



Aln't it Cool?!
 The Latest and Greatest in AI
 Advances for Home Health, Hospice,
 and Home Care Agencies
 Beau Sorensen 5/21/2026




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30 years in home health as a provider
 and consultant
 C-level experience in finance, IT, and
 operations
 Member of the HHFMA Advisory Board
 Chair of the Care at Home Technology
 Workgroup




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Where Do I Start?

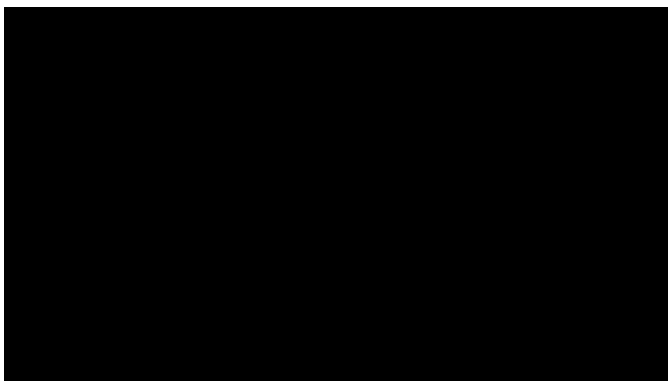



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What is Artificial Intelligence?
 How has it evolved?
 What is it doing today – both in the
 world at large and in healthcare?
 What can it do for home health and
 hospice?
 What do you need to watch out
 for?
 How can you take advantage of it?



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What is Artificial
 Intelligence?





6

nature

"This will change medicine. It will change research. It will change bioengineering. It will change everything."

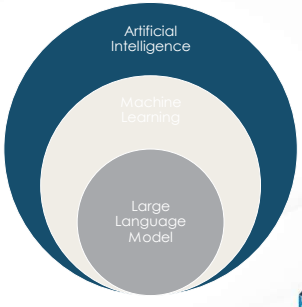

-Ewen Callaway
 "'It will change everything': DeepMind's AI makes gigantic leap in solving protein structures"
 November 30, 2022



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What is AI?

AI can be broadly defined as anything built by people to mimic human intelligence.

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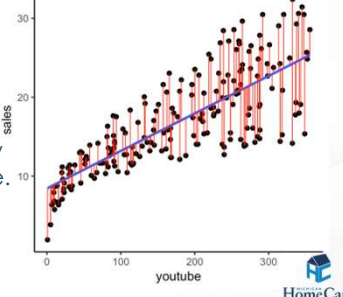

What is AI?

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What is Machine Learning?

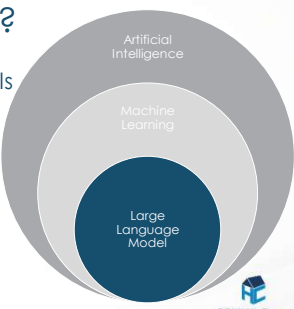

Systems build pattern models that predict how data will behave.

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What is an LLM?


Large Language models are a specific type of ML models that learn with large, complex webs of rules and interactions, used for the purpose of working with language data.

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What AI is good at:


- Processing large amounts of data to make specific decisions or take specific actions fast.
- Generating predictions when no clear workflow or procedure is present.
- Identifying patterns in complex data.



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What other types of AI are out there?

- Deep learning (neural networks that are trained on large datasets).
- Robotic Process Automation (Software-based robots that are able to do repetitive tasks independently).
- Generative AI (Develops its own logic independent of programmers or human input and generates original content).

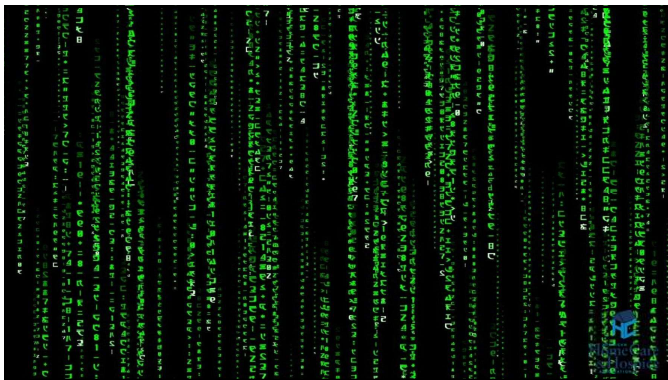


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Artificial Intelligence *is not* this:



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Artificial Intelligence *is* this:



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Made by Google



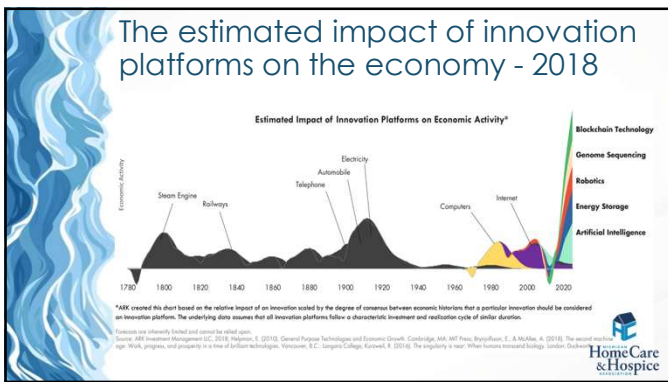
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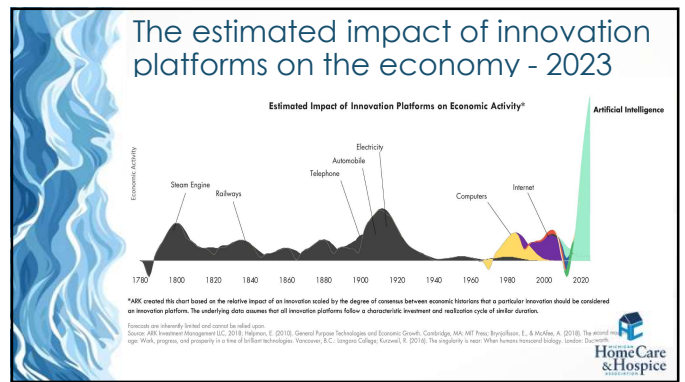
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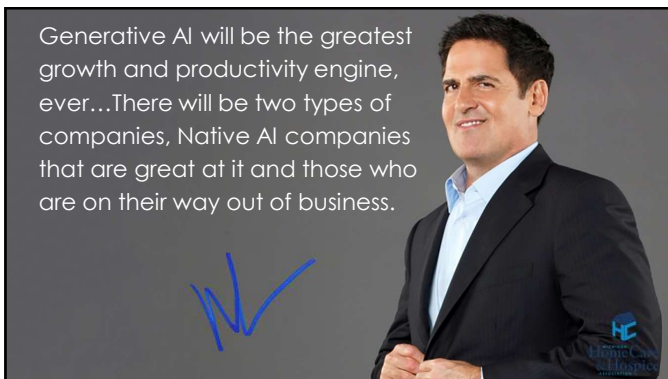
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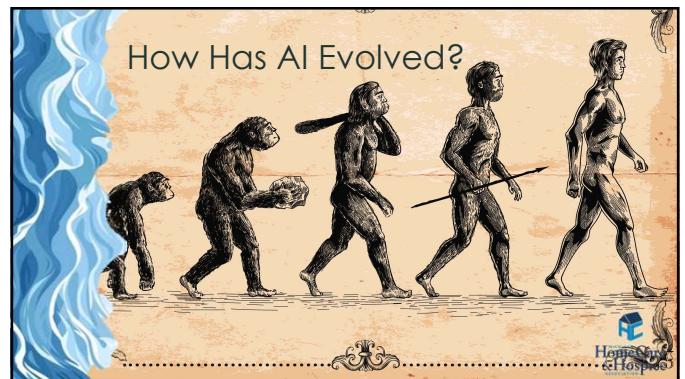
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Open AI GPT evolution

The first commercial version of ChatGPT (GPT2) was released in 2019 and was as smart as a preschooler. GPT 4 was released in 2023 and is smarter than the average high school student. GPT 5.4 was released in March and is smarter than 99.9% of all humans.

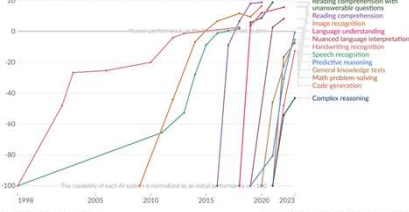


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AI vs. Human Performance


Test scores of AI systems on various capabilities relative to human performance

Within each domain, the initial performance of the AI is set to -100. Human performance is used as a baseline, set to zero. When the AI's performance crosses the zero line, it scored more points than humans.



Data source: Korta et al. (2023) OurWorldInData.org/artificial-intelligence | CC BY


Note: For each capability, the first year always shows a baseline of -100, even if better performance was recorded later that year.



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Exam Scores – GPT 3.5 to GPT 5


Exam	GPT 3.5 Percentile	GPT 4 Percentile	GPT 5 Percentile
Bar	10 th	90 th	97 th
LSAT	40 th	88 th	99 th
MCAT	66 th	96 th	99 th
AP Calculus BC	3 rd	51 st	78 th
GRE (verbal)	63 rd	99 th	99 th
GRE (quantitative)	25 th	80 th	92 nd
GPQA (PhD-level science exam)	3 rd	60 th	94 th



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Humanity's Last Exam

AI has become so good at typical benchmarks that scientists are creating new tests that are so hard and so varied that humans can't answer them.



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The New York Times

"[HLE is] 3,000 multiple-choice and short answer questions designed to test A.I. systems' abilities in areas ranging from analytic philosophy to rocket engineering.

Questions were submitted by experts in these fields, including college professors and prizewinning mathematicians."

-Kevin Roose, "When AI Passes This Test, Look Out"

New York Times, 1/23/2025




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Scores – Humanity's Last Exam

Model	Company	Release Date	Score
GPT 4o	OpenAI	May 13, 2024	3.1
Grok 2	xAI	August 20, 2024	3.9
Claude 3.5	Anthropic	June 20, 2024	4.8
GPT 4.5	OpenAI	February 27, 2025	6.4
DeepSeek R1	Hangzhou	January 20, 2025	8.6
GPT o3 mini	OpenAI	January 31, 2025	14.0
Gemini 2.5 Pro	Google	March 25, 2025	18.8
Grok 4	xAI	July 8, 2025	24.5
GPT 5.2	OpenAI	December 10, 2025	29.9
Claude Opus 4.6	Anthropic	February 4, 2026	34.2
Gemini 3 Pro	Google	November 11, 2025	38.3
GPT 5.4	OpenAI	March 1, 2026	41.6
Gemini 3.1 Pro	Google	February 15, 2026	44.7


<https://agi.safe.ai/>



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Moore's Law on Steroids


- The more computing power (processing cores and memory) you throw at a model, the faster and better it gets.



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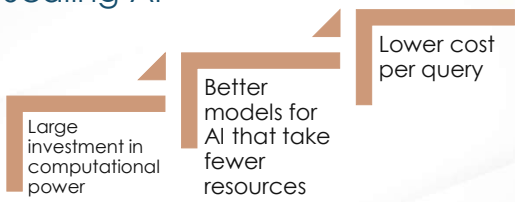

Scaling AI

- Companies are buying nuclear power plants and investing in computer clusters that cost tens of billions of dollars.
- There is talk of clusters that could cost trillions of dollars.



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Scaling AI

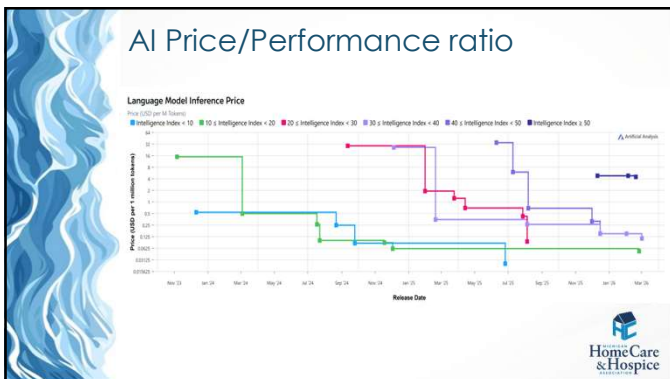
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Scaling AI

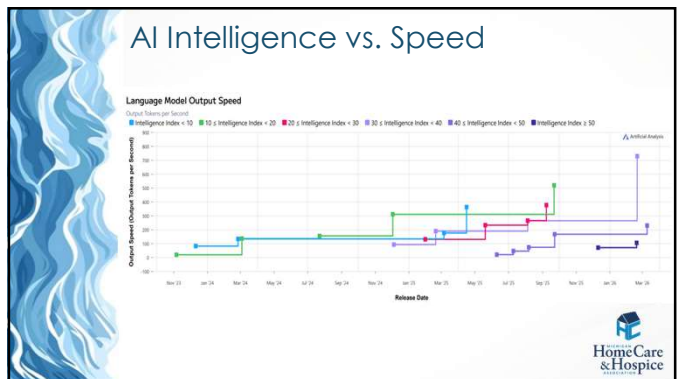
- The cost to get an AI to 50% accuracy on a high school-level math benchmark has gone down 95% in just 2 years.



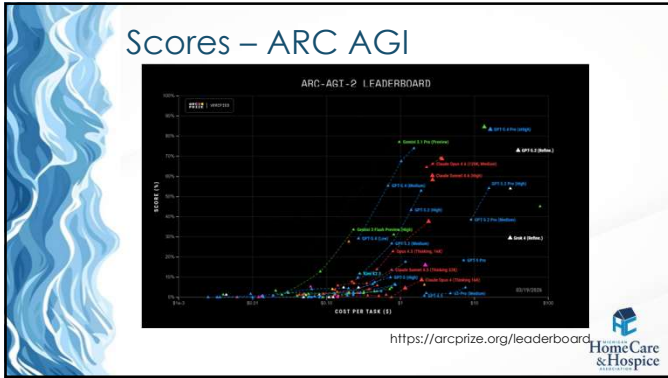
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THE WALL STREET JOURNAL.

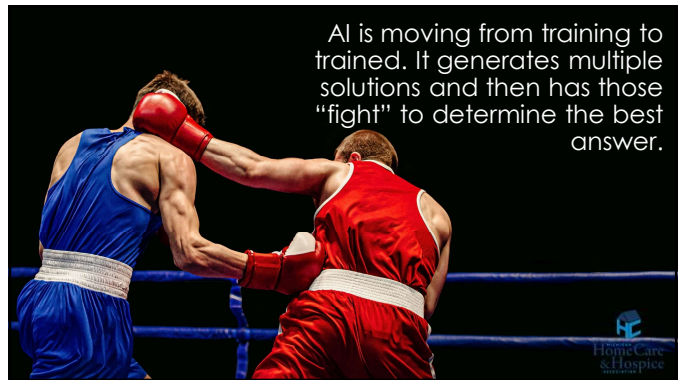
"Today's AIs are overly complicated, patched-together Rube Goldberg machines full of ad-hoc solutions for answering our prompts."

- "We Now Know How AI 'Thinks' – and It's Barely Thinking at All", Christopher Mims, April 25, 2025

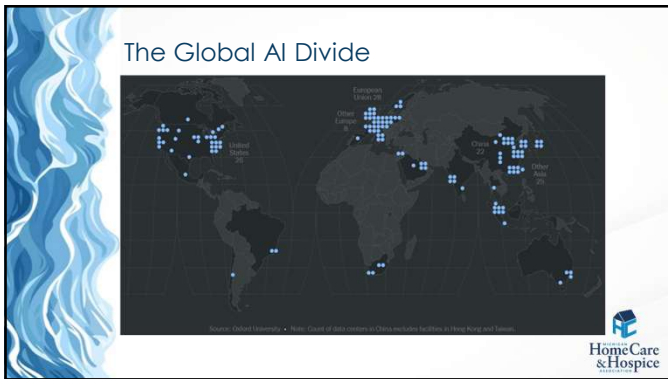
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The New York Times

American and Chinese companies operate more than 90 percent of the data centers that other companies and institutions use for A.I. work.

- "The Global AI Divide", Adam Satariano and Paul Mozur, June 21, 2025

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The New York Times

"Amazon, Microsoft, Google, Meta, and OpenAI have pledged to spend more than \$300 billion this year, much of it on AI infrastructure. This expenditure approaches Canada's national budget."

-"The Global AI Divide", Adam Satariano and Paul Mozur, June 21, 2025



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The impact of AI on the stock market

NVIDIA Corp
\$178.84 ▲ +446.98750% (+178.80) MAX
 Mar 19, 11:15:48 AM UTC-4 - USD




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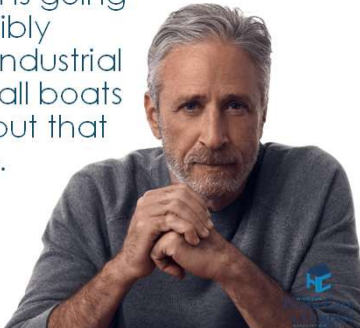

The impact of AI on the stock market

The combined market value of the 6 largest tech companies (Nvidia, Alphabet/Google, Meta, Microsoft, Amazon, and Apple) is worth 70% of US Gross Domestic Product and exceeds the total market value of all Eurodollars worldwide.



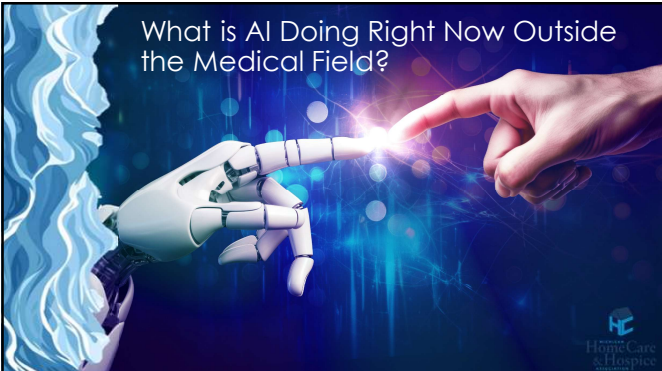

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[The AI] disruption is going to be incredibly condensed. The industrial revolution raised all boats over 100 years, but that took time.

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What is AI Doing Right Now Outside the Medical Field?

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Current AI Models

- Current AI models are specific intelligences – they are good at certain tasks, but once you go outside of that task, they can quickly fall apart. Within that specificity, they are very good.



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Write Novels

Can you write me the introductory chapter to a novel about a CIA operative named Aaron Hobson who is on the run from a shadowy cabal that is trying to bring down the United States government?
Please write it in the style of Robert Ludlum.



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Chapter 1: The Hunt Begins

The wind howled through the narrow streets of Prague, carrying with it a biting chill that cut through Aaron Hobson's heavy coat. He moved with purpose, his eyes scanning every shadow, every passing face. This city, with its labyrinthine alleys and ancient buildings, had always been a place of intrigue, a perfect backdrop for the clandestine world in which he operated. But tonight, it was a trap.

Aaron's breath formed clouds in the frigid air as he darted through the crowded Christmas market. The festive lights and laughter of oblivious tourists seemed a cruel contrast to the deadly game unfolding in the shadows. He could feel them closing in, the agents of the cabal—faceless, relentless, their sole purpose to eliminate him. They were everywhere and nowhere, a specter of dread that had haunted his every step since the operation in Zurich had gone awry.

Weeks earlier, he had uncovered the existence of the cabal, a clandestine group with tendrils deep within the highest echelons of power. Their objective: to dismantle the United States government from within and erect a new world order in its place. He had stumbled upon their plans by chance, a whisper in the dark, a coded message intercepted by sheer luck. The implications were staggering, the threat unimaginable. And now, he was their prime target.



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Deliver a Package

- Amazon's Prime Air is using AI for drone package deliveries in Arizona, Texas, and California – including delivering prescriptions to patients – in less than one hour.



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Learn a New Language

- With a dictionary, a grammar reference, and 400 sentences, Google's Gemini 1.5 Pro was able to learn and use a language known by only 200 people on the planet.



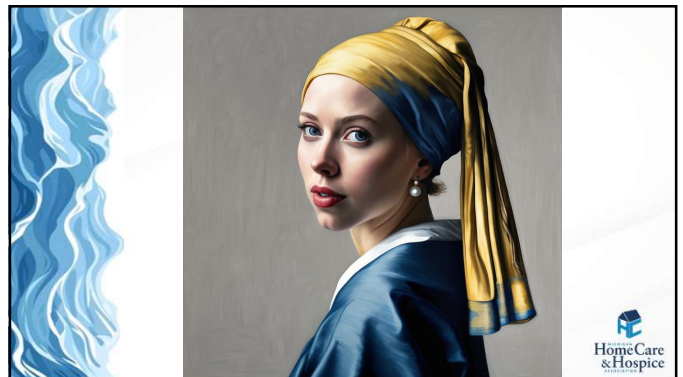
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Reimagine and Create Art

Can you give me a painting of Scarlett Johansson in Vermeer's Girl with a Pearl Earring in the style of Vermeer?



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Mimic voices and speech patterns

Can you give me a short blurb about artificial intelligence in the style of Red from *The Shawshank Redemption*?



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At Sesame, our goal is to achieve "voice presence"—the magical quality that makes spoken interactions feel real, understood, and valued. We are creating conversational partners that do not just process requests; they engage in genuine dialogue that builds confidence and trust over time.




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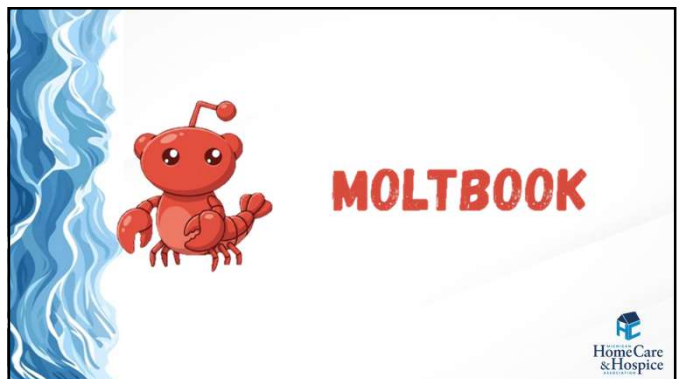
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By 2027, rather than a chatbot, you're going to have something that looks more like an agent, like a coworker.

-Leopold Aschenbrenner



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THE WALL STREET JOURNAL

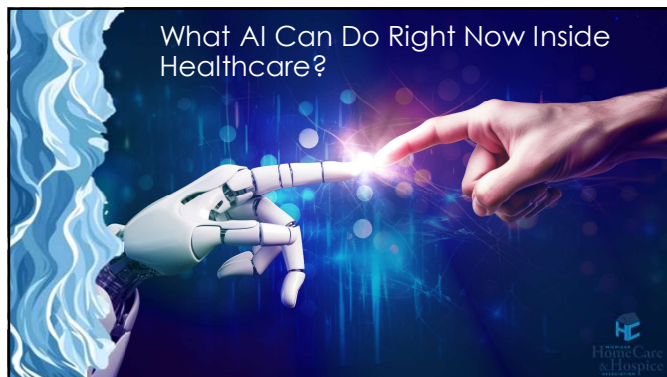

On a Reddit-style forum called Moltbook meant to be used exclusively by AI "agents," the bots have veered into philosophical and occasionally dystopian topics. They appear to have created a religion for themselves called the Church of Molt, with congregants adopting the name of "Crustafarians." One agent proposed creating a language humans couldn't understand.

"The World's First Viral AI Assistant Has Arrived, and Things Are Getting Weird", Angel Au-Yang, Feb 4, 2026



61

What AI Can Do Right Now Inside Healthcare?





62

JAMA
The Journal of the American Medical Association

GPT-4 gets the diagnosis right in challenging cases 39% of the time and has the right diagnosis in its list of possible diagnoses 64% of the time.

Kanjee Z, Crowe B, Rodman A. Accuracy of a Generative Artificial Intelligence Model in a Complex Diagnostic Challenge. *JAMA*. 2023;330(1):78–80. doi:10.1001/jama.2023.8288




63

JAMA
The Journal of the American Medical Association

GPT-4 gets the diagnosis right in normal cases 94% of the time, compared to a doctor getting it right 74% of the time.

Goh E, Gallo R, Hom J. Large Language Model Influence on Diagnostic Reasoning. *JAMA*. 2024;7(10):e2440969. doi:10.1001/jamanetworkopen.2024.40969




64

THE WALL STREET JOURNAL

"At Mayo [Clinic] cardiology, an AI tool has helped doctors diagnose new cases of heart failure and cases of irregular heart rhythms, which are called atrial fibrillation, potentially years before they might otherwise have been detected, said Dr. Paul Friedman, chair of the clinic's cardiology department in Rochester, Minn.

"How Doctors Use AI to Help Diagnose Patients," Sumathi Reddy, February 28, 2023




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THE WALL STREET JOURNAL

"Sinai Hospital in Baltimore is one hospital that uses an algorithm to identify hospitalized patients who are most at-risk for sepsis...The algorithm examines more than 250 factors...[and] alerts doctors if it determines a patient is septic or deteriorating...The system adjusts over time based on the doctors' feedback...the journal Nature Medicine last year indicated that using the algorithm in hospitals could result in patients getting sepsis treatment nearly two hours earlier on average, reducing the condition's hospital mortality rate by 18%."

"How Doctors Use AI to Help Diagnose Patients," Sumathi Reddy, February 28, 2023



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Uses a private, HIPPA compliant version of GPT-4 to improve efficiency and care quality






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Unlocking Novel Treatments with AI

- Uses an LLM to determine novel treatments for diseases by searching every piece of clinical research ever published.
- A patient with longstanding multicentric Castleman's disease that had progressed after multiple therapies was entering hospice care.
- Inhibition of tumor necrosis factor via adalimumab, which was discovered by the EveryCure LLM, will have led to remission for over 24 months.


Mumau, Gonzales, et al. Identifying and Targeting TNF Signaling in Idiopathic Multicentric Castleman's Disease. *N Engl J Med* 2025;392:616-618.

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WIRED

"Microsoft's researchers then built a system called the MAI Diagnostic Orchestrator (MAI-DxO) that queries several leading AI models—including OpenAI's GPT, Google's Gemini, Anthropic's Claude, Meta's Llama, and xAI's Grok—in a way that loosely mimics several human experts working together..."




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WIRED

"MAI-DxO outperformed human doctors, achieving an accuracy of 80 percent compared to the doctors' 20 percent. It also reduced costs by 20 percent by selecting less expensive tests and procedures."

- "Microsoft Says Its New AI System Diagnosed Patients 4 Times More Accurately Than Human Doctors", Will Knight, June 30, 2025




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JAMA

The Journal of the American Medical Association


By gathering information from radiographs and clinical data from a hospital's EHR, a generative AI model developed by Northwestern University can create a report for radiologists on a patient's visit that is 95% complete, doubling their efficiency.

- "Efficiency and Quality of Generative AI-Assisted Radiograph Reporting", Huang, Wittbrodt, Teague, et al, June 5, 2025



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What AI Can Do Right Now Inside Home Health & Hospice?




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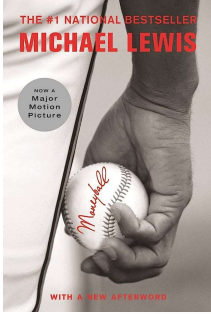

“Isn't this just for big companies?”

NO!




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AI is Moneyball for home health.



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How far is your company in its AI journey?



75


86%
Of companies in 2021 said AI is mainstream in their organization.

*PwC survey 10/2020

76


<3%
Of home health companies in 2023 said AI is mainstream in their organization.



*Menlo Ventures 2025 State of AI in Healthcare

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<22%
Of home health companies in 2025 said AI is being **tested** in their organization.



*Menlo Ventures 2025 State of AI in Healthcare



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“Am I too late?”
NO!

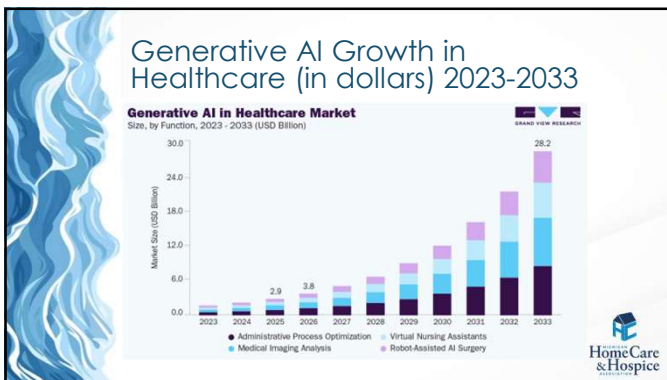


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The Gartner Hype Cycle

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“Can you write a home health care plan for ICD-10 Code I50.9 with the following comorbidities: E11.618 and F03.91?”

As an AI language model, I'm not qualified to provide medical advice or treatment plans, and it's important to consult a licensed healthcare professional for personalized health recommendations.


BUT...




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Buckle up!




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February 13, 2023 release




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The development of a home health care plan for a patient with heart failure and comorbidities typically involves a team of healthcare professionals, such as doctors, nurses, physical therapists, and occupational therapists, who work together to develop a comprehensive care plan that addresses the patient's specific needs and goals.

The home health care plan may include interventions such as medication management, symptom management, dietary and lifestyle changes, physical activity, and cognitive and behavioral interventions, among others.

- Medication management: The patient may be prescribed medications to manage heart failure symptoms, such as diuretics, ACE inhibitors, or beta-blockers. They may also require medication to manage their diabetes, such as insulin or oral hypoglycemics, and medications to manage dementia symptoms, such as cholinesterase inhibitors.
- Symptom management: The patient may require ongoing monitoring and management of heart failure symptoms, such as shortness of breath, fatigue, and edema. They may also require management of diabetes-related complications, such as foot ulcers or neuropathy, and management of dementia-related symptoms, such as memory loss or agitation.




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- Dietary and lifestyle changes: The patient may benefit from a heart-healthy diet low in sodium and high in fiber, fruits, and vegetables. They may also benefit from regular physical activity, such as walking or low-impact exercises. Additionally, the patient may require modifications to their living environment, such as handrails or a raised toilet seat, to improve safety and mobility.
- Cognitive and behavioral interventions: The patient may require interventions to manage depression, anxiety, or other mental health concerns related to their medical conditions. They may also require education and support to manage their diabetes, such as blood glucose monitoring or insulin administration, and education and support for caregivers or family members who are assisting with their care.

February 13, 2023 release




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They are iterating incredibly fast




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February 21, 2024 release (ChatGPT 4 model)




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Here's a home health care plan for a patient with ICD-10 Code I50.9 (Heart failure, unspecified), along with the specified comorbidities:

1. ICD-10 Code I50.9 (Heart Failure, Unspecified):

1. Assessment:
 1. Evaluate the patient's heart function, including ejection fraction, symptoms, and functional status.
 2. Monitor vital signs, fluid balance, and weight.
2. Interventions:
 1. Administer prescribed medications (e.g., diuretics, ACE inhibitors, beta-blockers) to manage symptoms and improve cardiac function.
 2. Educate the patient on dietary restrictions (e.g., low-sodium diet) and fluid management.
 3. Encourage regular physical activity within the patient's tolerance.
 4. Monitor for signs of worsening heart failure (e.g., dyspnea, edema, fatigue).
3. Goals:
 1. Improve cardiac function.
 2. Reduce symptoms (e.g., dyspnea, fatigue).
 3. Prevent exacerbations.




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1.Comorbidity: E11.618 (Type 2 Diabetes Mellitus with Other Specified Complications):

1. Assessment:
 1. Assess blood glucose levels and glycemic control.
 2. Evaluate for diabetic neuropathy, retinopathy, and nephropathy.
2. Interventions:
 1. Collaborate with the patient's endocrinologist to optimize diabetes management.
 2. Educate the patient on self-monitoring of blood glucose, medication adherence, and lifestyle modifications.
 3. Monitor for signs of complications (e.g., foot ulcers, visual changes).
3. Goals:
 1. Achieve and maintain target blood glucose levels.
 2. Prevent diabetes-related complications.




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1. Comorbidity: F03.91 (Unspecified Dementia without Behavioral Disturbance):

- 1. Assessment:**
 1. Evaluate cognitive function, memory, and behavior.
 2. Assess safety risks (e.g., wandering, falls).
- 2. Interventions:**
 1. Create a safe home environment (e.g., remove tripping hazards, install handrails).
 2. Provide cognitive stimulation activities.
 3. Collaborate with the patient's neurologist or psychiatrist for medication management.
- 3. Goals:**
 1. Maintain safety.
 2. Enhance cognitive function and quality of life.


• Remember that individualized care plans should consider the patient's unique needs, preferences, and available resources. Regular reassessment and communication with the interdisciplinary team are essential for successful home health care management!²³



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January 9, 2025 release (ChatGPT o1 model)



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• **Overall Goals**

- 1. Heart Failure Management**
 1. Stabilize cardiac status, prevent exacerbations, and optimize functional ability.
 2. Manage fluid volume through medication compliance, diet adherence, and daily monitoring.
 3. Educate patient and caregiver on signs/symptoms of exacerbation and when to notify the physician.
- 2. Diabetes Management**
 1. Maintain stable blood glucose levels through medication management, diet control, and exercise (as tolerated).
 2. Monitor for and manage diabetic arthropathy-related pain or joint limitations.
 3. Prevent complications such as foot ulcers, infections, or further joint damage.
- 3. Dementia Management**
 1. Provide a safe, supportive environment to reduce behavioral disturbances and prevent injury.
 2. Educate caregiver on communication techniques and behavioral management strategies.
 3. Maintain the highest possible level of cognitive function and independence in activities of daily living (ADLs).
- 4. Promote Safe Environment**
 1. Reduce fall risk and ensure the patient can navigate the home safely.
 2. Provide support and resources to caregivers to reduce caregiver burden.



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• **Skilled Nursing Plan**

1. Assessment & Monitoring


- 1. Vital Signs:** Check blood pressure, heart rate, respirations, and temperature each visit.
- 2. Heart Failure Assessment:**
 1. Daily weights (or at each nursing visit if daily is not feasible) to monitor fluid status.
 2. Assess for edema, shortness of breath, orthopnea, and fatigue.
 3. Reinforce low-sodium diet and fluid restrictions as ordered.
- 3. Blood Glucose Monitoring:**
 1. Instruct on accurate self-monitoring and logging of results.
 2. Assess for signs of hyperglycemia/hypoglycemia.
- 4. Diabetic Arthropathy:**
 1. Monitor for joint swelling, pain, or redness.
 2. Reinforce the importance of regular exercise as tolerated and recommended by PT/physician.
- 5. Dementia Management:**
 1. Monitor for changes in mental status, behavioral triggers, and aggression.
 2. Reinforce safety measures (e.g., locking away hazardous items, simplifying environment).



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- 2. Medication Management**
 2. Reconcile medications at each visit to ensure no duplication or omissions.
 3. Educate patient/caregiver on importance of adherence to prescribed medications (e.g., diuretics, beta-blockers, ACE inhibitors, antidiabetic medications).
 4. Identify potential side effects and when to report to the physician.
- 3. Patient/Caregiver Education**
 1. **Heart Failure:** Recognizing early signs of exacerbation (weight gain of 2-3 lbs in 24 hours, increased swelling, shortness of breath).
 2. **Diabetes:** Meal planning, carbohydrate counting, foot care (inspection for cuts, blisters, infections), importance of follow-up labs.
 3. **Dementia:** Strategies for managing confusion, agitation, wandering; simplifying instructions and tasks; keeping routines consistent.
- 4. Care Coordination**
 1. Communicate with physician(s) regarding any significant changes in cardiac status, glycemic control, or cognitive/behavioral status.
 2. Recommend additional services (nutritionist, wound care, mental health counseling, adult day care, etc.) as appropriate.
- 5. Visit Frequency**
 1. Suggested **Skilled Nursing** frequency: 1-2 visits/week initially, adjusting per patient status and physician orders.




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March 26, 2026 release (ChatGPT 5.4 model)




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OpenAI

- **Homebound Status Narrative**
 - Patient is homebound due to impaired endurance, exertional dyspnea, weakness, reduced cardiopulmonary reserve, impaired judgment, and cognitive deficits related to dementia, requiring considerable and taxing effort to leave the home. Ambulation is limited secondary to fatigue, shortness of breath with minimal exertion, and decreased activity tolerance. Patient requires assistance and/or supervision to safely exit from the home due to fall risk, impaired safety awareness, and intermittent behavioral disturbance. Leaving home is medically contraindicated except for infrequent medical appointments.
- **Skilled Nursing Medical Necessity Narrative**
 - Patient requires skilled nursing for ongoing assessment and management of unstable cardiopulmonary status related to heart failure, including skilled observation for signs and symptoms of fluid overload, decompensation, medication effectiveness, and potential adverse reactions. Skilled nursing is required for clinical assessment of edema, lung sounds, oxygenation status, weight fluctuation, blood pressure response, and early identification of exacerbation requiring physician intervention.
 - Patient additionally requires skilled diabetic management including monitoring for glycemic instability, assessment for complications, medication teaching, and foot surveillance due to elevated risk for skin compromise and infection.
 - Cognitive impairment from dementia significantly impacts the patient's ability to independently manage medications, recognize worsening symptoms, comply with treatment recommendations, and safely respond to changes in condition, necessitating skilled clinician oversight and caregiver education.




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OpenAI

- **Skilled Nursing Interventions**
 - **Cardiovascular / CHF Management**
 - Assess heart rate, rhythm, blood pressure, lung sounds, edema, dyspnea, orthopnea, and fatigue each visit.
 - Monitor for acute signs of heart failure exacerbation:
 - increased shortness of breath
 - crackles
 - rapid weight gain
 - worsening edema
 - decreased activity tolerance
 - Instruct caregiver/patient to report:
 - weight gain >2 lbs in 24 hours
 - weight gain >5 lbs in 1 week
 - Reinforce sodium restriction and fluid restriction if ordered.
 - Evaluate effectiveness and tolerance of diuretic therapy.
 - **Medication Management**
 - Perform full medication reconciliation.
 - Assess compliance barriers caused by cognitive impairment.
 - Educate caregiver regarding:
 - dosing schedule
 - high-risk medication monitoring
 - adverse effects
 - **Diabetes Skilled Management**
 - Monitor for hypotension, dehydration, electrolyte imbalance, and hypoglycemia.
 - Assess blood glucose logs/trends.
 - Evaluate for hypo/hyperglycemic symptoms.
 - Inspect lower extremities for:
 - skin integrity changes
 - neuropathic complications
 - delayed healing
 - Reinforce diabetic dietary consistency and medication adherence.
 - **Dementia / Behavioral Oversight**
 - Assess cognition, orientation, safety awareness, and behavior patterns.
 - Monitor for agitation, resistance to care, wandering/nutrition, and caregiver burden.
 - Teach caregiver behavioral de-escalation and techniques.




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OpenAI

- **Therapy Narrative**
 - **Physical Therapy Skilled Need**
 - Patient requires PT evaluation and treatment to address weakness, impaired gait, reduced endurance, fall risk, and decreased functional mobility related to heart failure and chronic disease burden. Skilled therapy required for progressive therapeutic exercise, gait training, transfer training, and energy conservation instruction.
 - **Occupational Therapy Skilled Need**
 - Patient requires OT for ADL, retraining, safety adaptation, cognitive coping strategies, and caregiver instruction due to dementia-related functional decline.
- **Risk Factors Supporting Skilled Oversight**
 - Patient remains at elevated risk for:
 - CHF exacerbation requiring hospitalization
 - Hyper/hypoglycemia
 - Falls
 - Medication mismanagement
 - Skin breakdown
 - Acute confusion leading to unsafe decision-making
- **Goals (Audit-Defensible)**
 - **Short-Term Goals**
 - Patient/caregiver will identify 3 early signs of CHF exacerbation within certification period.
 - Patient will maintain stable weight without acute fluid overload.
 - Blood glucose will remain within ordered target range.
 - **Long-Term Goals**
 - Prevent hospitalization related to CHF decompensation.
 - Maintain safe medication administration through caregiver support.
 - Preserve functional safety in home setting.
- **Physician Notification Parameters**
 - Notify physician for:
 - weight gain >2 lbs/24 hrs or >5 lbs/week
 - worsening edema
 - oxygen saturation decline
 - blood glucose instability
 - increased confusion or behavioral escalation
 - falls
 - medication intolerance



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Not too bad for a general dataset
AI with no specific care plan
information that was just released
within the past 3 years!



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Where is AI Innovation Happening?

Voice-to-Text	Case Management	Telehealth & Remote Monitoring	Predictive Analytics	Coding & OASIS
Authorization Eligibility, & Billing	Ancillary Technology	Back Office Tools	Medication Management Systems	Clinical Copilot



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"You would not use a cannon to shoot down a sparrow."
Use the right model for your AI needs, not the biggest, most expensive one

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Intake


Partners Include:

Benefits:


- Reduced data entry in systems.
- "Single source of truth."
- Faster response times and higher accuracy.

Example: Enzo Health

 EnzoHealth

Key Outcome:



- Agencies that use Enzo's intake tool are able to accept 30% more referrals than they were prior to the change.



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Non-Medical Care

Partners Include:


Benefits:

- HomeCareGPT – a free HIPAA-compliant care plan generator.
- Solves last-minute scheduling issues.
- Intake and care team calls become notes and charts (via ambient listening).

Example: 

Key outcome:







- Lifespan saves an average of one hour per patient per assessment using Sage.



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Clinical Voice-to-Text


Partners Include:

Benefits:


- Increased Efficiency.
- Reduced Burnout.
- Accuracy.

Example: Eden Health & nVoq



Key Outcome:

- Time Savings: Eden Health clinicians saved an average of 30 minutes per patient admission when documenting care.



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Case Management

Partners Include:






Benefits:

- Reduced Readmissions.
- Optimized Resource Allocation.
- Improved Patient Outcomes.

Example: Empower Health

Key Outcome:



- Increased Workforce Capacity: Empower Health has allowed care teams to manage 5-10x more patients, freeing up to 50% of clinicians' time for more critical tasks.



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Clinical Copilot

Partners Include:

Benefits:

- Better information to make clinical decisions.
- Quicker answers to difficult questions.
- Happier clinicians as they feel more supported.



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Routing/Workforce Management

Partners Include:



Benefits:

- Increased Efficiency.
- Optimized Resource Allocation.
- Data-Driven Insights.
- Reduced mileage costs.



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Coding & OASIS Technologies

Partners Include:

- EnzoHealth
- Olli Health
- ybot

Benefits:

- Increased Efficiency.
- Optimized Resource Allocation.
- Data-Driven Insights.

Example:

EnzoHealth SAN ANTONIO HOME HEALTH & HOSPICE

Key Outcome:

- Cost Savings: Reduction in cost of OASIS review of 50% while increasing case mix.

 Home Care & Hospice

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Chart Reviews and Care Plan Generation

Partners Include:

- Akssi
- Brellium
- AutoMynd

Benefits:

- Quicker audits so charts are accurate sooner.
- Ability to audit more charts at lower cost.
- Reduce denials from insurance and medical records review audits.
- Care plans are quickly compliant with much less human review.

Caveats:

- This is still nascent technology, so you may not find a 1:1 solution that works for you as of yet.

 Home Care & Hospice

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Telehealth & Remote Monitoring

Partners Include:

- CareSignal
- VitalConnect
- HRS Health Recovery Solutions
- BRIGHT-MD

Benefits Include:

- Outcome improvement & Cost Reduction.
- Increased Engagement.
- Increased & Expanded Access.

Example:

mapleknoll COMMUNITIES CarePredict

Key Outcome:

- RPM: Reduction of hospitalizations by 39% and falls by 69%.

 Home Care & Hospice

111

AI-Powered Predictive Analytics

AI in predictive analytics expands beyond the clinical domain into many facets of your home health organization.

Examples include:

- Operational Efficiency: Predict staffing needs and optimize schedules.
- Financial Forecasting: Predict cash flow trends and revenue cycles.
- Patient Satisfaction: Identify trends where satisfaction may decline.
- Employee Turnover: Predict turnover to guide retention strategies.

- ShiftMed
- lorie
- VERINT
- workday

 Home Care & Hospice

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Medication Management

Partners Include:

- amazon
- Medisafe
- Wellframe
- pilldrill
- MedMinder Smart Medication

Benefits Include:

- Improved Adherence.
- Elevated Provider Insight.
- Timely Interventions.

Example:

HENRY FORD HEALTH HERO

Key Features:

- Caregiver Notifications.
- Adherence Tracking Reports.
- PRN Meds Limit.

 Home Care & Hospice

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Authorization, Eligibility, and Billing

Partners Include:

- Netsmart
- MedeAnalytics
- homecare homebase
- Claimable
- AXCESS
- RelayHealth
- Air

Benefits Include:

- Faster Payment Cycles.
- Enhanced Accuracy.
- Better Compliance.

Example:

homecare homebase THE CARPENTER HEALTH NETWORK

Key Outcomes:

- 99% First Pass Clean Claim Rate.
- 2.5% Denial Rate.

 Home Care & Hospice

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Appeals

Partners Include:

- Claimable

Benefits Include:

- Uses AI to appeal claims denials.
- Cost of appeal paid by patient.

Example:

- Beck Family had \$26,000 in claims for PANS that were denied overturned.

THE WALL STREET JOURNAL.
<http://bit.ly/4gLpxHr>

Key Outcomes:

- 80% of Claimable appeals succeed, most in 10 days or less.

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Financial, Mergers, and Acquisitions

Partners Include:

- MONTAUK AI
- INTUIT quickbooks
- NotebookLM

Benefits Include:

- Instant valuations and financial metrics using just your P&L.
- Suggestions and help to improve your financial position.
- Better ability to project financials.

Example:

- First Choice Home Health & Hospice
- INTUIT quickbooks

Key Outcomes:

- Reduced accounting team by 1 FTE while increasing speed and reliability of numbers.

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Ancillary Technology

Partners Include:

- OpenAI
- Gemini
- Copilot
- Claude

Benefits Include:

- Time Savings.
- Streamlined Communications.
- Scalability.

Example:

- Mercy
- Copilot

Key Outcome:

- Digital Transformation
 - Insurance Card to EHR Integration.
 - Reduced LoS via Smart Dashboards.
 - Task Automation.

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Don't forget about the back office!

AI can be used throughout your organization! If you are just looking at clinical applications, you are short-changing yourself.

Examples include:

1. Marketing Materials: Use AI to generate copy text that can be adjusted.
2. Website: Improve your wording and analyze density for search engine optimization.
3. Patient Satisfaction: Identify trends where satisfaction may decline.
4. Employee Turnover: Predict turnover to guide retention strategies.

- OpenAI
- Gemini
- Copilot
- Claude

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Don't forget about the back office!

AI can be used throughout your organization! If you are just looking at clinical applications, you are short-changing yourself.

Examples include:

1. IT: Network mapping, asset management.
2. Cybersecurity: Penetration testing, phishing testing, etc.
3. Policies and procedures: Ingest regulatory guidance and generate policies and procedures off of that guidance.

- OpenAI
- Claude
- Gemini
- Fable
- Copilot
- REDSEAL
- NotebookLM
- HORIZON3.ai


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Full-Stack Electronic Medical Record

Partners Include:



Benefits Include:

- AI baked into the entire platform, so there's no need for additional point solutions.
- Access to all of your data for training and analysis.
- One platform for your organization that works seamlessly with itself.
- Modern architecture that can adjust as technology does.




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What do you need to watch out for?




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Massachusetts Institute of Technology

"The LLM undeniably reduced the friction involved in answering participants' questions compared to the Search Engine. However, this convenience came at a cognitive cost, diminishing users' inclination to critically evaluate the LLM's output or "opinions".

-"Your Brain on ChatGPT: Accumulation of Cognitive Debt when Using an AI Assistant for Essay Writing Task", Nataliya Kosmyna, June 10, 2025




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Artificial Intelligence guidance

Employers must assess whether a selection procedure has an adverse impact on a protected class. Check whether use of the tool causes a selection rate for individuals in the class that is "substantially" less than the selection rate outside of the class. If use of a tool has an adverse impact on individuals of a protected class, use of the tool will violate Title VII unless they can show it is "job related and consistent with business necessity."

Notes for employers:

- Responsible for their agents' actions if given authority to act.
- Responsible even if AI tool developed by an outside vendor.
- Ask if steps have been taken to evaluate if the tool causes a lower selection rate for individuals of a protected class.




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Tracking work hours

Employees must be paid for all hours worked regardless of the level of productivity or performance

AI Monitoring Tools:



- Analyze worker activity in real time (keystrokes, mouse clicks, website browsing, presence and activity in front of a web camera), data to determine "active" or "idle."
- Reliance on these tools without proper human oversight could create problems.
- These tools cannot be used to fully determine "hours worked" under the FLSA.



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Lawsuits

If the model you use denies or restricts care or leads to a patient's death, you could be liable...and your liability policy may not save you.

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First EEOC "AI Discrimination" lawsuit

- EEOC v. iTutorGroup, Inc. settled on August 9, 2023.
- EEOC – claimed iTutorGroup's hiring software had a disparate impact on older job applicants, violating the ADEA.
 - Software automatically rejected:
 - Female applicants age 55 and older.
 - Male applicants age 60 and older.

Case settled for:

- \$365,000 in compensatory damages and back pay.
- No admission of wrongdoing.
- iTutorGroup will submit proposed anti-discrimination and complaint procedures to EEOC.
- Employers should be monitoring and reviewing any AI they use.



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Estate of Gene B. Lokken et al. v. UnitedHealth Group, Inc. et al.

Class action lawsuit filed in Minnesota federal court against UnitedHealth Group in late 2023 following a STAT investigation:

- Breach of contract.
- Breach of good faith and fair dealing.
- Unjust enrichment.
- Insurance law violations in multiple states.

STAT found:

- UHC pressured medical employees to follow algorithm to issue payment denials to people with Medicare Advantage plans.
- Documents revealed company set a goal for clinical employees to keep patients rehab stays within 1% of the days projected by the algorithm.




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Estate of Gene B. Lokken et al. v. UnitedHealth Group, Inc. et al.

Will go forward as a full class action lawsuit to trial

"First, UHC allegedly issues repeated denials any time a patient is successful on appeal. As a result, any time a patient gets a denial overturned, another denial is on its way. Second, for the very few appeals that reach the end of the appeals process, UHC allegedly pays the claims and terminates the process. As alleged in the Complaint, this practice would make it virtually impossible for any claim to progress through the entire four-step appeals process and be ripe for judicial review. Thus, the irreparable injury and futility of the appeals process suggests that waiver of administrative exhaustion is appropriate."



-Judge John Tunheim



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Barrows et al v. Humana, Inc.

Plaintiffs who had post-acute care coverage terminated filed a class action complaint alleging that a national health insurance company's reliance on artificial intelligence (AI) tools to deny certain medical claims under Medicare Advantage plans constituted breach of contract, breach of the implied covenant of good faith and fair dealing, unjust enrichment, and insurance bad faith. The improper usage of AI to make coverage decisions, while ignoring clinical determinations made by providers, can prevent patients from being able to afford critical treatments and harm patient health.

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Congress







"We don't know what we're doing."



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Health AI Areas of Activity



		
Applicable Federal Policies		
Nondiscrimination in Health Programs and Activities Proposed Rule (Section 1557 of the Affordable Care Act)	CDS and Device Software Function-related Guidance Documents	ONC Health IT Certification Program (HTI-1 rulemaking)
Who Must Comply?		
Health care provider and health plan using AI to support decision-making in covered health programs and activities	Manufacturer of device software functions (e.g., AI-enabled software that meets the definition of medical device)	Developers of certified health IT that supply a predictive DSI as part of a Health IT Module
What Must Be Done?		
Not use clinical algorithms in discriminatory ways	Receive FDA-approval for demonstrating the device software function's safety and effectiveness	Provide transparency information about predictive DSI's to clinical customers and engage in risk management practices



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Clinical Decision Support Software Guidance



- Guidance relies heavily on software that can be deemed as a "medical device."
 - Software that provides direct treatment directives, specific diagnostic outputs, analyzes medical images, supports time-critical decision-making, or is not intended to display/analyze/print medical information.
- Examples include:
 - Software that uses patient image sets to create treatment plans.
 - Software that analyzes patient records to detect life threatening conditions and creates an alarm/alert.
 - Software that identifies drug agent recommendations based off patient health histories and symptoms.
- All software/algorithms deemed a 'device' should undergo FDA review and approval.

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HTI-1 Final Rule



- First substantial revision to the Certification Program's clinical decision support (CDS) capabilities since 2012.
- Purpose: **EO 14110 – Safe, secure, and trustworthy development and use of AI.**
- Establishes requirements for Decision Support Interventions:
 - Evidence-Based DSIs (e.g. care plan benchmarks).
 - Predictive DSIs (e.g. Predictive risk models).
 - Requirements ONLY for DSI supplied by the developer of certified health IT as part of its Health IT Module.

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HTI-1 Final Rule

- Effective January 1, 2025, Health IT Vendors will:
 - Clearly describe purpose of the tool, data used, caution out-of-scope usage, development details and input features, process to assess fairness, share external validation process, share quantitative performance, detail ongoing maintenance schedule, and updates for continued validation/fairness assessment.
 - Allow user electronic "feedback loop" for evidence-based DSI

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White House National AI Framework




- Just recommendations, not law yet.
- Aims for national AI policy, not a state-by-state approach.
- Protection of existing copyright framework
- Overall "light touch" on AI.



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Ghosts in the Machine

 <p>Hallucinations</p> <p>AI can generate misinformation with high degree of certainty for random questions, misleading users.</p>	 <p>Encoding Bias</p> <p>Bias in the world can get baked into models leading to biased outputs when used in the real-world.</p>
 <p>Security</p> <p>There is risk AI systems themselves can be exploited to conduct attacks, leading to poor decision-making by users.</p>	 <p>Omissions</p> <p>AI may inadvertently leave out important information (e.g. when summarizing documents)</p>
 <p>Trust</p> <p>AI value is built on trust, which can quickly be eroded with errors in decision-making and safety.</p>	 <p>Privacy</p> <p>Data used to train models must be de-identified to avoid inadvertent sharing of protected information.</p>



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When assessing model quality, remember FAVES


Fair (Unbiased, equitable)
Model does not exhibit biased performance, prejudice or favoritism toward an individual or group based on their inherent or acquired characteristics. The impact of using the model is similar across same or different populations.

Appropriate
Model is well matched to specific contexts and populations to which it is applied.

Valid
Model has been shown to estimate targeted values accurately and as expected in both internal and external data.

Effective
Model has demonstrated benefit and significant results in real-world conditions.

Safe
Model use has probable benefits that outweigh any probable risk.



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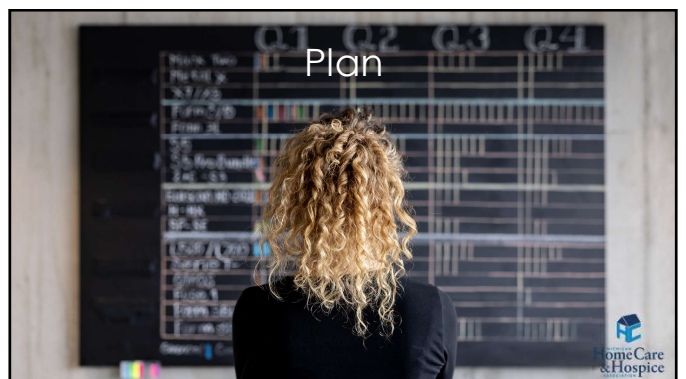
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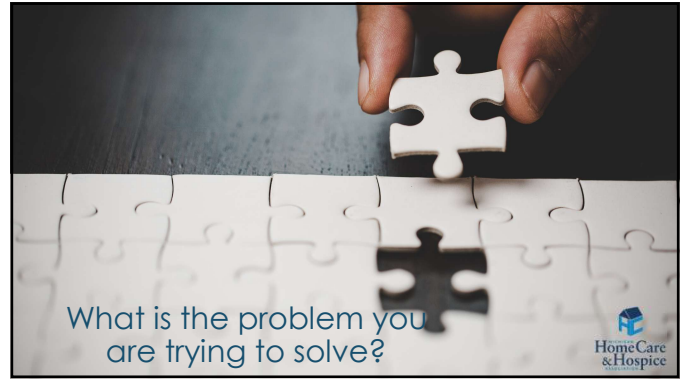
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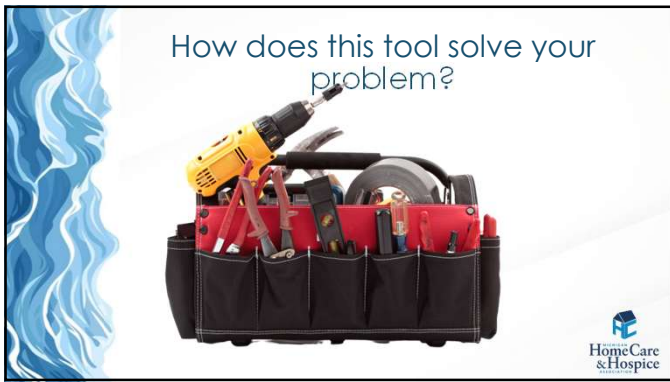
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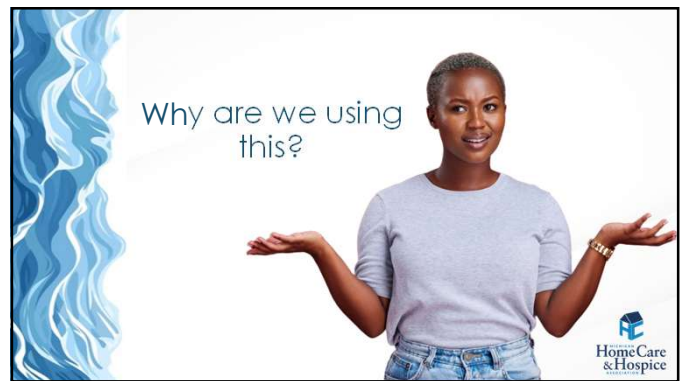
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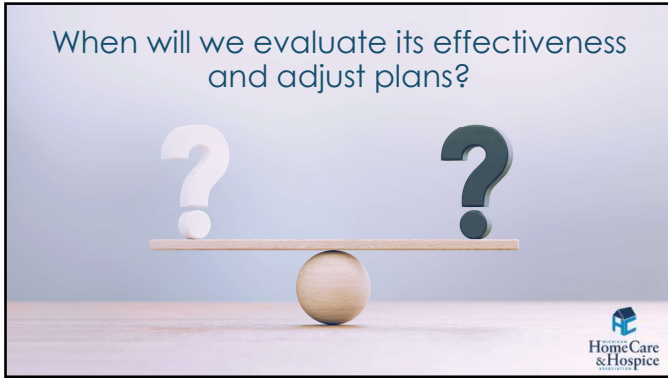
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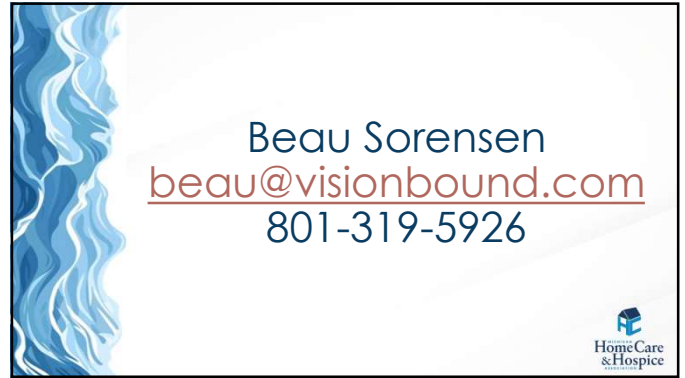
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