-based decision-making, improving quality, safety, and efficiency, coordinate care and foster communication;
3.   Improve patient experience and outcomes;
4.   Deliver value and reduce costs;
5.   Optimize health system performance.

One of the system capabilities of AI is to provide clinical decision support. For example, AI can be used for prediction and prevention of adverse events, predictive analysis for high risk patients and outcomes to treatment. Furthermore, AI can even be used to predict and prevent adverse events. Hence it is clear that AI has the capability to be beneficial as a tool in decision making regarding healthcare.

In the article published by OCED on 2023 titled "AI language models: Technological, socio-economic and policy considerations", it is stated that AI Language models is a component of Natural Language Processing (NLP) which is a field in AI that aims for understanding and generation of human language by computers. It involves algorithms and models that processes, analyses and generates texts or speech trained on a large collection of data.

In theory, it is impossible for AI to make ethical decisions as humans do. Ethics is rooted in human empathy, moral reasoning and deep understanding of the complex structure of the way of human life. AI is incapable of any of those things. However, practically speaking, AI is able to imitate it by following algorithms and predefined rules. Developers and engineers can embed the ethical principles into the language models which will serve as its guiding light for any decision making processes. This brings us to how we as designers of such AI should design these ethical rules for the algorithms to follow.

Regulation of AI utilization in healthcare

As there are many ethical concerns and possible violation to rules of bioethics in use of AI in healthcare related decision making, it is of utmost importance that the regulation should be strengthened and made stricter. As there is still a desperate need of regulation and research done in the possibility of ethical decision making skills of AI and language models, this paper aims to survey the willingness of the general public in using AI in their decision making in the first place.

Our questionnaire is carried out for people of all ages. The survey is done in the Google forms. The questionnaire includes questions the following: demographic: age, gender, country, education background, occupation; understanding of AI: in a scale of 1 to 10, we ask the scale of knowledge they perceive to have on AI and their ability to make decisions; trust perception: how much trust do you currently have in the AI system to make decisions on your behalf; informed decision: knowing the pros and cons of AI. The results had been collected and analyzed. This graph we show like an example:

Knowing the up and downsides of AI in decision making, are you willing to allow AI to make decisions for you in an emergency situation?
48 responses

- Yes
- No
- Unsure

39.6%
54.2%
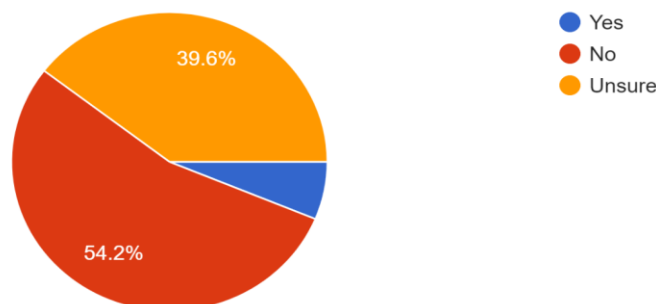
In conclusion, there is a need to develop regulations and standards that will govern the use of AI in medicine and protect patients' rights in both countries. This includes developing control and monitoring mechanisms, as well as making AI algorithms transparent and explainable. It is also important to consider the ethical aspects of AI use, such as fairness, responsibility and autonomy.The development of AI in medicine requires international cooperation and knowledge sharing. This will accelerate the development of new technologies and ensure that they are available to all patients, regardless of their country of residence. For example, international cooperation can facilitate the development of new diagnostic and treatment methods, as well as the exchange of experience and knowledge between medical specialists.

Also, international cooperation can help develop regulations and standards that will govern the use of AI in medicine and protect patients' rights. This is especially important in the context of globalization and international cooperation in medicine.

AI has great potential to improve healthcare services and enhance the quality of life of patients. However, there are many ethical, legal, and technical challenges that need to be addressed in order to successfully implement AI in medicine. In the nearest future, AI will become an integral part of medical practice, opening up new opportunities for the diagnosis, treatment and prevention of diseases.

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