

Kartik
Padave

Simran
Kumari

Varun
Khadayate

A.I. IN HEALTHCARE

A.I. PRESENTATION





Topics to cover

- Abstract
 - Introduction
 - Ethical Concerns
 - Regulatory Concerns
 - Implication for Healthcare
 - Governance Model
 - Conclusion
 - References

Abstract

Artificial Intelligence

Efficacy of artificial intelligence (AI) in improving aspects of healthcare delivery is increasingly becoming evident, it becomes likely that AI will be incorporated in routine clinical care in the near future.

Healthcare

Growing focus and investment in AI medical applications both from governmental organizations and technological companies.

Ethics and Regulation

These concerns include the possibility of biases, lack of transparency with certain AI algorithms etc.

Governance Framework

Aims to not only address the ethical and regulatory issues that arise out of the application of AI in health care, but also stimulate further discussion about governance of AI in health care.

Introduction

- Interest in AI has gone through cyclical phases of expectation and disappointment since the late 1950s.
- Emergence of appropriate computing infrastructure, big data, and deep learning algorithms has reinvigorated interest in artificial intelligence (AI) technology and accelerated its adoption in various sectors.
- AI is positioned to have a major role in a range of healthcare delivery areas, including diagnostics, prognosis, and patient management.
- A single major mishap with a clinical AI system could undermine public and health professional confidence.



Ethical Concerns



AI bias

Training of AI models requires large-scale input of health-related or other data.



Privacy

Healthcare data are some of the most sensitive information one can hold about a person.



Patient and clinician trust

Effective health care is predicated on the maintenance of substantial trust between the public and health professions and systems.



Regulatory Concerns

- Ability to autolearn from real-world use and can thereby improve in performance over time.
- Concerns also emerge about the safety and efficacy of AI medical software that does not necessarily align with current models of care delivery.
- Issues of liability are also of concern.
- Lack of explainability affecting some algorithms.



Healthcare Implication

- Clinical use of AI models is certain to transform current models of healthcare delivery; indeed, their reach will extend beyond clinical settings.
- Opportunities to automate triage and screen and administer treatment are also becoming a reality.
- In the absence of appropriate regulatory and accreditation systems, rapid progress in development and deployment of AI models could lead to unsafe and morally flawed practices in health care.

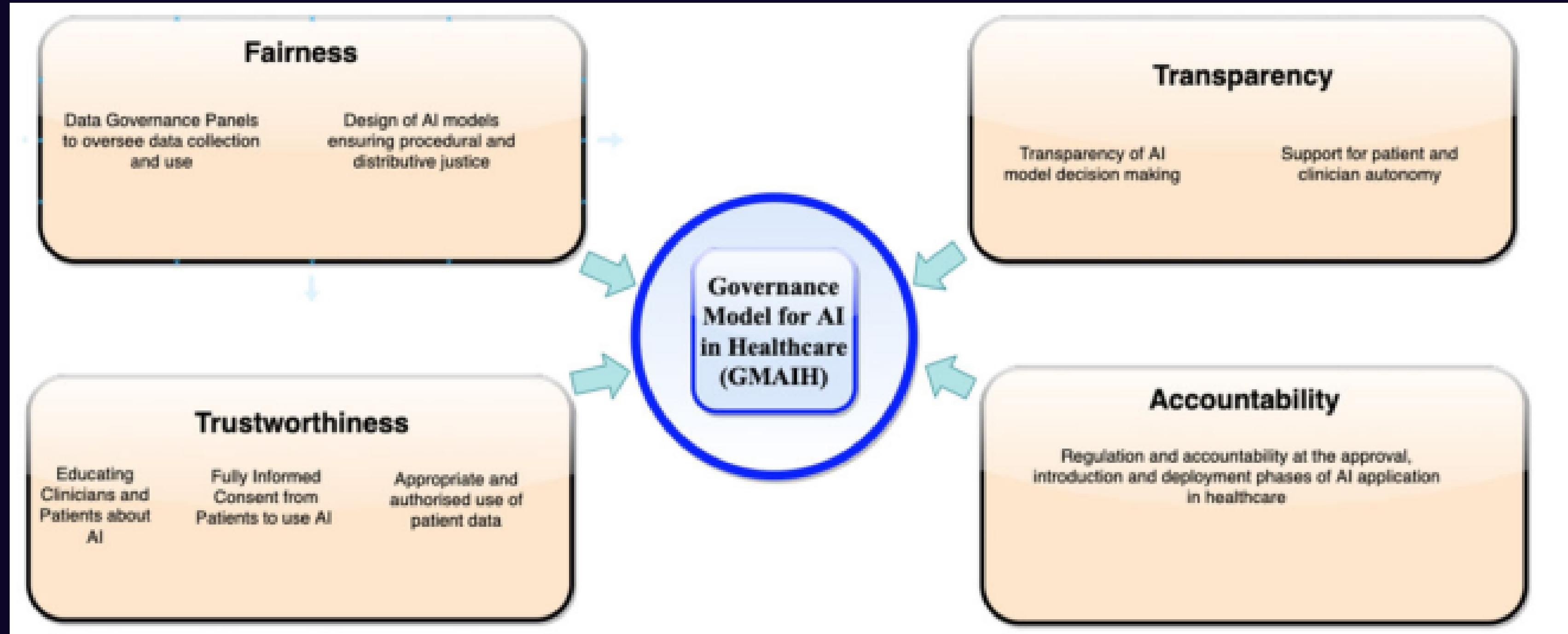
Governance Model

- Governance Model for AI in Healthcare (GMAIH).
- To address the aforementioned ethical, regulatory and safety and quality concerns.



4 main components:

- Fairness
- Trustworthiness
- Transparency
- Accountability



Conclusion

- AI medical products are already on the market and there is increasing evidence of the efficacy of AI medical software in clinical decision making.
- By incorporating basic elements essential to the safe and ethically responsive use of AI in health care, it is designed to be flexible enough to accommodate changes in AI technology.





Thank You

Varun Khadayate A016

Simran Kumari A018

Kartik Padave A022