AI in the Humanities: Ethical Implications in Healthcare

Ryan Scott | Brightpoint Community College

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Introduction

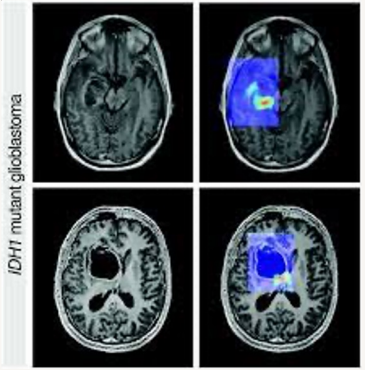
Background and Research Focus

- Undergraduate student at Brightpoint and a Mellon Research Fellow.
- My research project explores the integration of AI into the Humanities, with a focus on healthcare applications.
- As an electrical engineering student, I am approaching the topic from a cross-discipline perspective.

What AI is Currently Used For in Medicine

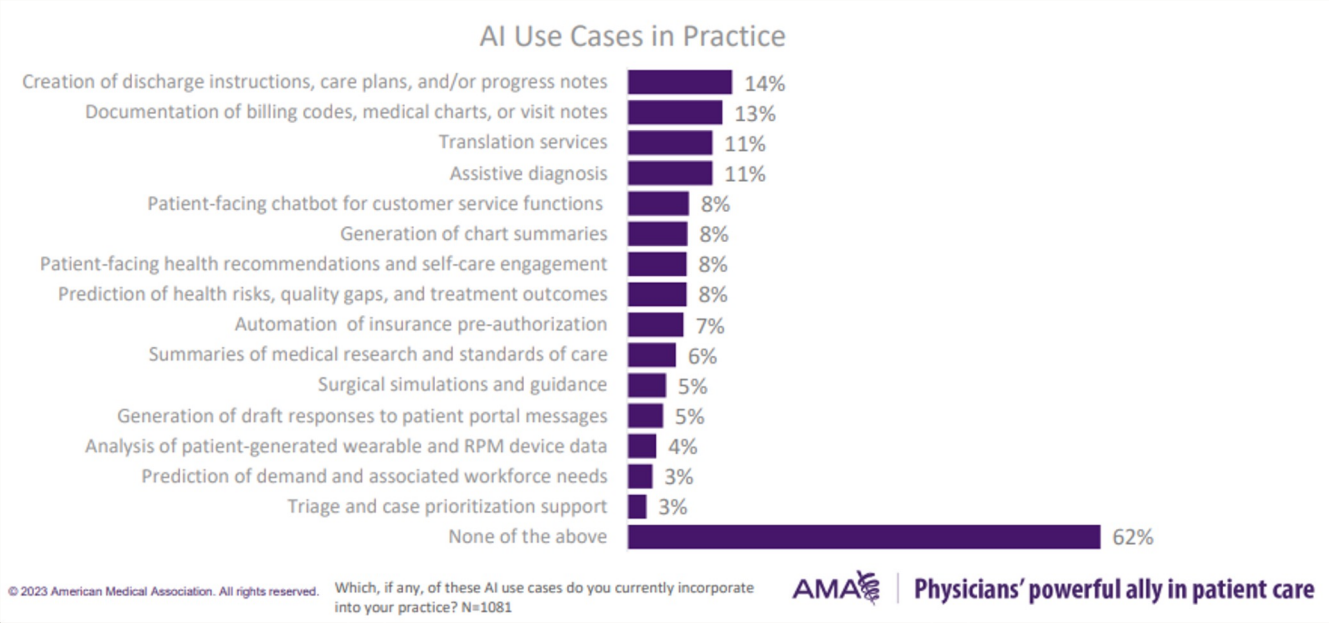
Monitoring of vitals such as heart rate, blood pressure. [7]

Diagnostic imaging such as autonomously spotting cancer cells [7]



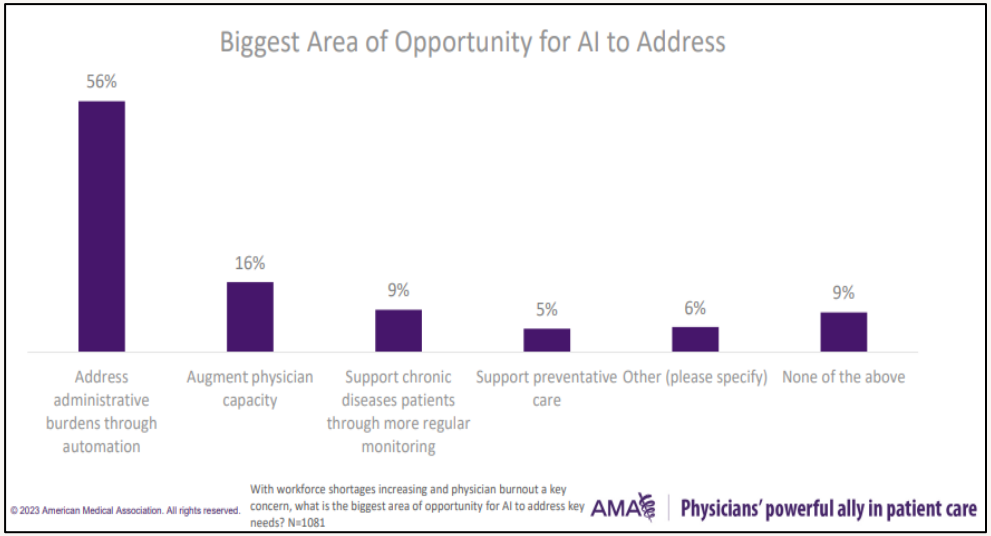
Automated electronic health record generation [13]

What AI is Currently Used For in Medicine [13]



Incentives for current usage [13]

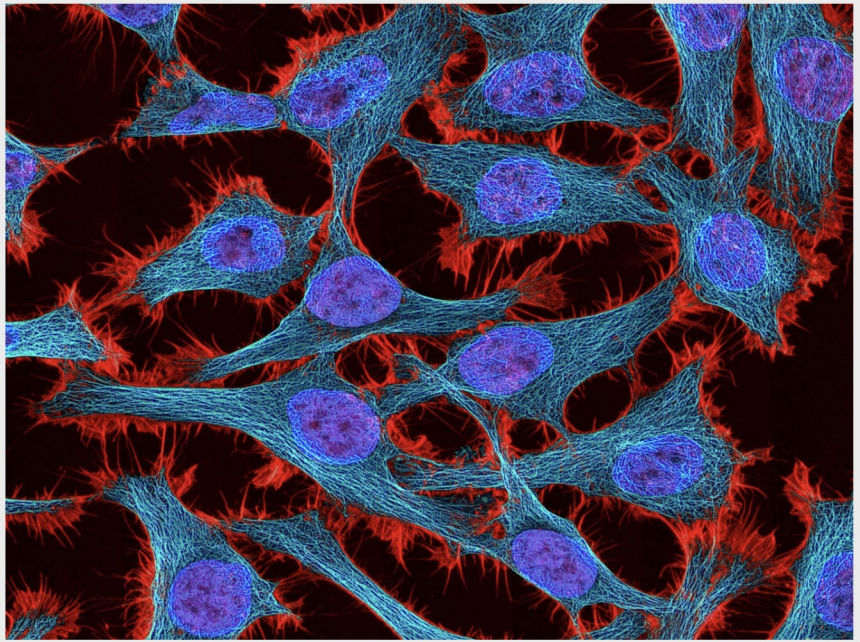
- Healthcare worker shortage
- EHR work overflow
- Parallel processing



Ethical issues in healthcare

Henrietta Lacks

- Victim of poor ethical choices [14]
- Saved countless lives [14]
- Moral gray area



Multiphoton fluorescence image of stained HeLa cells. Credit: NIH *Getty Images*

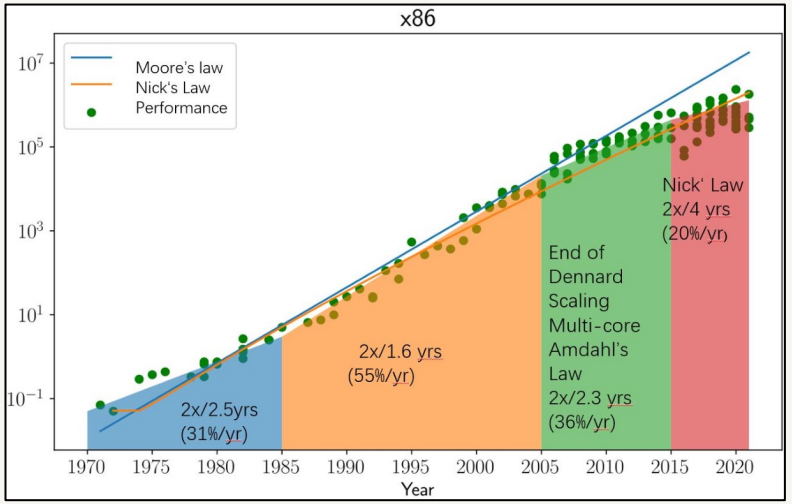
Privacy Concerns, ethical issues

Qualities of AI

- Trained on a dataset
- Who owns the dataset? [2]
- Human vs algorithm
- Issues with making decisions statistically

Education and technological development

- AI is not new news [1]
- What has driven the advancement?
- What threshold have we recently crossed?
- Moore’s law



Education and technological development

- Compare to Google, calculators, spellcheck
- Access to information
- Problem solving

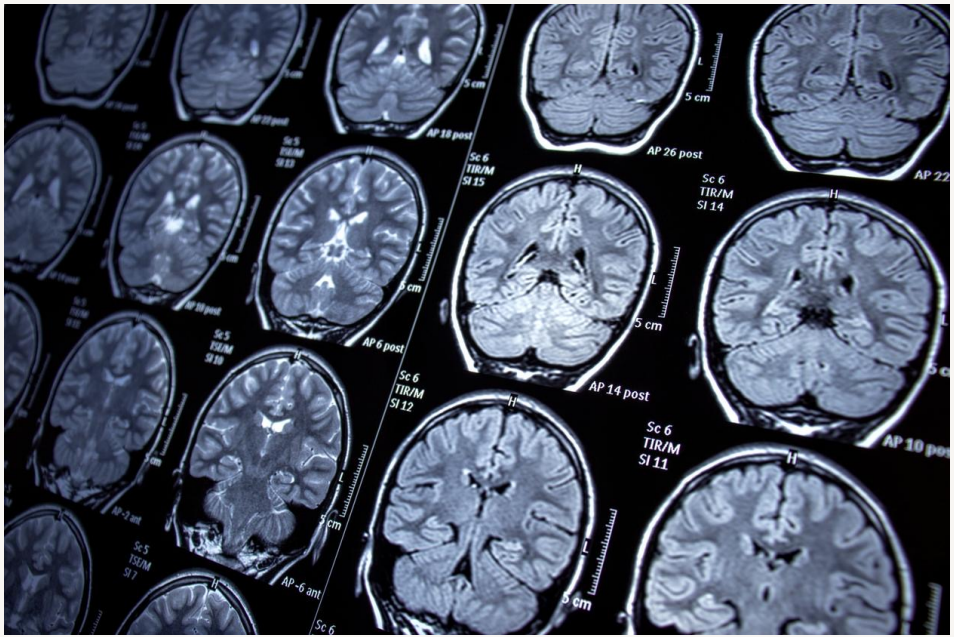
Education and technological development

- The education system does not need to be revamped
- Circling back to worker shortage
- Quantity and quality

Benefits of Using AI in Medicine

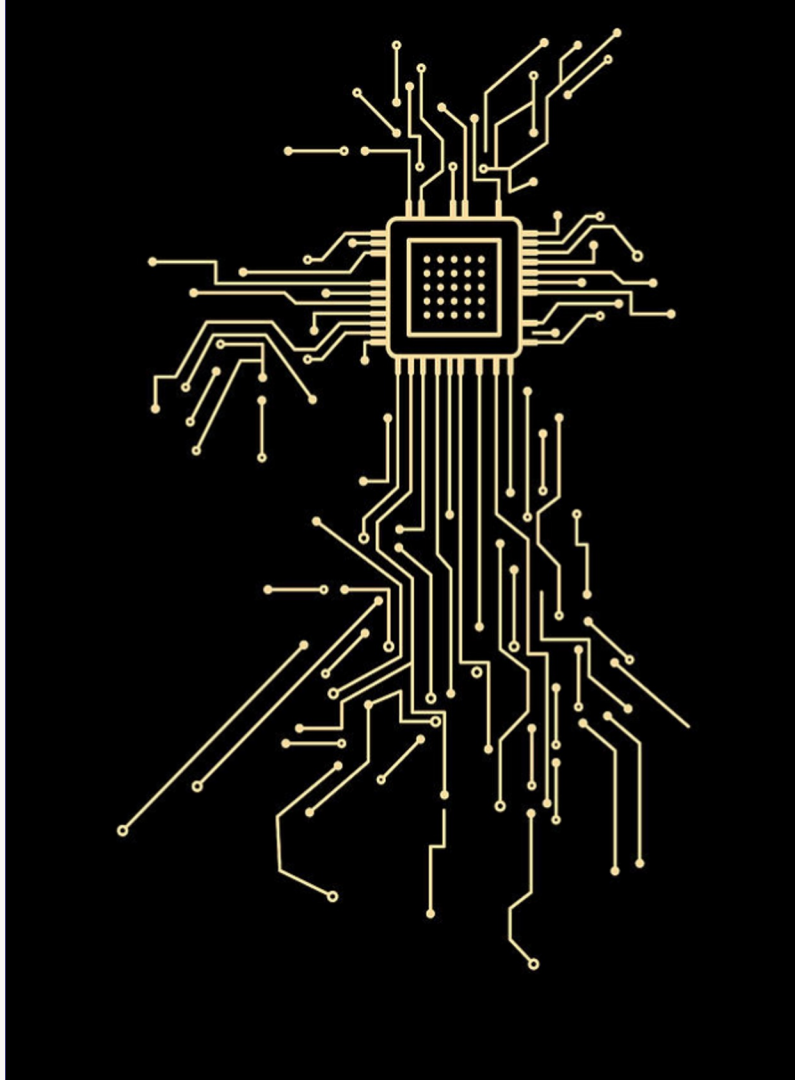
Diagnostic technology

- Many tools initially seem superior [12]
- Further testing?
- How to handle implementation?



The future clinical environment with AI

- Progression from traditional medical practice to AI-assisted diagnosis in clinical settings
- Ethical considerations of AI influencing clinical decision-making
- Implications of fully automated diagnostic tools in healthcare



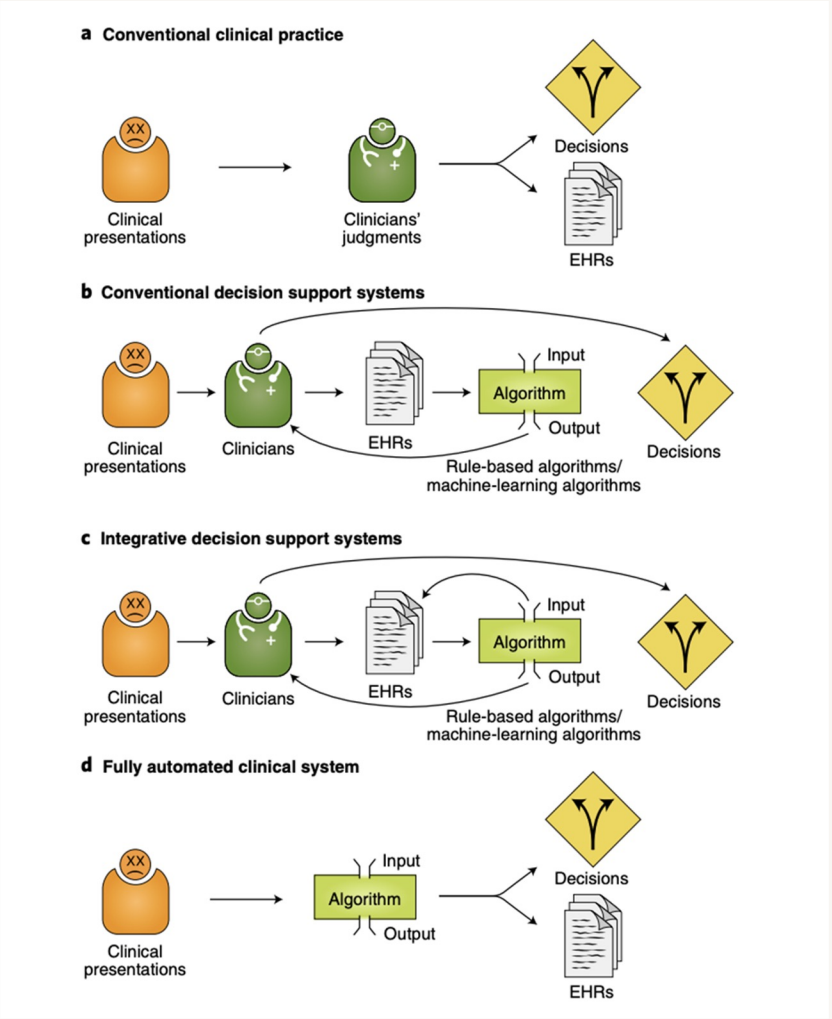
Possible clinical implementations of AI [3]

a - Current practice
- Standards of care applied to AI
- EHRs and workload issues

b - Validation model
- Does not address EHR issues
- Provides feedback to clinician

c - Validation and documentation
- Some EHR assistance
- Similar structure to B

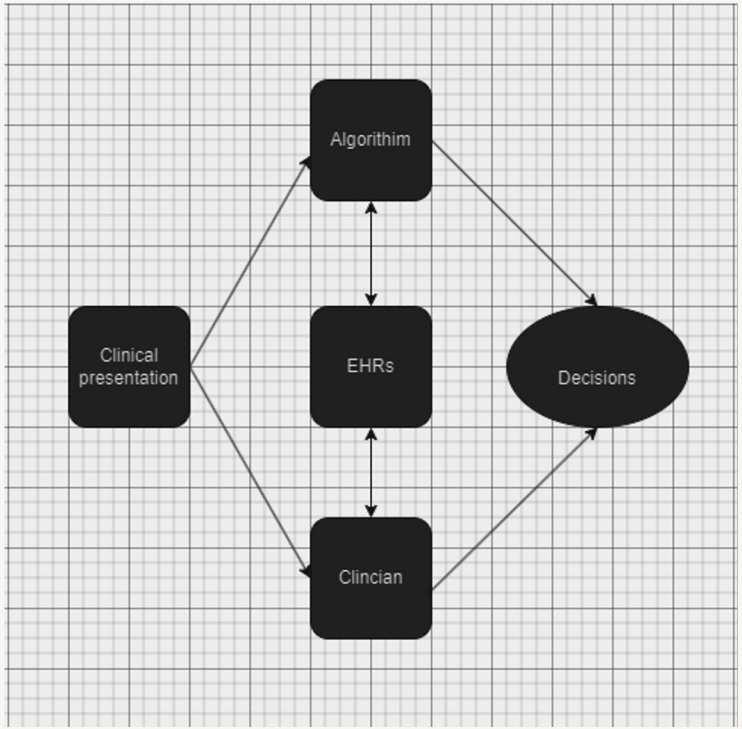
d - Full automation
- Ethically dubious
- Human in the loop



Parallel processing model

I am proposing a fifth model

- AI handles initial EHR work
- Provides diagnostic feedback
- Steps are validated by physician who can focus on the patient



Conclusion

- Human in the loop [3]
- Doctor patient relationship [17]
- Near vs far future
- GAI

Questions?

Contact: Ryan Scott,
rs7248@email.vccs.edu