# Recommendations for the development of ethical guidelines for AI-related health research in Egypt.

**Ahmed Samir Abdelhafiz, MD,PhD**

**National Cancer Institute, Cairo University**

# The new era of AI in Egypt

- In 2019, the National Council for Artificial Intelligence was founded by the Egyptian government as a partnership between the government, academia, and leading companies in the field of AI.

- The AI strategy enablers included the development of governance to monitor the execution of the strategy, laws, and regulations, ethical principles, and guidelines.

- Healthcare a priority sector, where the government was looking for partners to develop AI solutions for triage and diagnosis of diseases, smart management of healthcare data, mental health, and bioinformatics.

# The knowledge gap

# Challenges with AI health research

- Challenges related to knowledge about the nature of AI research among Institutional Review Boards members.

- Challenges related to the informed consent model to be used with participants in AI research.

- Challenges related to data protection, confidentiality, and privacy in AI research.

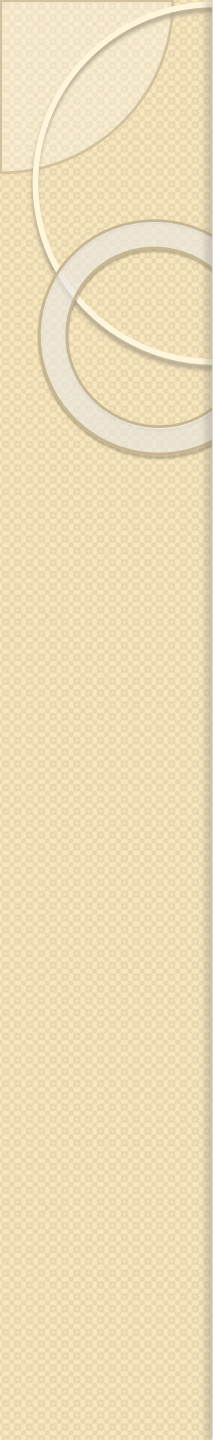- Challenges related to fairness and equitable benefit sharing.

# Goal and methodology

- Identifying some ethical issues that may arise during AI related health research on humans, and to provide recommendations to deal with these issues.

- Three issues/themes represent the concern of this paper, namely; informed consent, commercialization and benefit-sharing and intuitional review boards.

- Each Issue is discussed in brief, followed by providing some recommendations based on the knowledge of the author about the local laws and regulations.

# The informed consent

- The traditional concept of informed consent is challenged in AI-related research.

- It is difficult to predict who will have access to the data in the future, and in what type of research this data will be used.

- The nature of research and expected outputs could be too difficult for patients/participants and doctors to understand and sometimes for researchers to explain.

- Growth of the use of AI based health applications raises new ethical concerns.


- The risks related to privacy, including potential re-identification risk could be greater in this type of research.

# Recommendations

- Specific consent that explains all details about proposed research is a suitable option.

- Tiered or dynamic consent models could also be options for use in AI health research.

- There is a significant growth in the number of internet users in Egypt, which could support the use of dynamic consent in the future
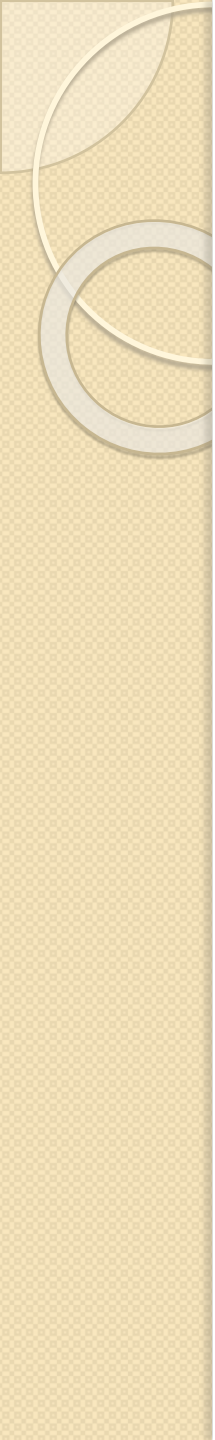
# Commercialization and benefit-sharing

- AI research necessitates collaboration with technology partners and private sector companies.

- Guidelines, regulations, and policies regarding commercialization should be developed and implemented.

- The government and its representatives can negotiate benefit sharing with technology partners to reach the best deals with them in this aspect.

- Instead, the government may also set the boundaries of acceptable practice, and specific terms can be negotiated by the involved parties

# Institutional Review Boards (IRBs)

- There is no available data about the knowledge of Institutional Review Board members in Egypt about AI and ethics related to its implementation in health research.

- This novel type of research could represent a specific challenge for IRB members.

- Evaluation of the knowledge, perceptions and attitude of IRB members about this type of research is necessary.

- Proper education and training about issues and challenges associated with this novel type of research are needed.

- The Supreme Council for the Review of Clinical Research Ethics established based on the clinical research law and The Egyptian Network of Research Ethics Committees can play a major role in coordinating these activities.

- Experts in the field should explain some technical aspects to IRB members upon request, which could help them to make an informed decision about research proposals submitted to them.

# Conclusions and recommendations

- The development of laws, guidelines and recommendations to support AI health research is necessary to equip IRB members with tools to monitor this type of research, and to preserve the rights of the involved parties.

- Training IRB members on how to use these tools are essential to allow them to create a balance between advancing medical research and the protection of the community.

- Encouraging and supporting AI research in the medical field will allow real-time detection of problems and discussions to find solutions for them.

Thank You!