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# Preparing for AI Integration in Clinical Education

GEA Webinar Series: AI Skill Building for Medical Educators  
January 15, 2026 (Session 9)

# Introductions

## as we get started

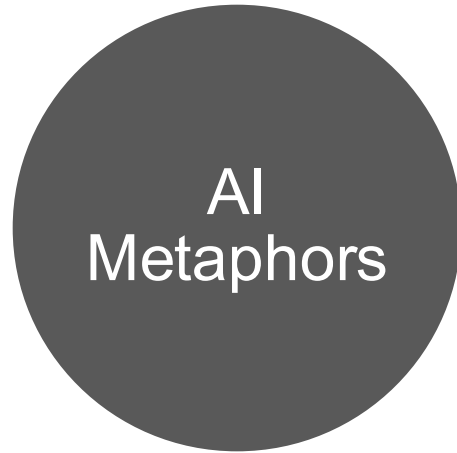
- In the Chat share your
  - Name
  - Location
  - AI Metaphor

e.g.

Larry Hurtubise

Columbus Ohio

AI is like driving a car because competencies are changing



Tools



Nature



Colleague



Other

# Share Your Story!

What have you done with AI as a result of your participation in this series?

What new tools have you tried, and for what?

Have you formed your own AI community of practice?

Share your AI growth story with us.



# Disclosures

None

The College of Human Medicine Office of CME designates this event for a maximum of 1 *AMA PRA Category 1 Credit(s)*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



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College of Human Medicine  
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# Disclaimer

Although we use certain AI tools in our sessions, we are not promoting some over others.

We are simply choosing certain tools we have access or familiarity with as examples to demonstrate skills.

We do not have time to demonstrate all the available tools.

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# Introductions



Larry Hurtubise, PhD  
Curriculum and  
Instruction Consultant  
The Ohio State  
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Cynthia Ledford, MD  
Professor/ Physician  
Educator, Consultant



Daniel McFarlane, MD  
Associate Professor of  
Internal Medicine and  
Pediatrics. The Ohio  
State University



Srinivasan Suresh MD  
Professor of Pediatrics  
University of Pittsburgh

# Learning Objectives

- Describe the **potential impact of AI on clinical practice and diagnostic reasoning** including risk of deskilling, never skilling, and mis-skilling.
- Explore **AI applications for clinical care** and strategies for their use in clinical education including strategies to assess readiness and evaluate outcomes .
- Highlight **ethical and practical considerations** for the physician-patient and human-computer relationships.
- Identify **how teachers can incorporate** adaptive learning skills and reflective practice to support thoughtful and safe expansion of AI in clinical practice.

## How to ask questions

- Please post questions for the panelists in the Q&A. We will try to answer them throughout the session
- Please use the chat for ongoing discussions with all the participants.



AI  
Metaphors



Tools



Nature



Colleague



Other

# AI Metaphors

# Turning into AI

Quantitative futurist Amy Webb discusses three technologies that make up the “super cycle” that we’re all living through right now: artificial intelligence, wearable devices, and biotechnology, and why, despite the unnerving change, we still need to do some serious future planning. [What's Coming \(and What's Here\) - Brené Brown](#)



# Impact

Describe the potential impact of AI on clinical practice and diagnostic reasoning

- What trends or innovations are you seeing?
- What unintended consequences are or may result?

Bhargava, H., Salomon, C., Suresh, S., Chang, A., Kilian, R., Stijn, D. V., Oriol, A., Low, D., Knebel, A., & Taraman, S. (2024). Promises, Pitfalls, and Clinical Applications of Artificial Intelligence in Pediatrics. *Journal of medical Internet research*, 26, e49022. <https://doi.org/10.2196/49022>

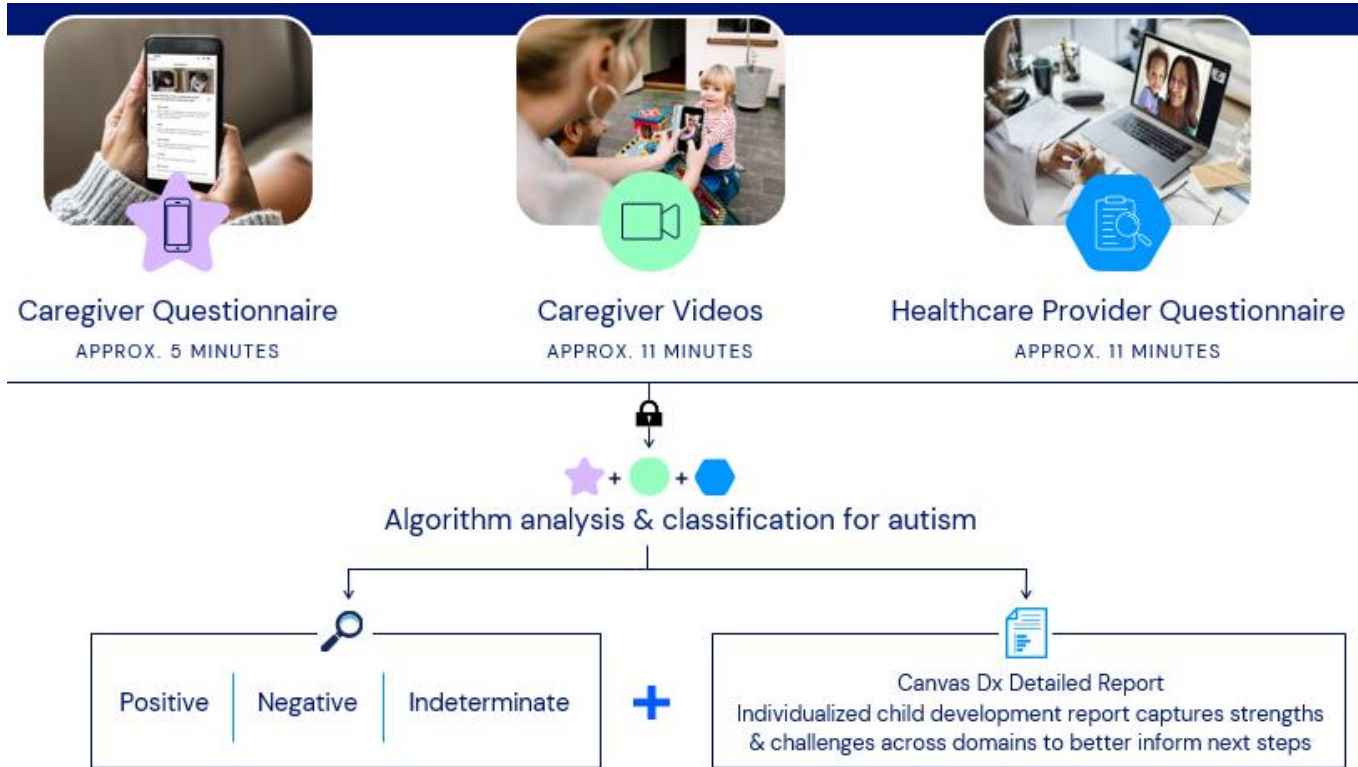
Suresh, S., Misra, S.M. A Review of the Role of Artificial Intelligence in Pediatric Clinical Care, Education, and Research. *Curr Pediatr Rep* 13, 32 (2025). <https://doi.org/10.1007/s40124-025-00362-w>

# The Future of AI in Clinical Care

AI and ML hold significant promise for transforming healthcare by enhancing various aspects of patient management and system operations.

- Clinical Applications
- System Efficiency and Outcomes
- Generative AI
- Evolving Care Models

# Earlier Diagnosis of Autism



Slide Courtesy: Sharief Taraman MD

# Adjust to Reading Level

SU

Can you please explain how to use Albuterol MDI with spacer, for asthma as a rescue inhaler, to a 10 year old child, in 5 steps or less?



Of course! Let's make this simple and easy to understand for a 10-year-old:

1. **Get Ready:** First, shake your inhaler really well for about 5 seconds. Take the cap off the inhaler and attach the spacer to the mouthpiece of the inhaler.
2. **Big Breath Out:** Before you use the inhaler, breathe out all the way, but do it away from the spacer's mouthpiece.
3. **Puff & Inhale:** Push down on the inhaler to release a puff of medicine into the spacer. As soon as you do that, take a slow, deep breath in through your mouth and try to fill your lungs with air.
4. **Hold & Exhale:** Hold your breath for about 10 seconds, or as long as you can. This gives the medicine time to settle in your lungs. Then breathe out slowly.
5. **Rinse:** After using your inhaler, it's a good idea to rinse your mouth with water or brush your teeth so you don't get an icky taste or sore throat later.

Remember, always use your inhaler exactly as your doctor tells you, and let them know if it doesn't seem to be working or if you need to use it more often than usual!

Given Amy Webb's three factors (artificial intelligence, wearable devices, and biotechnology)

**What would you steer into for the biggest impact?**



Group on Educational Affairs

# AI in Clinical Practice

- Mobile
- OpenEvidence
- AI Curriculum- 'Show and Tell' sessions for trainees and faculty
- Not all AI are equal

# Care

- What models are emerging to steering into AI in clinical care and education?
- How can educators prepare
  - Strategies and resources



# Benefits of AI Technology in Patient Care

*AI can automate tasks to free up a clinician's time to focus more on their patients, "humanizing" care in new ways*

- Ambient AI
- Aiva Health—The first voice-powered care assistant: connects patients with the correct physician for communication.

*AI can be an important source of data and expertise for clinicians.*

- Open Evidence

*AI can help clinicians better interpret imaging results.*

- Colonoscopy Identification
- Clear normals so Radiologists can focus on the abnormal studies

*AI can help health care organizations improve quality and safety.*

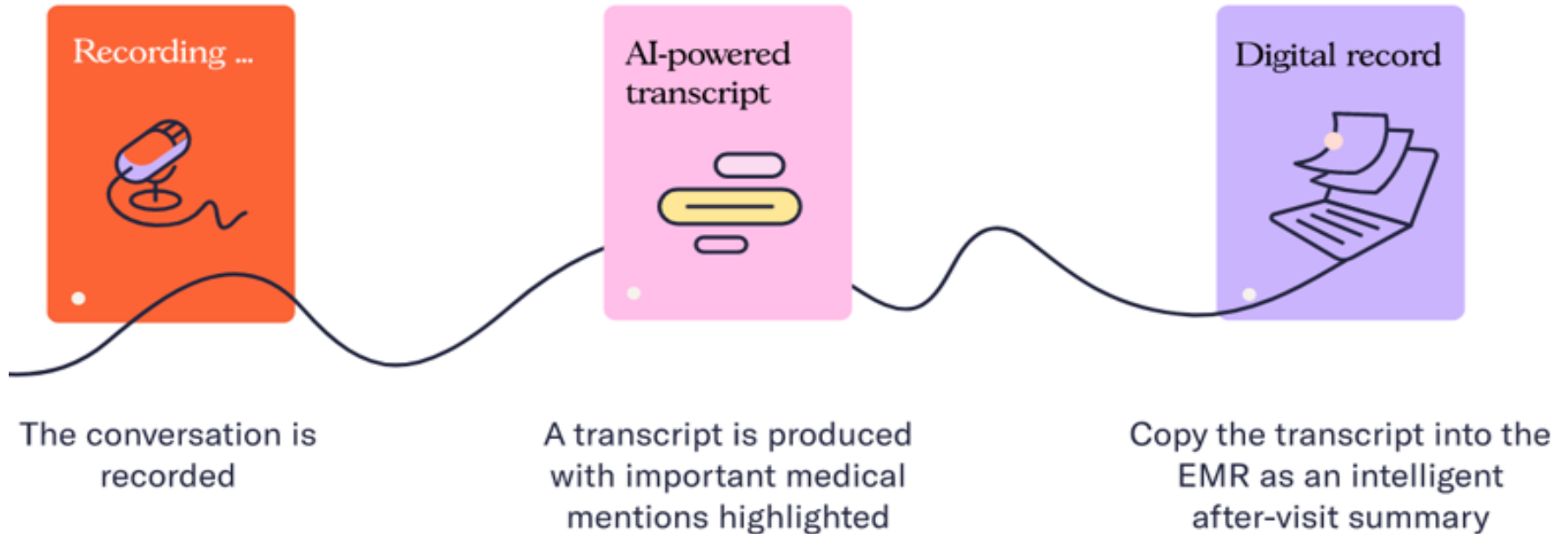
- Review large data sets to assess risk and process that can be improved

*AI can aid in the diagnosis and treatment of rare diseases*

- Personalized care by using larger data sets to compare and diagnose rare diseases.

# AI- Clinical Documentation

**From ambient conversation to clinical note, with a little help from generative AI**



# Ambient AI – Clinical Documentation

≡ WORKLIST

📅 JUL 14, 2024



09:34 AM

8:51

Rm 9

Rm 9

CLINICAL NOTE

PATIENT SUMMARY [PVS]

## History of Present Illness

The patient, a young child with a history of colorectal stenosis requiring two surgeries in infancy, presented with a three-day history of continuous fever. Despite administration of Tylenol and ibuprofen, the fever persisted, reaching up to 104 degrees. The patient also experienced vomiting, particularly when the fever spiked. Over the past 24 hours, the patient reported abdominal pain and dysuria. The patient vomited once in the morning of the consultation day. There were no reports of diarrhea, cough, runny nose, or shortness of breath. The patient's appetite was noted to be decreased, with minimal food intake but sipping on water. The patient had no other hospital admissions or major medical issues. The patient was not on any daily medications and had no known allergies. The patient's mother, a physician assistant, noted that the patient had a history of hydronephrosis detected in utero, but follow-up ultrasound in November 2021 showed no abnormalities. The patient had no previous history of urinary tract infections.

## Physical Exam

VITALS: P- 120  
HEENT: Throat normal, no redness. Ears clean, no wax.  
CHEST: Lungs clear.  
ABDOMEN: Soft, non-tender on palpation. No abdominal tenderness on deep palpation.

## Results

LABS  
Urinalysis: 10 WBC, positive leukocyte esterase, positive nitrite (07/14/2024)

## Assessment & Plan

Urinary Tract Infection: Three days of fever, vomiting, and abdominal pain. Dysuria and positive urine analysis (leukocyte esterase and nitrite) in the last 24 hours. No history of UTIs.

Start oral antibiotics daily for 7 days.

How was the quality of this clinical note?



TRANSCRIPT

Almost continuously would you say?

Yeah, we've had to rotate Tylenol and ibuprofen.

If we would miss it even for a couple of minutes she would get up to like 104.

And she was complaining of belly pain too?

Just today.

Yeah, the first couple days she threw up when her fever got high.

Didn't yesterday because we were keeping on top of it.

ABRIDGE



SHE/HER ^

COPY ALL

MARK AS DONE



0:00

8:51

1x

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# Open Evidence AI (slide 1 of 4)

## What is the evidence for the use of oral dexamethasone (steroids) in children with croup?

OpenEvidence<sup>®</sup>

Share

New Conversation



what is the evidence for the use of oral dexamethasone (steroids) in children with croup?

Answered on September 16, 2025

^ Finished thinking

• Analyzing query

🔍 Searching published medical literature, guidelines, FDA, CDC, and more

• Synthesizing relevant information

## Open Evidence AI (slide 2 of 4)

In addition to the findings of the landmark study, multiple systematic reviews and clinical trials have consistently demonstrated that **oral dexamethasone is effective in reducing the severity and duration of symptoms in children with croup**, regardless of initial severity. The most commonly studied and recommended dose is **0.6 mg/kg as a single oral dose**, though evidence suggests that lower doses (e.g., 0.15 mg/kg) may be similarly effective for mild to moderate cases.<sup>[1-2]</sup> The benefit of dexamethasone includes a reduction in croup scores as early as 2 hours after administration, decreased rates of return visits or hospital (re)admissions, and shorter lengths of stay in emergency departments or hospitals.<sup>[3-4]</sup>

Randomized controlled trials have shown that dexamethasone is beneficial for both mild and moderate-to-severe croup, with improvements in clinical scores, reduced need for additional interventions, and decreased parental stress and sleep disruption.<sup>[5]</sup> The efficacy of dexamethasone is comparable to that of prednisolone, and both are superior to placebo in preventing unscheduled medical re-attendance within 7 days.<sup>[1]</sup> Nebulized budesonide is an alternative for children unable to tolerate oral dexamethasone, but oral dexamethasone remains the preferred first-line therapy.<sup>[6]</sup>

## Open Evidence AI (slide 3 of 4)

Current clinical practice guidelines, such as those referenced in the American Family Physician review, recommend a single dose of oral dexamethasone for children with croup of any severity, with the addition of nebulized epinephrine for moderate to severe cases.<sup>[4]</sup> The safety profile of single-dose dexamethasone is favorable, with serious adverse events being rare.<sup>[3]</sup> Overall, the evidence base strongly supports the use of **oral dexamethasone as the mainstay of pharmacologic treatment for croup in children.**

Would you like me to summarize the evidence comparing the efficacy and safety of different dexamethasone dosing regimens (e.g., 0.6 mg/kg vs. 0.15 mg/kg) in children with croup, to help guide optimal dosing decisions?

# Open Evidence AI (slide 4 of 4)

## ☰ References



1. **Prednisolone Versus Dexamethasone for Croup: A Randomized Controlled Trial.**

Parker CM, Cooper MN.

Pediatrics. 2019;144(3):e20183772. doi:10.1542/peds.2018-3772.



2. **Clinical Inquiries. What's Best for Croup?.**

Pitluk JD, Uman H, Safranek S.

The Journal of Family Practice. 2011;60(11):680-1.



3. **Glucocorticoids for Croup in Children.**

Gates A, Johnson DW, Klassen TP.

 JAMA Pediatrics. 2019;173(6):595-596. doi:10.1001/jamapediatrics.2019.0834.



4. **Croup: Diagnosis and Management.**

Smith DK, McDermott AJ, Sullivan JF.

American Family Physician. 2018;97(9):575-580.



5. **A Randomized Trial of a Single Dose of Oral Dexamethasone for Mild Croup.**

Bjornson CL, Klassen TP, Williamson J, et al.

 The New England Journal of Medicine. 2004;351(13):1306-13. doi:10.1056/NEJMoa033534.

☆ [Leading Journal](#)



6. **Viral Croup: Diagnosis and a Treatment Algorithm.**

Petrocheilou A, Tanou K, Kalampouka E, et al.

Pediatric Pulmonology. 2014;49(5):421-9. doi:10.1002/ppul.22993.



# Benefits of AI Technology in Patient Care

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**Given the variety of potential benefits of AI in clinical care,**

**What are you seeing most in your practice? What are you not seeing yet?**

# Patient Centered

- Highlight ethical and practical considerations for the physician-patient and human-computer relationships.
  - How does foregrounding patient centered medicine influence strategies to assess readiness and evaluate outcomes .
-

# Considerations

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<b>Affordances</b>	<b>Describing, Predicting, Prescribing</b>	
<b>Limitations</b>	<b>Implicit and systemic bias</b>	
	<b>Patients</b>	<b>Populations</b>

# Ethics and Foregrounding Patient-Centered Medicine

The deployment of AI in healthcare raises critical ethical and governance challenges that require thoughtful safeguards to protect patients.

- Ethical Concerns
- The "Black Box" Problem
- Mitigating Bias and Ensuring Equity
- Informed Consent and Trust

Given the affordances and limitations

**What should medical educators  
focus on?**



Group on Educational Affairs

# Learning

Identify how educators can build adaptive learning skills and reflective practice to support thoughtful and safe expansion of AI in clinical practice.



# Impact on Learning

- Opportunities for Learning:
  - Cognitive off-loading
  - LLMs can serve as a "virtual medical tutor"- supporting clinical reasoning and knowledge acquisition
- Risks to Skill Development:
  - Deskillling:\*\* Loss of previously acquired skills.
  - Never-skilling:\*\* Failure to develop essential competencies
  - Mis-skilling:\*\* Reinforcement of incorrect behavior
- Adaptive Engagement (Cyborg vs. Centaur): Learners engage adaptively with AI
  - Centaur users - delegate tasks to the AI but maintain critical human oversight (recommended for high-risk, uncertain, or diagnostic tasks).
  - Cyborg users - tightly intertwine their work with the AI for all task stages (efficient for low-risk, well-defined tasks, but carries higher deskillling risk).

Abd-Alrazaq, A. et al. (2023). Large Language Models in Medical Education: Opportunities, Challenges, and Future Directions. *JMIR medical education*, 9, e48291. <https://doi.org/10.2196/48291>

Abdulnour, R. E. E., Gin, B., & Boscardin, C. K. (2025). Educational strategies for clinical supervision of artificial intelligence use. *New England Journal of Medicine*, 393(8), 786-797.

## Teaching Tips

### What to Teach

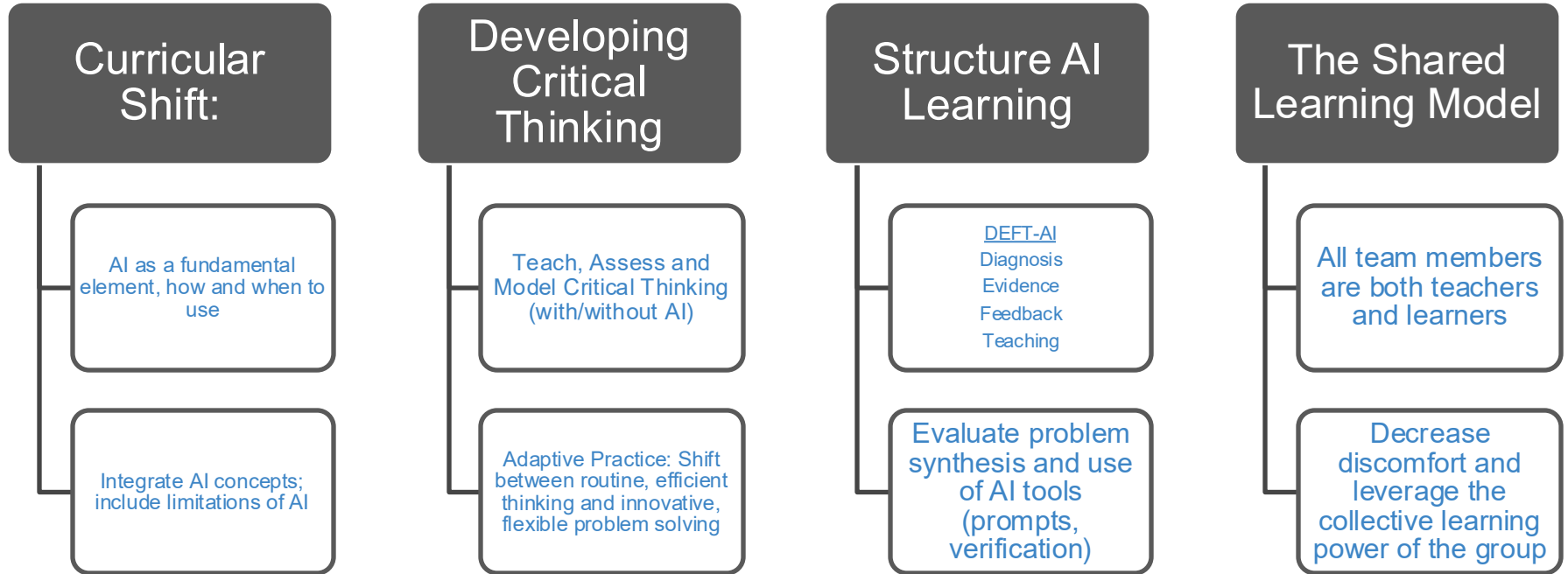
- Verification is Crucial
  - Be a Centaur
- Strategies: Chain-of-thought prompts
  - Reasoning discourse

### How to Teach

- Role Modeling
  - Resources
  - Motivation
- Integrate into Teaching
- Direct Teaching about AI use

# Implications for Teaching (The Educator's Role)

Educator challenge: Supervising a technology where learners may possess a greater operational expertise. Educator approach must shift.



**Given the implications of AI for teaching and considering the Dreyfus model, (Novice, Advanced Beginner, Competent, Proficient, and Expert) ...**

**How might clinician educators adapt their teaching related to AI for different levels of learners?**

# Faculty Development

- Supporting faculty who are master adaptive learners



# Resources for Staying Up to Date

- Professional Organizations and Educational Programs
- Regulatory and Evaluation Tools
- Key Academic Literature and Reviews:
- Analogy for Adaptive Practice in the Age of AI

# How do you stay up to date?



Group on Educational Affairs



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# CME & Session Evaluation



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# References

Commentary: Early applications of ChatGPT in medical practice, education and research Although ChatGPT has the potential to change medical practice, education and research, further improvements of this application are needed for regular use in medicine.

Commentary: Will ChatGPT undermine ethical values in nursing education, research, and practice? As nursing researchers in digital health technology and AI, we are concerned not only about the safety implications of ChatGPT, but also about its ability to capture the ethical values, principles, and core tenets that underpin the unique discipline of nursing.

Literature Review: ChatGPT and large language model (LLM) chatbots: the current state of acceptability and a proposal for guidelines on utilization in academic medicine. We performed a scoping review of available literature to understand the current state of large language model (LLMs) use in medicine and to provide a guideline for future utilization in academia.

Literature Review: ChatGPT utility in healthcare education, research, and practice: Systematic review on the promising perspectives and valid concerns The current systematic review aimed to investigate the utility of ChatGPT in health care education, research, and practice and to highlight its potential limitations.

Literature review: Exploring the role of ChatGPT in patient care (diagnosis and treatment) and medical research: A systematic review This systematic review examines the potential of ChatGPT in patient care and its role in medical research.

Literature Review: Large language models in medicine This review acts as a primer for interested clinicians, who will determine if and how LLM technology is used in healthcare for the benefit of patients and practitioners.

Misra, S. M., & Suresh, S. (2024). Artificial Intelligence and Objective Structured Clinical Examinations: Using ChatGPT to Revolutionize Clinical Skills Assessment in Medical Education. *Journal of medical education and curricular development*, 11, 23821205241263475. <https://doi.org/10.1177/23821205241263475>

CME ACTIVITY INFORMATION

**Activity Name:** Enduring: Preparing for AI Integration in Clinical Education

**Date:** January 16, 2025 – May 14, 2028

**Activity Code:** 95408

**Speaker Name:** Larry Hurtubise, PhD; Cynthia Ledford, MD; Daniel McFarlane, MD; Srinivasan Suresh, MD

**Target Audience:** Regional physicians, residents, students, faculty

**Learning Objectives:** *at the conclusion of this educational activity, learners will be able to:*

Objective 1: Describe the potential impact of AI on clinical practice and diagnostic reasoning including risk of deskilling, never skilling, and mis-skilling.

Objective 2: Explore AI applications for clinical care and strategies for their use in clinical education including strategies to assess readiness and evaluate outcomes.

Objective 3: Highlight ethical and practical considerations for the physician-patient and human-computer relationships.

Objective 4: Identify how teachers can incorporate adaptive learning skills and reflective practice to support thoughtful and safe expansion of AI in clinical practice.

**Accreditation Statement:**

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Michigan State University designates this activity for a maximum of 1.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Summary of Financial Disclosures:**

All planners, reviewers, faculty presenters have nothing to disclose.

**Commercial Support Disclosure:**

No commercial support was provided for this CME activity

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**Termination Date:** MAY 14, 2028

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