

Artificial Intelligence (AI) in Academic Medicine Webinar Series

Episode 3: “AI & Healthcare Delivery: Navigating the Clinical Reality and Expectations”

March 26, 2024

Recording: <https://vimeo.com/928379941>

Facilitator:

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Speakers:

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- Shakaib Rehman, MD, MACP, FACH, FEACH, FAMIA, CSH, Chief of Education, Phoenix VA Health Care Systems; Professor & Chair, Department of Biomedical Informatics, University of Arizona College of Medicine-Phoenix
- Mary Kate Selling, MHA, Executive Director, Clinical Data and Analytics, UChicago Medicine

Key Takeaways & Tips Discussed

Drivers of Implementing and Evaluating AI in Clinical Setting

- AI has demonstrated value and application in clinical settings through established uses in fields such as radiology and imaging.
- AI's potential to create predictive modeling and be used in clinical decision making will be a significant change to the industry.
- Some institutions are exploring AI for the reduction of cognitive load on providers, reducing administrative burden.
- Regulation and oversight are on the horizon to help guide uses of AI in clinical settings, mostly focused on the issue of safety.
 - ONC, FDA, NIST and more are currently working on basic guidance
- Faculty at all levels are seeking institutional guidance on the use of AI for a wide range of purposes.
- There is keen interest across the industry to evaluate AI for increased clinical efficiency for financial purposes.
- Patients utilizing AI for self-diagnosis and treatment plans presents a new evolution on “Dr. Google.”
- The Veterans' Administration is actively evaluating AI tools to assist in areas such as scribing, enhanced scoping, suicide prevention, EHR compatibility, and more

Stakes with AI and Clinical Data

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- Health systems should consider the implications of AI on patients, but also internally for employees, workflows, and more.
- Bad data in, bad outputs still applies. It is important to review before launching new tools, including review of the data sets that the models were trained on, and to follow up after a tool has been deployed, including validation and continued governance/follow-up to ensure relevant utilization and impact.
- Emerging AI tools accessible outside the organizational
- Include stakeholders with various areas of expertise (DEI, providers, data scientists, etc.) in the review and validation processes.

Graduate Medical Learners and AI

- GME learners in different AI engagement levels
 - Observers who are aware of where AI is in their environment, but do not generally seek it out to use.
 - Active adopters seeking pragmatic uses for clinical (e.g., letters for patients) and learning (e.g., board study “companion,” flashcard generation) uses.
 - AI innovators who are researching applications of AI in new areas, likely have computer programming skills.
- Joint degree programs between medicine and AI are emerging.
- Trainees are considering the role of AI within their clinical future.
- Increased training in areas such as math and logic and programming may prove useful to future providers and training may need to happen before residency.

New Tools and Existing Workflows

- Subject matter experts are necessary in all levels of development.
- Vendor vs homegrown AI tools are a major consideration point.
- AI tools will likely need adjustment and refinement after implementation.
- The potential for biased data being used to train tools is real and must be considered when determining whether to use a tool and for which populations.
- Workflow impact must be considered if deployed.
- Transparency of tools and their data sources are critical for all stakeholders.
- Forethought to governance structure in clinical environment is critical given the stakes.
- The validation of AI-generated outputs is currently a major industry focus and very resource intensive.
- Committees with clinical expertise represented that provide oversight of AI-related or produced tools or output is an approach to limit risk to patients

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References & Resources (note that these are not endorsed by AAMC, but alluded to in discussion):

- White House Office of Management and Budget (OMB) [Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence](#) (March 28, 2024)
- National Institute of Standards and Technology (NIST) [Artificial Intelligence Resource Hub](#)

Join us for the 4th episode in the AI in Academic Medicine webinar series on April 30, 3-4pm ET, ["Utilizing AI for the Medical Education Classroom"](#)