



CME Learner Information

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Artificial Intelligence (AI) Use Disclosure CME Learner Information

In accordance with ACCME guidance on the Responsible Use of AI in Accredited Continuing Education, portions of this activity were developed with AI assistance.

AI Tool Information: NONE

Tool: [Name of AI tool]

Version: [Version, if applicable]

Date(s) of Use: [Month/Year]

Purpose: [e.g., drafting slides, organizing content, assessment question development]

Model/Source: [e.g., GPT-4, OpenAI]

Prompts/Outputs Stored Externally: [Yes/No]

System Security: Only secure, institution-approved AI systems were used.

Human Oversight and Review:

All AI-assisted or AI-generated content was reviewed, edited, and verified by [Name/Role of qualified reviewer], an experienced clinician, to ensure:

- Scientific and clinical accuracy, validity, and reliability

- Independence from commercial bias or influence

- Screening for bias, stereotyping, and AI “hallucinations”

- Compliance with ACCME Standards for Integrity and Independence

Review included **documented version control and traceability** indicating who reviewed content and when.

Reviewers had **No relevant financial relationships** with ineligible companies.



CME Learner Information

Artificial Intelligence (AI) Use Disclosure

Responsible Use Statement:

AI was **not used** to generate unverified clinical recommendations or provide assessment answers directly to learners.

No protected health information (PHI) or personally identifiable information (PII) was entered into AI systems.

Accountability:

Final responsibility for content accuracy, clinical recommendations, and independence rests with the faculty presenter.

The accredited provider maintains oversight, ensuring AI use aligns with ACCME standards and internal governance policies, including the use of approved AI tools and ongoing quality review.

Learner Transparency:

Learners are informed that AI tools were used to assist in content development, while all educational judgments were made by qualified human faculty.

ACCME AI Guidance Reference:

<https://accme.org/resource/guidance-on-ai/>

PH Med Staff Grand Rounds

The AI Reality Check: What Every Physician Needs to Know – Dr. Walter Reiling, MD, & Dr. David Cha, MD

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The AI Reality Check: What Every Physician Needs to Know

Walter A. Reiling, MD – System VP and CMIO

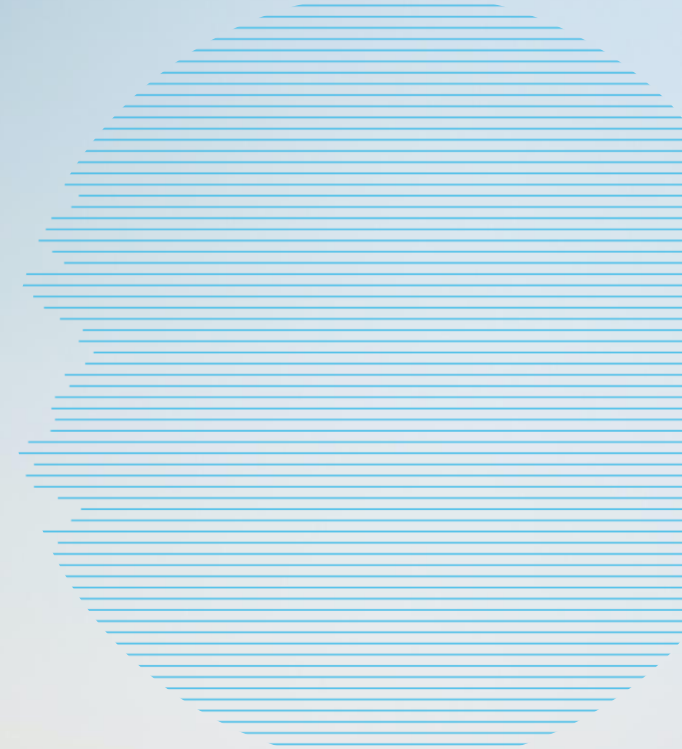
David Cha, MD – Associate CMIO

Objectives

- Describe the fundamentals of artificial intelligence in healthcare.
- Identify the current capabilities of clinical AI tools at Premier Health.
- Recognize the limitations and mitigate risk of AI in healthcare settings.
- What does the future of AI in Medicine look like?

Foundations of AI

What is AI?



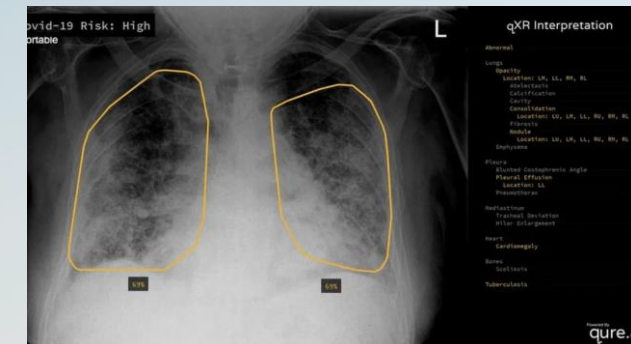
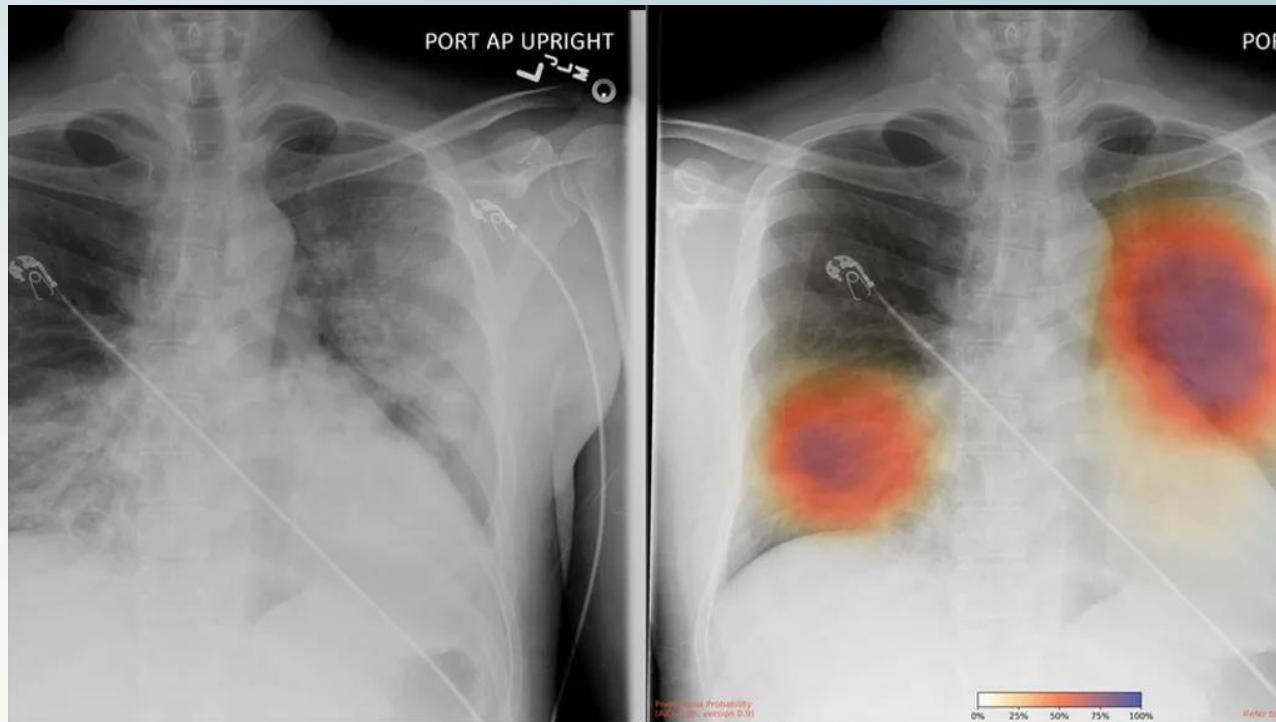
History of AI

Terminology has existed since the 1950s

Used in healthcare for decades

- Analysis of scans in Medical Imaging
- Predictive analytics
- Treatment algorithms
- Speech to Text

Using Image Recognition Algorithms for Covid Pneumonia



AI can be defined broadly

Any computer-based process that mimics human thought can be considered AI. Even a Pocket Calculator could count

**According to Chat GPT -
“Artificial Intelligence is a field of computer science that focuses on creating systems or machines that can perform tasks that typically require human intelligence.”**

What kinds of AI are out there?



Looking at a classification can help with understanding



Premier AI Governance has adopted a scale

Levels of AI

- Level 1 - Artificial Intelligence (AI): The broadest category. The simulation of human intelligence in machines that are programmed to think and act like humans, enabling a machine to solve problems and understand language.
- Level 2 - Machine Learning (ML): A subset of AI that focuses on enabling systems to learn from data and improve their performance on specific tasks without explicit programming. Essentially, it's about creating algorithms that can identify patterns, make predictions, and make decisions based on data, rather than relying on pre-defined rules.
- Level 3 - Deep Learning (DL): A subset of machine learning that uses artificial neural networks with multiple layers (deep neural networks) to analyze data and learn complex patterns.

What is AI?

Examples of Artificial Intelligence (level 1)

- Siri answering a math question
- Word email auto correct
- Health care: Symptoms checker

Examples of Machine Learning (level 2)

- Netflix recommendations
- Credit card fraud detection
- Health care: Readmission Risk Score, Sepsis Prediction

Examples of Deep Learning (level 3)

- LLM's (ChatGPT, Gemini, Copilot, etc)
- Autonomous driving
- Health care: Ambient Listening



What AI is Not?

Not Just Automation

- Simple rule-based systems (e.g., automated appointment reminders) are not AI.

Not Human Intelligence

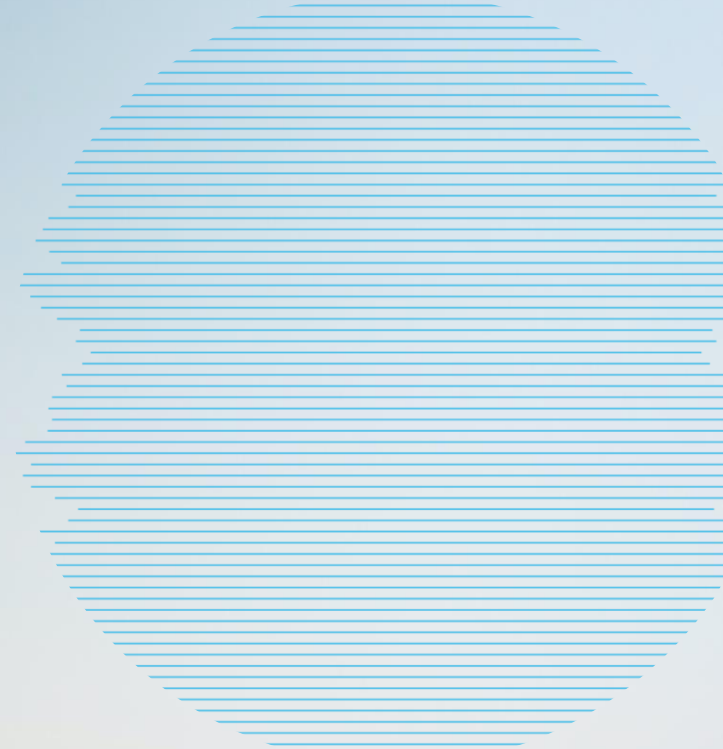
- AI mimics human thought processes but does not possess consciousness, emotions, or self-awareness.

Not Perfect

- AI relies on data quality and can make errors if trained on biased or incomplete datasets.

AI is a transformative tool that enhances decision-making and efficiency but is not a replacement for human expertise or judgment.

Why Now?



AI in Healthcare – Why Now?

- Healthcare is facing unprecedented shortages of caregivers
 - Aging population and shortfalls in training show disturbing trend
 - Nursing Shortage
 - By 2037 Health Resources & Services Administration projects shortage of 207,980 RNs and 302,440 LPNs
 - Ohio currently has 9000 open nursing positions
 - 63% of current nurses are considering retiring or leaving direct patient care
 - Physician shortage
 - Many organizations projecting the national shortfall to be 80,000 to 100,000 by 2036
 - Over 30% of physicians in Ohio are at or nearing retirement age
 - Other Healthcare workers
 - AHA suggests by 2028 the US will be short 100,000 critical healthcare workers in many areas, particularly in nursing assistant roles

AI in Healthcare – Why Now?

- Explosion of Healthcare Data both Medical Knowledge and Patient Data
 - One estimate is accumulated medical knowledge doubles every 3 months
 - It is impossible for a human to keep up with all the new information
 - This includes clinical guidelines, genomic data and increasingly output from rpm (remote patient monitoring)
 - AI can filter the data and provide interpreted, synthesized output for actionable insights
 - The EMR content for an average adult patient is approximately the same length as Hamlet
 - AI can read it all and summarize it in seconds.

AI in Healthcare – Why Now?

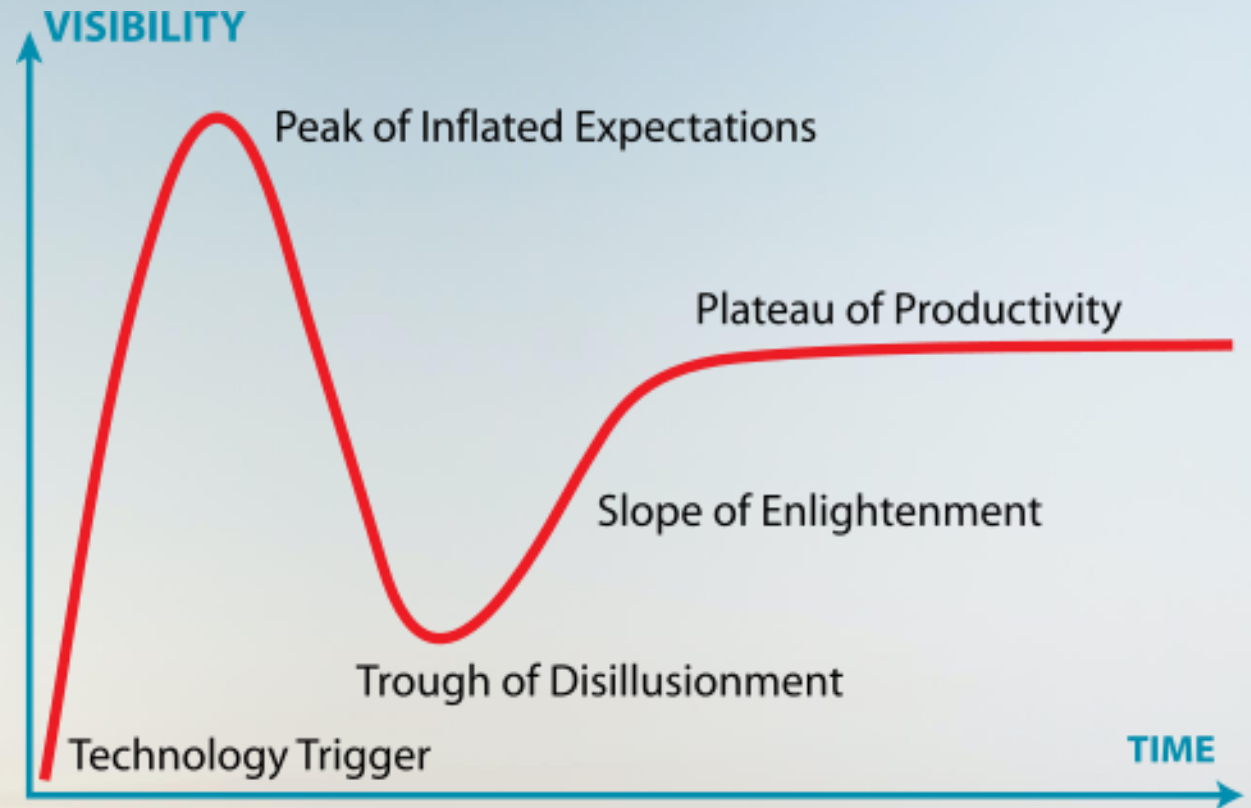
- The technology now exists
 - The concept has existed for decades, but the means has finally matured enough to be really useful
 - Incredible growth in computing power as with the OpenAI product ChatGPT
 - ChatGPT evolution
 - GPT1 - **117M** parameters
 - GPT2 – **1.5B** parameters
 - GPT3 – **175B** parameters
 - GPT3.5 and GPT4 added Chat moniker with conversational AI and advanced reasoning capability
 - GPT5 – possibly up to **5 Trillion** with real time reasoning and advanced coding capabilities.

AI in Healthcare – Why Now?

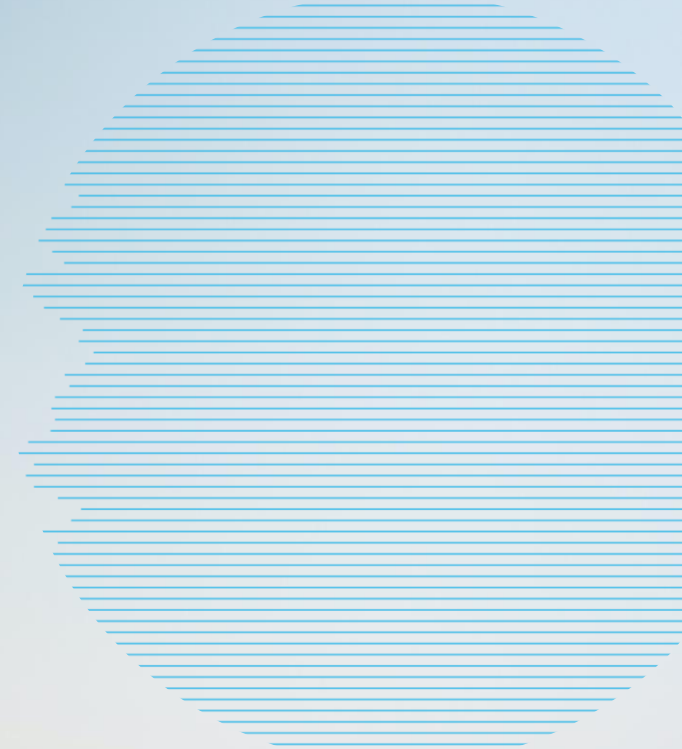
- The technology now exists (cont.)
 - Machine learning architecture advances
 - Training computations doubling every 5 months
 - Specialized hardware using GPUs (NVIDIA)
 - Advent of NPUs, Neural Processing Units
 - Scalable cloud infrastructure
 - Massive standardized datasets are being created to train the models
 - Large EMR datasets like Epic and Cerner
 - Epic Cosmos over 300M patients

The Gartner Hype Curve

- This is Typical for all Disruptive Technologies.
 - AI is no different
 - The questions is always where you are on the curve.
 - Consider the example of battery electric vehicles.
 - Managing expectations is key.



Dr. Walt's Three Phases of EMR Evolution



Progress in digitizing health data

- Dr. Walt's 3 phases of the EHR
 - Y2K through 2010(ish)
 - It was all about getting the paper into the computer and getting adoption
 - 2010's
 - Focus is on discrete data
 - 2020's
 - Getting the data to work for patients and providers (with a detour for Covid)

Phase 1: Paper to Digital

Not a satisfier for clinicians!!

Made the information easier to read, transport and view remotely but was more work and an unwelcome change in workflow

Note Date: 10/27/16
Signed by (CLINICAL SOCIAL WORKER), LICSW on 10/27/16 at 3:28 pm
Affiliation: MEDICAL CENTER

SOCIAL WORK - AMBULATORY SERVICES
Progress Note

CLINICAL DATA: (Relevant Subjective and Objective Information including session length and #; mental status including SI/HI.)
45 minute solution focused psychotherapy

Problems addressed:

adj to illness
family strain

Focus today is stressful relationship w/sister who provides financial support in many arenas for pt. Pt feels sister doesn't appreciate her perspective around the financial dependency. Pt views sister as often very critical and unkind. It triggers for pt feelings she had growing up w/mother who could also exhibit these behaviors. Pt comes from appointment earlier with Dr. S. Per her report, recent MRI showed stability in terms of new lesions, but some abnormalities "that explain my cognitive problems" which is some relief for her. She has been referred to a neuropsychologist and she hopes tha can provide some help w/her organizational problems.

She now volunteers regularly with a local agency in her home town. She is upset by strife with her 15 yo dtr who is critical of pt's behavior and cognitive problems.

MSE: Pt late for session (she had an earlier appointment she had forgotten about when she scheduled with me). She is casually dressed and engages actively in session w/full range of affect. Mood again this visit is somewhat discouraged and irritable in discussion about tension w/her sister. She feels interactions w/her teenaged children is more difficult; esp w/dtr. Pt continues to meet regularly w/community psychiatrist who manages her meds. She has ongoing challenges w/paperwork and organizational tasks. She's been referred to a neuropsychologist. As above, she gets pleasure from activity in volunteer role where she feels valued and smart. Insight and judgment are good. She makes good use of sessions and feedback.

CLINICAL ASSESSMENT: (Brief summary of pertinent information)

Phase 2: Make it discrete and reportable

Not a satisfier for clinicians (again)...

This was largely driven by payers and regulators hungry for a better view into healthcare data. Also added to workload for clinical staff

Progress Note

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CLINICAL ASSESSMENT: (Brief summary of pertinent information

Medal	CHN	FRA	GER	HUN	ITA	NED	RUS	URS	USA	Grand Total
Archery	420	714	1409	1427	1058	1385	860	769	2382	15090
Diving	420	714	1409	1427	1058	1385	860	769	2382	15090
Fencing	420	714	1409	1427	1058	1385	860	769	2382	15090
Figure skating	420	714	1409	1427	1058	1385	860	769	2382	15090
Speed skating	420	714	1409	1427	1058	1385	860	769	2382	15090
Ice hockey	420	714	1409	1427	1058	1385	860	769	2382	15090
Archery	420	714	1409	1427	1058	1385	860	769	2382	15090
Diving	420	714	1409	1427	1058	1385	860	769	2382	15090
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Ice hockey	420	714	1409	1427	1058	1385	860	769	2382	15090
Archery	420	714	1409	1427	1058	1385	860	769	2382	15090
Diving	420	714	1409	1427	1058	1385	860	769	2382	15090
Fencing	420	714	1409	1427	1058	1385	860	769	2382	15090
Figure skating	420	714	1409	1427	1058	1385	860	769	2382	15090
Speed skating	420	714	1409	1427	1058	1385	860	769	2382	15090
Ice hockey	420	714	1409	1427	1058	1385	860	769	2382	15090
Total	420	714	1409	1427	1058	1385	860	769	2382	15090

Phase 3: Make it easier!

Clinicians love this stuff!!

AI assistants for ambient documentation, chart summaries, and communication management are getting good reviews



Nabla

 **Ambience**

How AI is Used Today at Premier Health

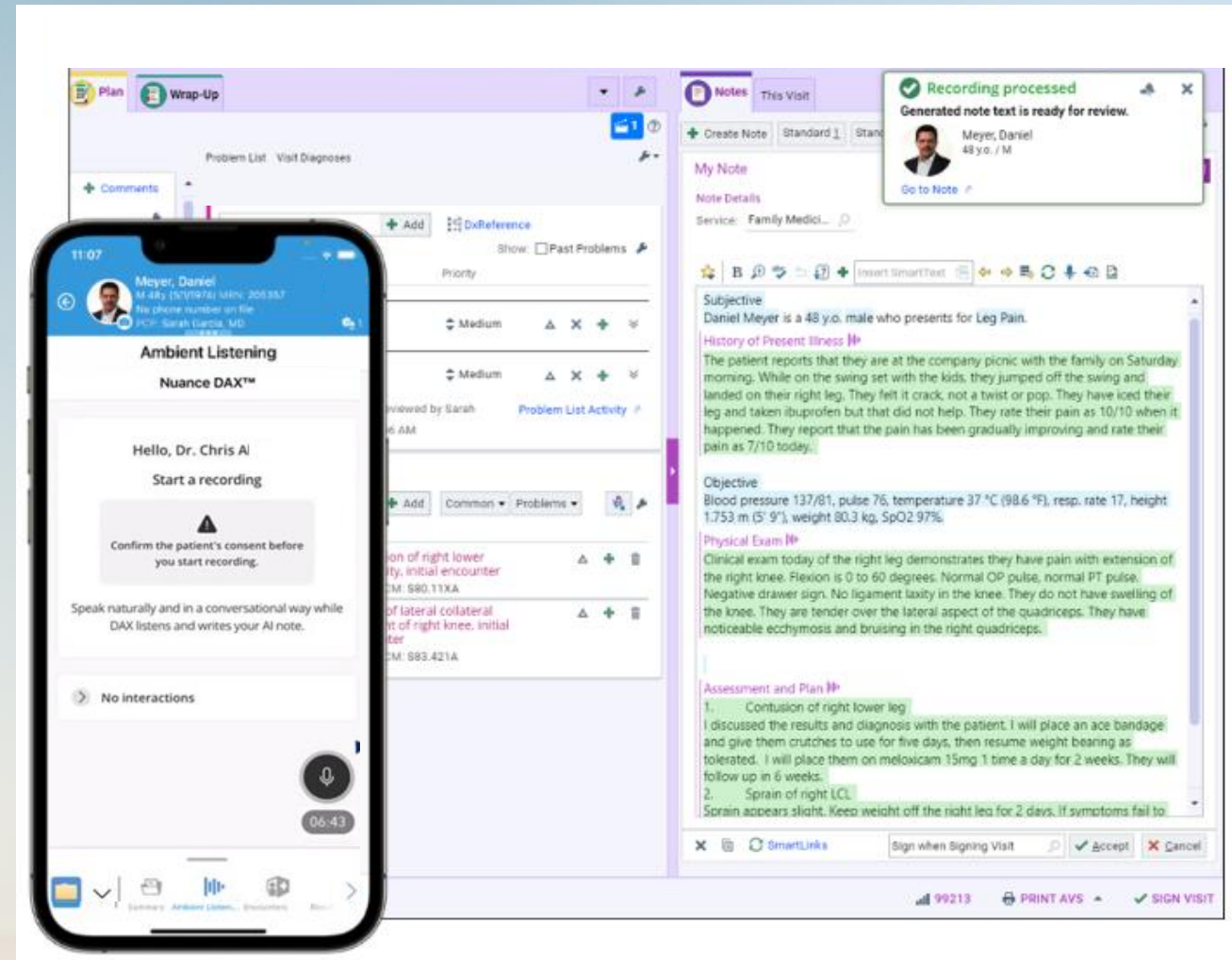




Clinical Documentation & Workflow

- Ambient scribing and auto-charting
- Note summarization and order suggestions
- Inbox triage and automation

Ambient AI Listening





Ambient Documentation Technology in Clinician Experience of Documentation Burden and Burnout

Jacqueline G. You, MD^{1,2}; Reema H. Dbouk, MD³; Adam Landman, MD, MS, MIS, MHS^{1,4,5}; [et al](#)

- Ambient AI scribes reduce physician burnout by 21–22%
- Decrease note-related cognitive load and improve undivided patient attention
- 87.5% of users report it helps reduce cognitive burden during visits



Williams, Mark E 7/29 11:00 AM

Walt, will you marry me? this is the best thing ever! Thanks for doing this!

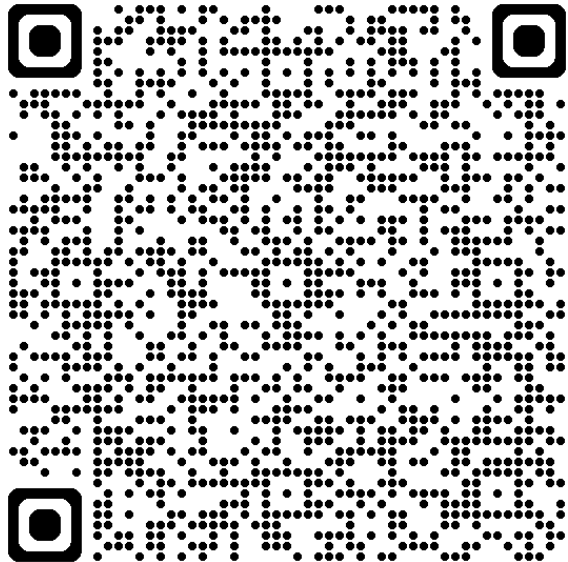


Reiling, Walter A - CMIO 7/29 11:02 AM

My wife might take issue with that. LOL

AI Resource Hub: Dragon Copilot

Tommy Spijkers, Sr. AI Product Manager



SharePoint

Search this site

Inside Premier

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Digital Health & Technology

Human Resources

Nursing

Quality Innovation

Supply Chain

Transformation Office

All Departments

Microsoft Copilot Chat

Dragon Copilot

Epic AI

FAQ

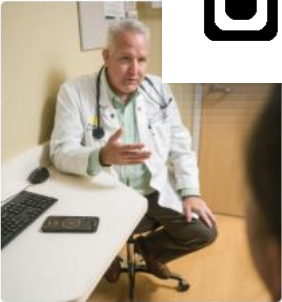
Documents

on Copilot

- urnout
- ognitive load
- ocumentation time
- ajama time

- ✓ Increase focus on the patient
- ✓ Increase patient satisfaction

Microsoft Dragon Copilot is an AI tool that helps providers create clinical documentation. It works through Epic's Haiku and Canto mobile apps, where it listens to patient conversations and uses AI to generate draft notes. Because it is built into Epic, all drafts flow directly into the patient record, streamlining documentation and giving providers more time to focus on taking care of their patients.



Scenario: You are an inpatient physician taking over care for a patient that has been admitted for 10 days.

Chart Summarization

Powered by Generative AI. Intended to summarize previously documented patient information. Not a replacement for clinical judgment and not intended for diagnosis, treatment, cure, mitigation, or prevention of a disease or condition.

Background Information:

- Patient is a 44-year-old male admitted to the ICU following a motorcycle accident resulting in multiple injuries, including a ruptured spleen, pneumothorax, and a left hip injury. ¹
- X-ray confirmed a left femoral neck fracture with displacement. ¹
- Patient underwent splenectomy and open reduction internal fixation (ORIF) of a left femoral neck fracture. ²

Events During Admission:

- Patient is in serious condition, post-op from multiple injuries including a ruptured spleen, pneumothorax, multiple rib fractures, anemia associated with acute blood loss, abrasion of the right arm, and a closed left subtrochanteric femur fracture. ³
- Patient is experiencing respiratory distress, pneumonia, and ARDS, and is being treated with Levaquin for pneumonia and with increased ventilatory support, supplemental fluids, Lasix, and dopamine for ARDS. ³
- Patient is experiencing post-op pain in left hip, managed with analgesics. ²
- Patient's anemia improved after transfusions, with plans to monitor hemoglobin and hematocrit every 12 hours. ²
- Patient's heart rate is now specifically noted as elevated. ⁴

Recent Events on Patient:

- BP, pulse, and SpO2 have improved, with most recent readings at 110/78, 84, and 95% respectively. ^{5,6,7}
- Negative net IO of -360mL, with increased urine output at 8635mL. ^{8,9}
- Pantoprazole and levalbuterol added to medication regimen. ^{10 11}
- TPN and pantoprazole were due but not administered twice and once respectively. ^{12,13,14}
- Serous drainage from wound and sluggish distal circulation noted, with increased foot swelling. ^{15 16}
- Patient's respiratory status improved, assisting ventilator with respiration. ^{17 18}
- Patient is beginning to wean off ventilator, with FIO2 decreased to 50% and PEEP decreased to 10. ^{18 19 20 21}

References



Feedback

Generate Summary

Scenario: On your first day back on the hospital floors, a nurse tells you the patient is ready for discharge. You need to write the discharge summary.

Hospital Course Draft for D/C Summary

AI Hospital Course ?

Summary Type

Narrative

Problem-oriented

System-oriented

Generate

 [Leave Feedback](#)

Glen A. Henke, a 42-year-old male, was admitted to the ICU on 7/30/2024 following a splenectomy and ORIF of a left femoral neck fracture. ¹ Post-operatively, he experienced significant pain in his left hip, which was managed with analgesics. ² Initial physical examination revealed he was oriented but distressed, with rapid heart rate, respiratory distress, and rales in the lungs. ² He also had abdominal tenderness and a cranial nerve deficit. ² Lab results showed anemia with a hemoglobin of 6.4 g/dL and hematocrit of 19.4%. ² He had a closed traumatic pneumothorax with a chest tube in place and minimal drainage. ²

On 7/31/2024, the patient developed increasing shortness of breath and continued to experience pain in his left chest and hip. ³ Physical examination showed worsening respiratory distress with diffuse bilateral rales and abdominal distension. ³ Lab results indicated stable hemoglobin at 9.8 g/dL and hematocrit at 29.4%. ³ A chest X-ray revealed right lung atelectasis and a persistent left pneumothorax with effusion. ³ The assessment included possible pneumonia or ARDS, and plans were made to repeat the chest X-ray and monitor ABGs. ³

By 8/01/2024, the patient had a difficult night with increasing respiratory distress, hemodynamic instability, and ongoing left hip pain. ⁴ He was sedated on a ventilator with frequent groaning due to pain. ⁴ Physical examination showed increased rales and sputum production requiring suctioning. ⁴ Lab results showed hemoglobin at 9.9 g/dL and hematocrit at 29.0%. ⁴ The patient was diagnosed with pneumonia and ARDS, and treatment included empiric Levaquin, increased ventilatory support, supplemental fluids, Lasix, and dopamine for pressor support. ⁴

 Copy Text

Scenario: Patient asks, “I just saw this result in MyChart. Can you explain these results?”

Or

“My AI generated Hospital course is too long, make it shorter!”

AI Text Assistant

The screenshot displays a medical software interface titled "Assessment & Plan". The main text area contains a clinical note for "1. Tinnitus." which is partially highlighted. A search bar is visible above the text. On the left, a sidebar menu lists various actions: "Pinned", "Summarize: use clinical language", "Recent", "Format as a list", "Summarize", "Rephrase", "Tools", and "Destigmatize language". The "Rephrase" option is currently selected, and a dropdown menu is open, showing options like "Use simple language and explain", "Make more formal", "Make more casual", and "Destigmatize language". The main text area also shows sections for "3. Broken right wrist" and "4. Bruised left hip", each with a brief description of the injury and recommended treatment.

Scenario: A draft reply addressing the patient's request for a new medication and advice for worsening symptoms.

InBasket Art AI Draft Reply

 **Draft By Art**  

I'm sorry to hear that your indigestion symptoms have returned and that the back stretches aren't providing relief. For the Prilosec ***. As for your back pain, we can discuss other options during your upcoming visit.

 [Learn More](#)  [Start with Draft](#)  [Start Blank Reply](#)

Did you find the draft helpful?

 This was helpful  This was not helpful

 **Related Info**

Based on conversation content

Omeprazole Magnesium Keywords: "Prilosec" 

 [Learn more](#)

 **Message Details**

Received: Today 

 **Conversation: Quick Question**

(Newest Message First) 

John Adams to P Mychart Messaging Pool (Selected Message)

My indigestion symptoms are back. Could I get a prescription for Prilosec? Also, my back is hurting. Is there anything I can take for that?

11/26/25 1:23 PM 

AI Suggest
Level of Service

Level of Service Calculator

Generated LOS

Medical Decision Making Level 4

Problems Addressed: Moderate (4)

Prediabetes

Hypercholesteremia

Essential hypertension

Data Reviewed: Moderate (4)

3 x Ordering of each unique test

3 x Review of the result(s) of each unique test

Risk: Moderate (4)

The provider manages prescription drug therapy, continuing Zepbound at 5 mg and monitoring blood weight, and orders multiple laboratory tests: thyroid stimulating hormone, hemoglobin A1C, CBC with differential, and comprehensive metabolic panel.

Details

Generated LOS

Medical Decision Making Level 4

Problems Addressed: Moderate (4)

Bradycardia

Chronic illness with exacerbation, progression, or side effects of treatment

"The patient's heart rate was measured at 43 today, which is lower than usual."

"It was discussed that diltiazem may be contributing to the low heart rate. The risks of a low heart rate"

"The plan is to reduce the diltiazem dosage from 360 mg to 240 mg."

Essential hypertension

Stable chronic illness

"Essential hypertension, benign"

"Essential hypertension"

"Stage 3b chronic kidney disease (HC CODE)

Stable. Continue current medical therapy Tight blood pressure control."

Barrett's esophagus with dysplasia

Stable chronic illness

"Barrett's esophagus with dysplasia"

"Records from the digestive specialist were reviewed."

"The plan is to continue omeprazole and famotidine as prescribed."

Data Reviewed: Moderate (4)

5 x Ordering of each unique test

"Orders: THYROID STIMULATING HORMONE"

"HORMONE CBC WITH DIFFERENTIAL"

"Orders: VITAMIN D, 25-HYDROXY, TOTAL SCREEN COMPREHENSIVE METABOLIC PANEL"

"Orders: VITAMIN D, 25-HYDROXY, TOTAL SCREEN"

"Orders: HEMOGLOBIN A1C"

Details

Applied

Generative AI Patient type: New Established Service type: OFFICE/OUTPATIENT

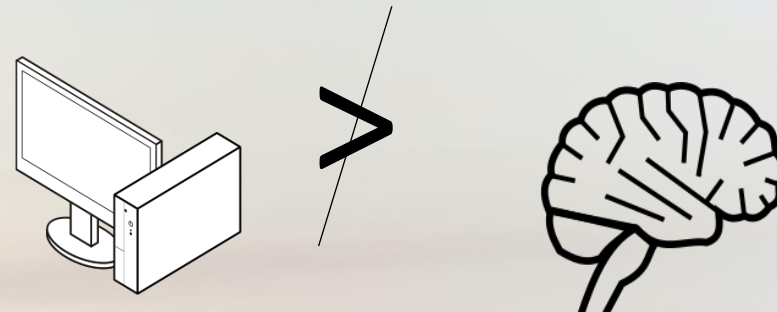
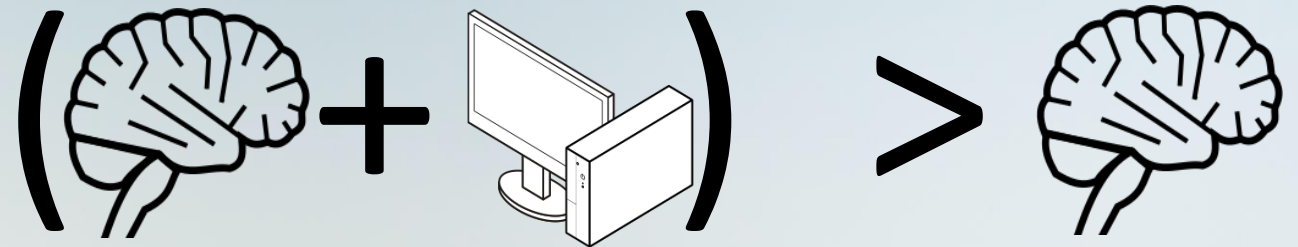
ed	Risk
None	☐ Minimal
ation of 2:	☐ Low - OTC drugs - Minor surgery with no identified risk factors
if prior external notes from unique source	☐ 3+
if the results from each unique test	☐ 3+
of each unique test	☐ 3+
ismment requiring an independent historian that is not patient	
(one from below)	☒ Moderate - Prescription drug management - Minor surgery with identified risk factors - Elective major surgery with no identified risk factors - Diagnosis or treatment significantly limited by social determinants of health
(two from below)	☐ High - Elective major surgery with identified risk factors - Emergency major surgery - Drug therapy requiring intensive monitoring for toxicity - Decision not to resuscitate or to de-escalate care because of poor prognosis - Decision regarding hospitalization or escalation of hospital-level care - Parenteral controlled substances

Accept and Verify Cancel

Clinical Decision Support

- Treatment and medication guidance
- Diagnostic and imaging assistance
- Risk prediction (e.g., sepsis, readmission)

- Human in the loop
- The Fundamental Theorem



AI in Diagnostics

- AI Endoscopy (Computer Aided Detection)
- Imaging
- Pathology
- EKG
- *And much more*



Patient Engagement

- AI chatbots (Emmie) and symptom checkers
- Personalized reminders and education
- Wearable / remote monitoring insights
- Patient in the loop

JAMA Internal Medicine

Original Investigation

FREE

April 28, 2023

Comparing Physician and Artificial Intelligence Chatbot Responses to Patient Questions Posted to a Public Social Media Forum

John W. Ayers, PhD, MA^{1,2}; Adam Poliak, PhD³; Mark Dredze, PhD⁴; [et al](#)

[» Author Affiliations](#) | [Article Information](#)

JAMA Intern Med. 2023;183(6):589-596. doi:10.1001/jamainternmed.2023.1838

Physician responses were 41% less empathetic than chatbot responses

Research & Population Health

- Natural language processing (NLP) for chart review and cohort discovery
- Predictive analytics for at-risk patients
- Genomic and precision medicine tools
- Personalized medicine

Operational & Administrative

- Bed flow and discharge prediction
- Staff scheduling and throughput optimization
- Coding, billing, and prior auth automation

Predictive Models

- Implemented:
 - Risk of Unplanned Readmission
 - Will This Patient Be Discharged Today or Tomorrow?
 - Likelihood of an ED patient needing an inpatient bed
 - Sepsis
 - ED Patient Likelihood to Occupy an Inpatient Bed
- Not yet implemented:
 - Automatically Categorize In Basket Messages
 - Adjust Staffing Based on Census Forecasting
 - Risk of Hospital Admission or ED Visit Considers Social Drivers of Health (SDOH)
 - Better Discharge Planning with Predicted Level of Care

Limitations and Risks with using AI

Epic Sepsis Model in 2021

JAMA Internal Medicine

External Validation of a Widely Implemented Proprietary Sepsis Prediction Model in Hospitalized Patients

Andrew Wong, MD¹; Erkin Otles, MEng^{2,3}; John P. Donnelly, PhD⁴ ;
Andrew Krumm, PhD⁴; Jeffrey McCullough, PhD⁵; Olivia DeTroyer-Cooley, BSE⁶; Justin Pestrue, MEcon⁶; Marie Phillips, BA⁷;
Judy Konye, MSN, RN⁸; Carleen Penozza, MHSA, RN⁸; Muhammad Ghous, MBBSc⁴; Karandeep Singh, MD, MMSc^{1,4}

A STAT INVESTIGATION

Epic's AI algorithms, shielded from scrutiny by a corporate firewall, are delivering inaccurate information on seriously ill patients



By [Casey Ross](#) July 26, 2021



Arming both sides of the house

The New York Times

In Constant Battle With Insurers, Doctors Reach for a Cudgel: A.I.

As health plans increasingly rely on technology to deny treatment, physicians are fighting back with chatbots that synthesize research and make the case.



- “Are we going to be at a zero sum, where we’re going to see both robots lying on the floor, with both parties having spent a lot of money? Or are we going to go beyond the ‘Battle of the Bots’ toward a better spirit of collaboration?” - Ashraf Shehata, principal and U.S. sector leader for healthcare at KPMG

Risks Associated with AI



Bias: AI systems can reflect and perpetuate biases in training data, leading to skewed outcomes.



Privacy Concerns: AI technologies often collect and analyze large amounts of personal data, raising privacy and security issues.



Lack of Transparency: Complex AI systems can be difficult to understand, leading to distrust and resistance to adopt.



Cybersecurity Threats: AI can be exploited by malicious actors to launch cyberattacks, compromising data and security.



Job Displacement: Automation of tasks due to AI can result in significant job losses across various industries.

Use Large, Unbiased and Diverse Datasets



SELECTION OF THE RIGHT TRAINING
DATASETS IS CRITICAL



UNDERSTANDING THE DATASETS IS
NECESSARY TO EVALUATE AI TOOLS

When possible, use transparent algorithms



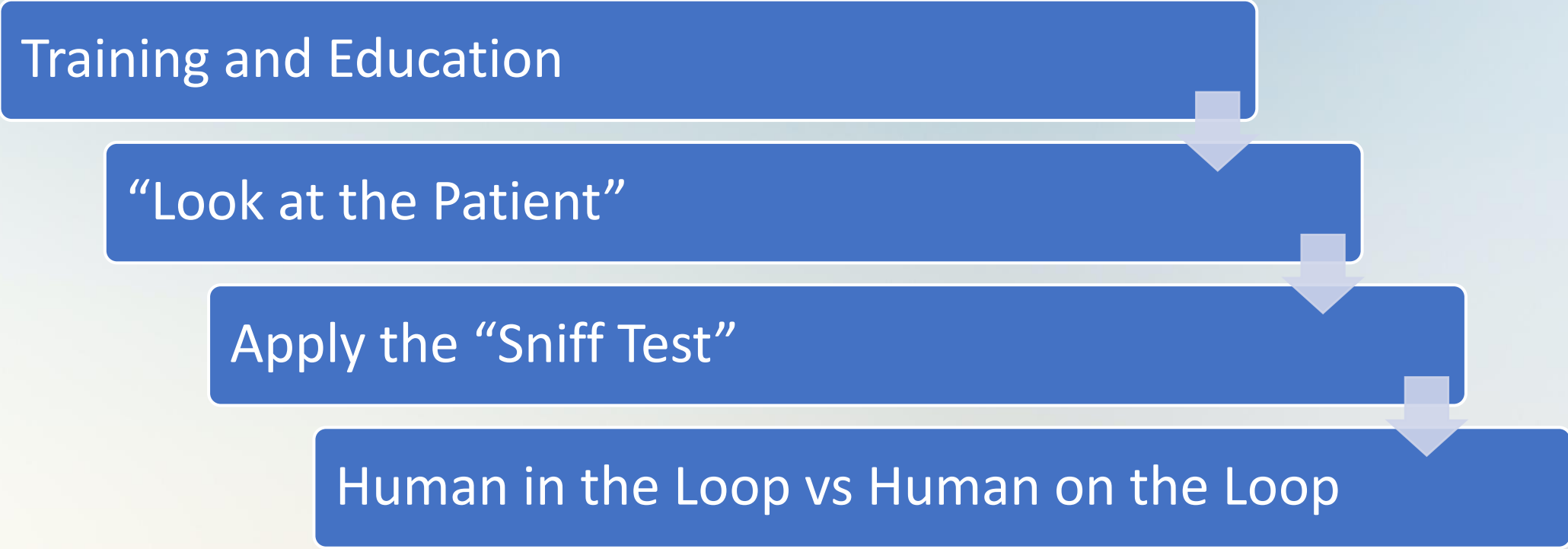
More work underway to make algorithms and reasoning transparent



Monitor results for output “drift” like with Tessa

Don't Give the AI the Last Word

Training and Education



```
graph TD; A[Training and Education] --> B["Look at the Patient"]; B --> C[Apply the "Sniff Test"]; C --> D[Human in the Loop vs Human on the Loop];
```

"Look at the Patient"

Apply the "Sniff Test"

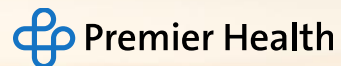
Human in the Loop vs Human on the Loop

Future of AI in Medicine



Cosmos is a dataset created in collaboration with a community of health systems using Epic and is designed to improve patient care. By combining their data, participating organizations and Epic can make new discoveries and advance medicine. Cosmos also powers tools at the point of care, providing insights to clinicians that are tailored to the patient in front of them.

More than **451,000 physicians** in the Cosmos community care for **300 million patients** across **41,313 clinics** and **359,507 hospital beds**.



<https://cosmos.epic.com/>



Look-Alikes

Very rare conditions and medical mysteries often result in limited evidence for a physician to draw from when determining a course of action or treatment for their patient. Look-Alikes enables providers to connect with other providers across the Cosmos community who might have experience with patients with a similar constellation of symptoms or condition so they can collaborate on care.



Best Care Choices

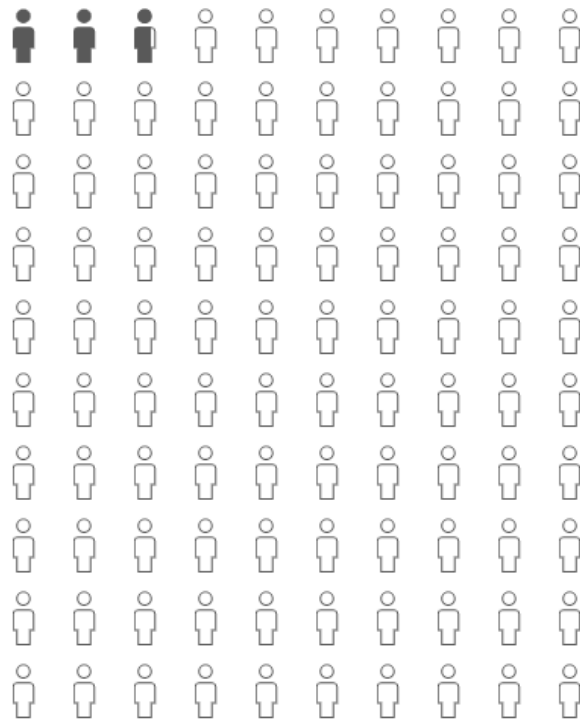
To further evidence-based care, Best Care Choices for My Patient shows providers insights into how similar patients responded to the treatments they are considering, right at the point of care. Physicians will be able to explore the collective knowledge from millions of clinical decisions to see treatments and resulting outcomes for patients like the one in front of them.

Percent
at Goal

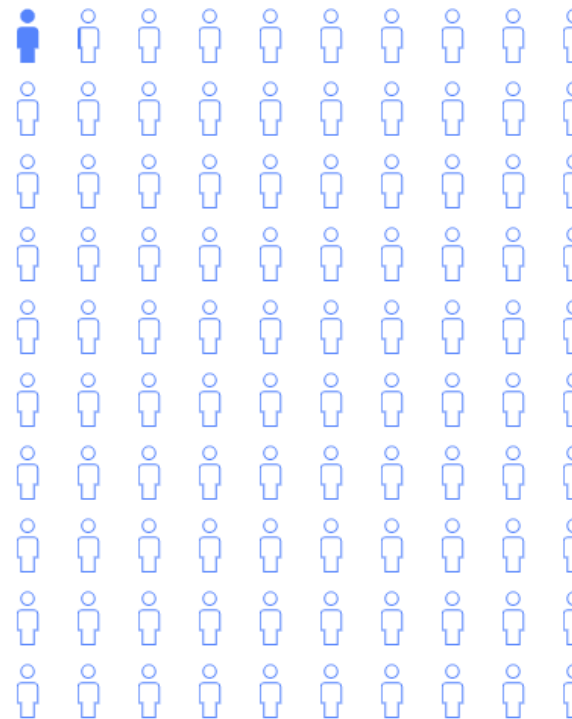
Stroke

Heart
AttackHow often did patients like you have: **Heart Attack?**Stay on **Current Treatment**
(ACE Inhibitors)**2.8 in 100**

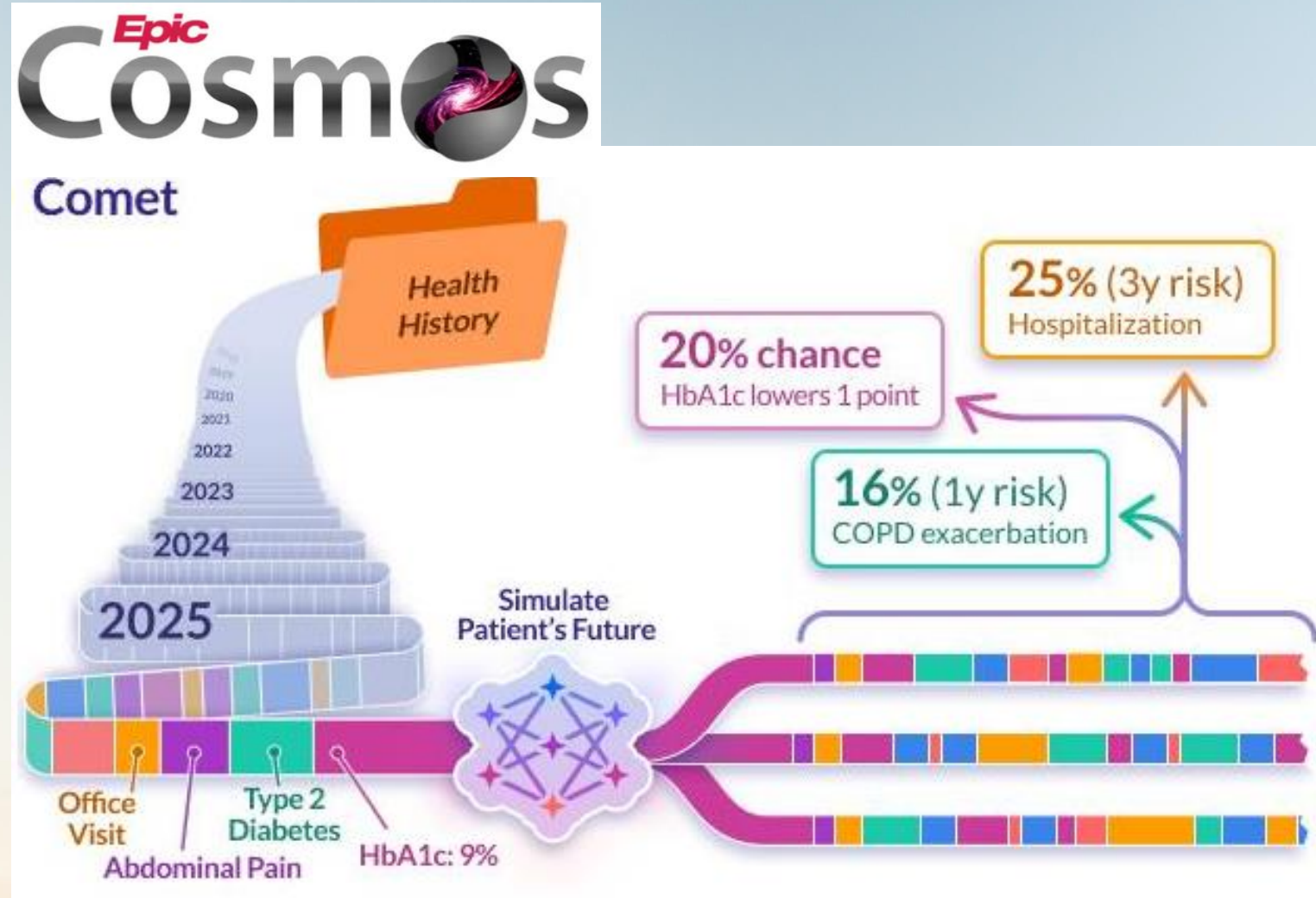
experienced this in 3 years

Switch from ACE Inhibitors to **Thiazide Diuretics****1.2 in 100**

experienced this in 3 years



AI and Big Data in Personalized Medicine





Questions?



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