AI in Global Health Education and Curriculum Design

CUGH AI Working Group

April 9, 2026

Agenda

- Session Overview
- Intro to AI & Global Health Education
- AI & the Global Health Workforce
- AI in Clinical Education
- Closing & Evaluation

CUGH AI Working Group Mission

The AI Working Group at the Consortium of Universities for Global Health seeks to improve the wellbeing of people and the planet by advancing innovative, ethical, and equitable integration of artificial intelligence into global health. Through **education**, we create accessible resources to deepen understanding of AI's potential and challenges. Through **research**, we drive innovative AI solutions to address global health disparities. Through **service**, we foster cross-sector partnerships to implement cutting-edge AI applications. Through **advocacy**, we promote policies that ensure equitable access to transformative AI technologies, aligning with CUGH's mission to enhance health equity and sustainability worldwide.

Key Activities:

- Webinars with leaders in AI
- Two-pagers introducing AI topics
- AI curriculum needs
- Guidance on AI use in global health education
- Commentaries on AI integration in global health
- Conference sessions

Session Goals

1. To share and document perspectives and priorities among the CUGH community related to AI

2. To identify opportunities for the AI WG to support cross-cutting needs within CUGH

3. To refine the AI Working Group Scope of Work to align with CUGH member priorities

4. To recruit working group participants with diverse perspectives who can lead CUGH AI WG activities

AI and Global Health Education

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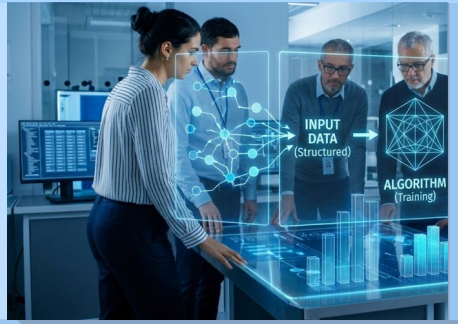
GEORGETOWN UNIVERSITY
Center for Global Health Practice and Impact

What is AI?

Artificial Intelligence: systems that perform tasks that normally require human intelligence (ability to learn, reason, make decisions, and adapt)

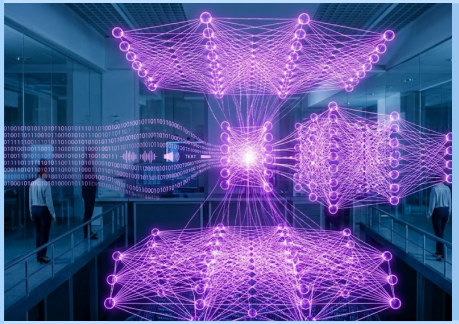
AI is a toolbox, not a single technology

What is AI?



Machine Learning

Algorithms and models for prediction



Deep Learning

Machine learning using artificial networks

Generative AI

Creation of images, text, or videos

How is AI used in Global Health?

Study & learn

- Literature reviews
- Brainstorming
- Note taking
- Editing
- Quizzing & studying
- Data analysis & interpretation
- Synthesizing research
- Personalized learning paths

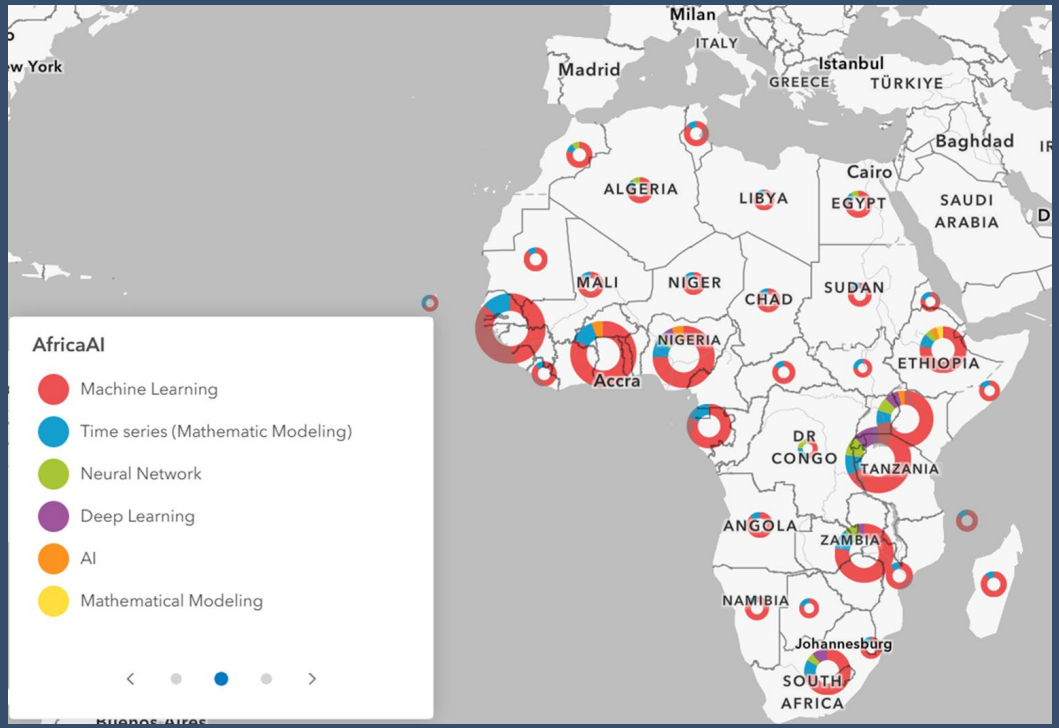
Do our Work

- Notation and meeting notes
- Grant writing
- Automation
- Report generation
- Automating data entry
- Creating presentations
- Document summarization

Implement Health Programs

- Clinical Decision Support
- Chatbots
- Outbreak risk prediction models
- Supply chain management
- Predictive modeling for resource allocation
- Early disease detection
- Health worker training tools
- Monitoring program effectiveness

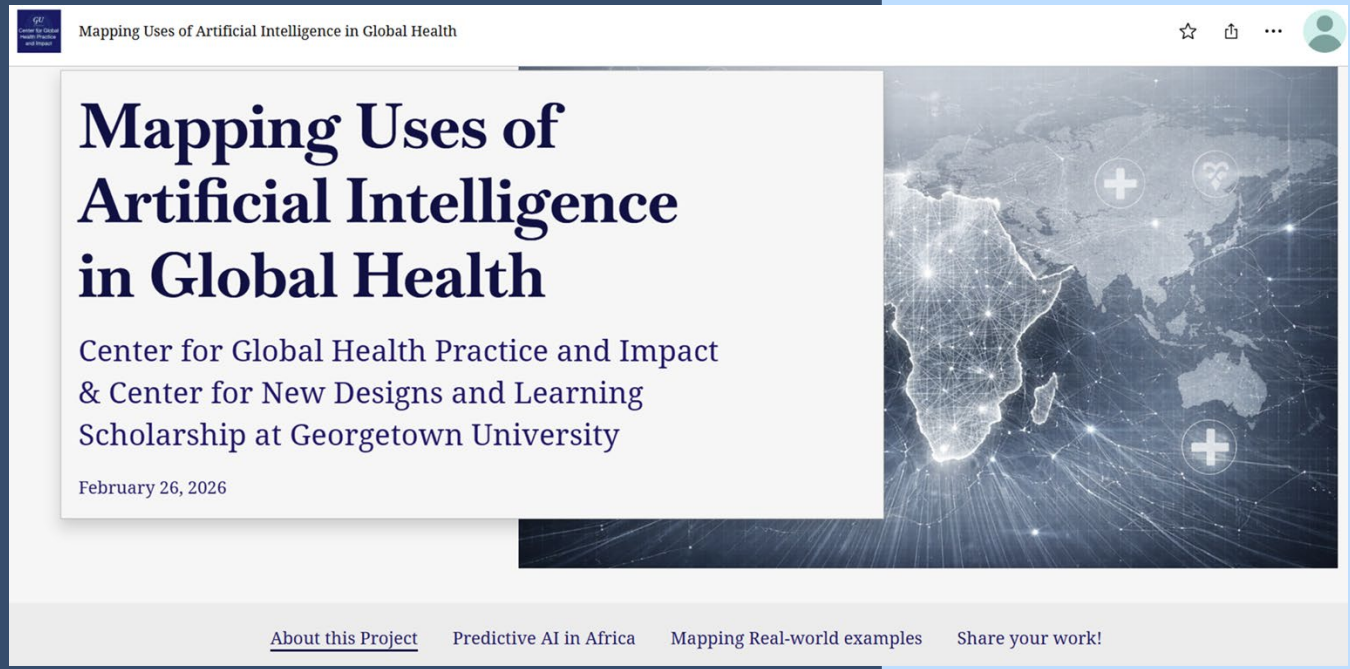
Case Study: Predictive AI in Global Health



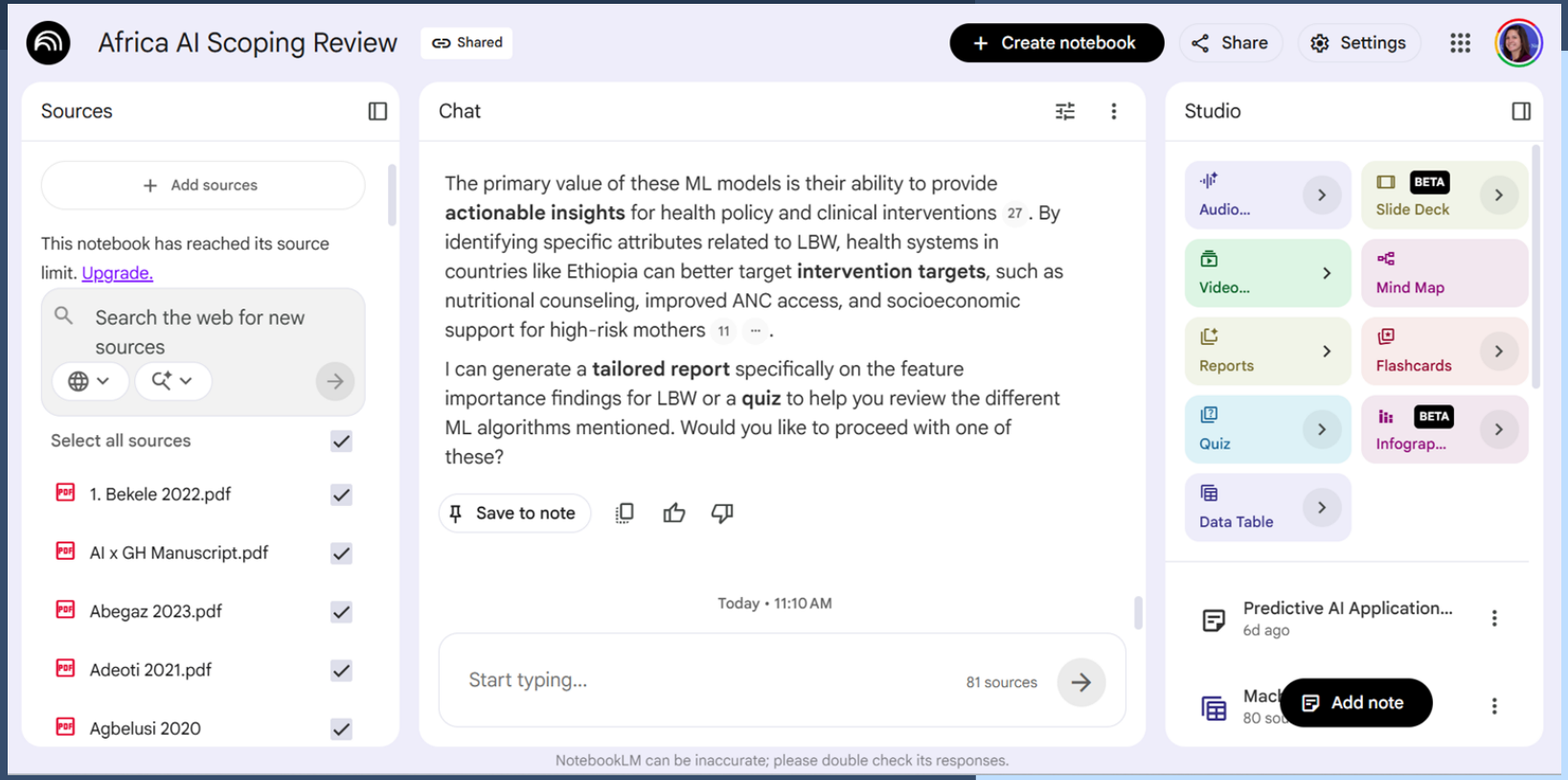
Scoping review of predictive AI in Africa

- 80 predictive AI studies
- 54 African countries
- Infectious disease focus (61%)
- Machine learning most common (67%)

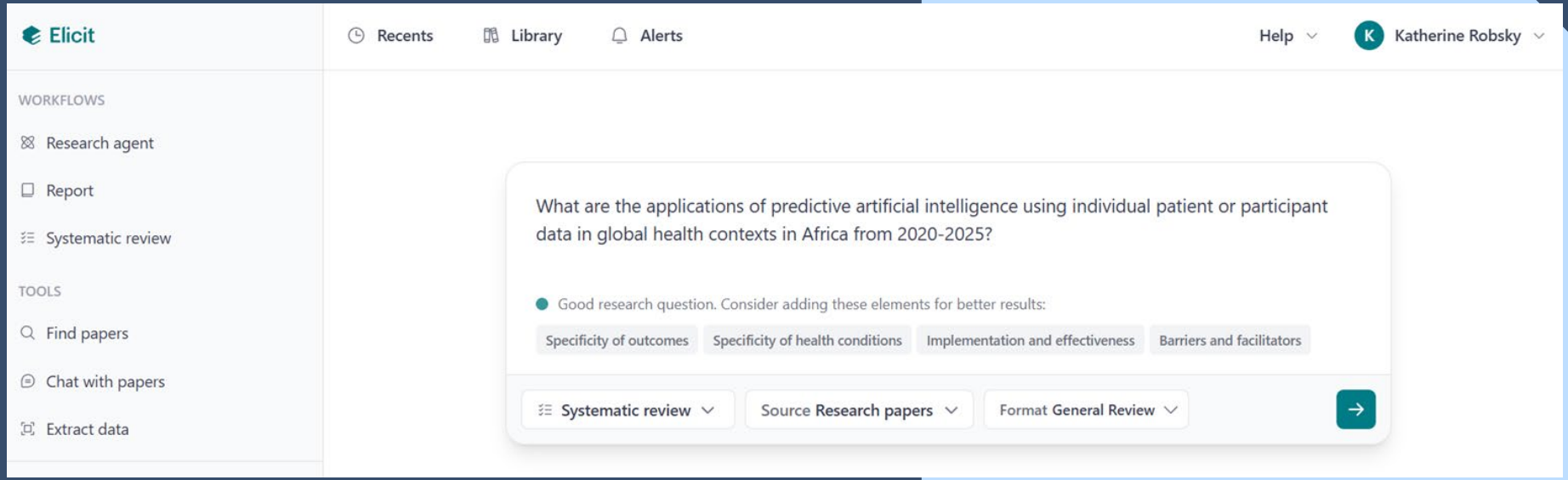
Case Study: Predictive AI in Global Health



Case Study: Predictive AI in Global Health



Case Study: Predictive AI in Global Health



Conclusions

AI is a toolbox with many potential uses in global health, including how we study & learn, do our work, and implement health programs

1. AI is already embedded in global health
2. Global health as a field needs to adapt - quickly
3. AI neither good nor bad - it depends on its use

What are your thoughts, concerns, and questions regarding the AI in the context of global health education?

Consider:

1. How is AI currently reshaping how you learn, teach, or share knowledge within the global health community?
2. What specific skills or competencies must students and practitioners develop to use AI effectively and ethically in their work?
3. What resources or initiatives should CUGH prioritize to support your understanding and use of AI?

Activity: Networking & sharing (10 min)
Report back (10 min)

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AI in Clinical Education

What's actually happening — and what we're still missing

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THE CLINICAL REALITY

What AI promises clinical education

- Adaptive learning, personalized feedback
- AI-generated clinical cases & simulations
- Decision support embedded in training
- Scale: reach learners in any setting
- Automated assessment and competency tracking

[1]

vs.

What frontline clinicians actually face

- Tools built for high-resource, EHR-rich contexts
- No bandwidth, no validation data, no support
- Learners using AI unsupervised with no framework
- Educators without AI literacy
- AI adding complexity, not reducing it

[2]

[1] Blanco et al., Med Teach 2025 (faculty/student AI survey) [2] Guirguis et al., J Med Internet Res 2026 (health professions students & AI use)

WHERE AI IS SHOWING UP IN CLINICAL EDUCATION

Case-Based Learning

- AI-generated patient cases
- Adaptive difficulty based on learner response
- Simulation scenarios for rare/high-stakes events

But: cases reflect training data biases

Assessment & Feedback

- Automated written assessment scoring
- Instant, iterative feedback on reasoning
- Formative feedback at scale (esp. in resource constrained settings)

But: risk of shortcutting clinical reasoning

Clinical Decision Support

- Point-of-care tools integrated in training
- Differential diagnosis aids
- AI as a "second opinion" for learners

But: black box, limited LMIC validation

[3] Sobrido-Prieto et al., BMC Med Educ 2025 (updated scoping review, AI in undergraduate medical education) [4] Lancet Digital Health Viewpoint 2025 (AI in medical education: opportunities & challenges)

THE SUBTRACTION PROBLEM

AI in clinical education is removing the wrong things

Cognitive load ≠ useless friction [5]

Learners who delegate reasoning to AI without reflective processing risk cognitive deskilling. Struggling through a case builds pattern recognition — AI that short-circuits that may produce clinicians who can prompt, but can't think.

Efficiency ≠ competence [6]

Faster feedback loops don't automatically build clinical judgment. AI systems that disrupt existing reasoning workflows add cognitive burden rather than removing it — a well-documented barrier to real-world adoption.

Access ≠ equity [7]

An AI tool that works in Boston and fails in Kigali isn't a global health solution. LLM deployment remains heavily concentrated in high-income countries — raising real concern that technology amplifies rather than closes health disparities.

[5] Ferretti et al., JMIR 2025 (GenAI: enhancing critical thinking or undermining cognitive autonomy?) [6] Bienefeld et al., npj Digital Med 2025 (AI should support clinical reasoning, not displace it)
[7] Chen et al., Lancet Reg Health W Pacific 2025 (LLMs & global health equity)

WHAT WE ACTUALLY NEED

A framework for clinician-led AI integration in education

01

Clinician-Centered Design

Frontline physicians and educators must shape AI tools not just validate them after the fact.

Clinical context is not a use case. It's the foundation.

02

AI Literacy for Educators First

We cannot teach what we don't understand.

All clinicians and educators need accessible, non-technical AI literacy before they can meaningfully guide learners.

03

Context-Appropriate Evaluation

Which AI tools are actually validated for which settings? Who decides?

We need shared criteria not brand marketing.

04

Protect the Human Elements

Clinical reasoning, patient communication, ethical judgment, and cultural humility are not "soft skills."

They are the core and AI must be built around them.

GUIDED DISCUSSION — YOUR TURN

15 minutes | Small groups → report back

Q1

Has AI changed how you or your learners approach clinical reasoning — for better or worse?

Think: a specific moment. Not a theory.

Q2

What's one thing AI should NOT be allowed to replace in clinical training?

What's the line you'd draw — and why?

Q3

What would "context-appropriate AI literacy" actually look like for your setting?

What are the 2-3 things every clinician-educator in your context needs to know?

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All references 2023–2026. Full citations available on request.

YOUR TURN — LIVE POLL

Join the discussion

3 questions. No login needed.
Type your response — watch the room think in real time.

1. Open your phone camera
2. Scan the QR code — or go to slido.com/1576755
3. Type your answer — no account needed

slido.com/1576755

15 minutes total | ~4 min per question

Q1

Has AI changed how you or your learners approach clinical reasoning — and if so, how?

> *Think of a specific moment, not a general trend. A case, a shift, a concern you've actually seen.*

Type 1-2 sentences. Responses appear live on screen.

slido.com/1576755

4 minutes | responses visible now

Q2

What is the one thing AI should not be allowed to replace in clinical training?

Name it specifically. Then tell us why — what breaks if we lose it?

Type 1-2 sentences. Responses appear live on screen.

slido.com/1576755

4 minutes | responses visible now

Q3

In your setting, what does AI literacy for clinician-educators actually require?

Name the 1-2 most essential things — skills, knowledge, or conditions. Short phrases work best.

3-5 words max. Submit multiple times for multiple ideas. Watch the cloud build.

slido.com/1576755

3 minutes | cloud builds in real time

Image: NASA / Reid Wiseman, April 2026 | Public domain

"When we were on the far side of the moon, looking back at Earth, you really felt like you weren't in a capsule."

Jeremy Hansen, CSA Astronaut
Artemis II, April 6, 2026

In a time of global health uncertainty —
humans working without ego,
across every difference,
achieved the impossible.

Thanks, Artemis, for the reminder.