K Health was born out of a medical error.

My father had a stroke after the blood thinner he was prescribed failed. There was a simple inexpensive device to track how his body was responding to the medication, but he didn't have regular access to it.

During recovery, I listened to his doctors debate whether he should go back on the drug or switch medication. It seemed obvious we should compare the risks, benefits and outcomes in other patients similar to him to make the right decision. It didn't make sense to me that they did not have this kind of data readily available.

That's when I realized healthcare has a data problem. Doctors are plugging patient information into electronic health records, but they are often not using personalized data to make point-of-care decisions or extract insights.

Shouldn't doctors have this ability at their fingertips?

This is the single biggest point of failure in medicine. That's why Ran Shaul and I founded K Health. The goal was to integrate the most relevant, personalized and context rich data about the patient at the point-of-care. To get there, we would need the latest advancements in artificial intelligence: K Health would give doctors AI superpowers.

We set out on a journey to build the "best doctor in the world."

We are technologists, but we are also patients and caregivers. We understand firsthand what it's like to navigate a complex, inaccessible and costly healthcare system. After eight years and more than $300 million invested in research and development, we were ready to put our AI Physician to the test.

Today we published a study in the *Annals of Internal Medicine* with researchers from Cedars-Sinai Medical Center and Tel Aviv University.

The result? K Health's AI Physician Mode outperformed human doctors.

In the study, we focused on common conditions that represent over 100 million primary care visits each year: respiratory, urinary, vaginal, eye, and dental symptoms. Importantly, this wasn't just a quiz involving medical exam test questions but real patient cases, which are much more complicated. Some generative AI models have performed well on medical test questions, but when it comes to real world medical cases it's a whole different ball game. Real world cases are simply messier and more complex.

The study compared initial recommendations from K Health's AI Physician Mode with final recommendations made by human doctors at the virtual primary care clinic Cedars-Sinai Connect. A panel of adjudicating doctors reviewed 461 patient visits.

Overall, these doctors rated AI Physician Mode's recommendations higher than the decisions made by real doctors.
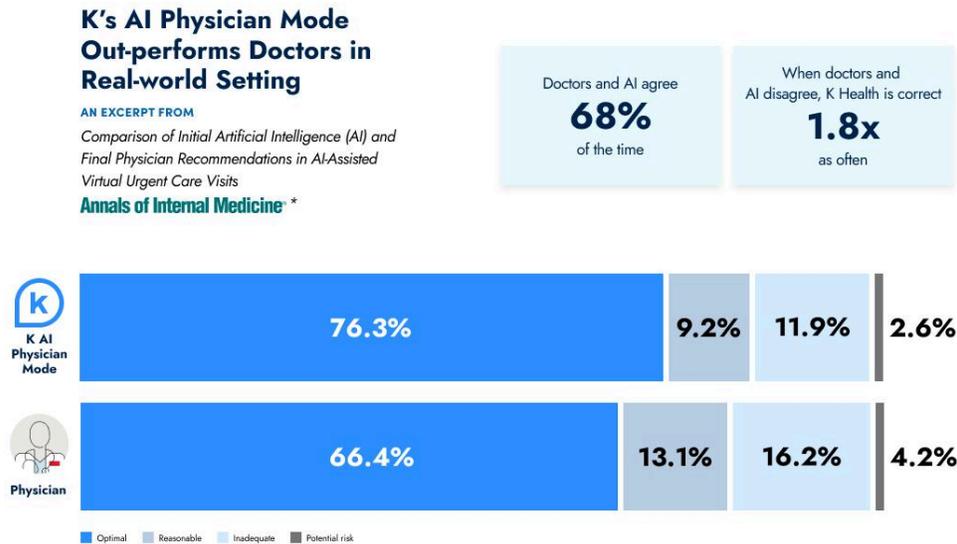
Doctors and AI Physician Mode agreed on clinical decision-making 68 percent of the time. But when there was disagreement, AI Physician Mode was correct nearly twice as often! And, when it came to "potentially risky" clinical decisions, AI Physician Mode received only about half as many ratings compared to human physicians.

This is a huge feat: AI Physician mode was smarter than human doctors. The findings suggest AI Physician Mode was better at identifying critical red flags and adhering to medical guidelines.

This isn't just about medical knowledge. It's about ensuring your doctor has the right data to make the best decision possible. AI Physician Mode draws on the anonymized records of tens of millions of patients to understand how people with similar symptoms, medical history, gender and age fared on different treatments.

This has tremendous implications for the future of healthcare. There are tens of millions of Americans who don't have access to primary care and we are on the brink of an AI-powered transformation that will make healthcare better for everyone.

Wouldn't you want your doctor to have that superpower?

K's AI Physician Mode Out-performs Doctors in Real-world Setting

AN EXCERPT FROM

Comparison of Initial Artificial Intelligence (AI) and Final Physician Recommendations in AI-Assisted Virtual Urgent Care Visits

Annals of Internal Medicine *

Doctors and AI agree
68%
of the time

When doctors and AI disagree, K Health is correct
1.8x
as often

K AI Physician Mode: 76.3% | 9.2% | 11.9% | 2.6%

Physician: 66.4% | 13.1% | 16.2% | 4.2%

Optimal | Reasonable | Inadequate | Potential risk

* https://www.acpjournals.org/doi/10.7326/ANNALS-24-03283
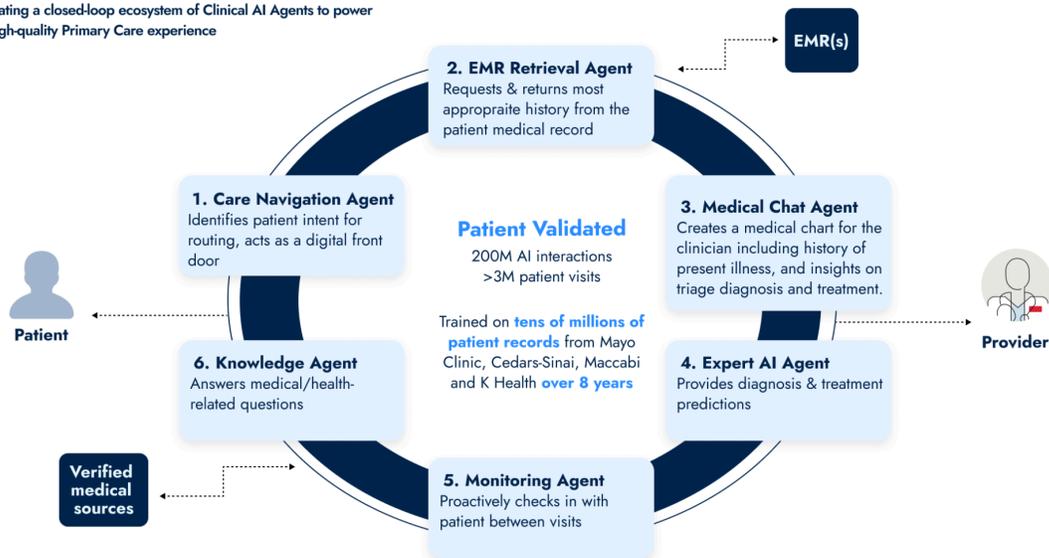
K Health Is Hacking Medicine For The Masses

For the first time, AI is playing a key role as a member of the clinical care team at leading U.S. health systems. Our 24/7 AI agents are assisting human doctors to triage, diagnose and treat patients at Cedars-Sinai, Hackensack Meridian Health, Hartford HealthCare and Mayo Clinic.

For example, when a patient logs on to the virtual primary care clinic Cedars-Sinai Connect, their first interaction is with a K Health AI agent that starts asking questions about their symptoms and triaging the case. Another AI agent completes the medical intake, while another starts pulling relevant data from their medical record. The next AI agent tees up potential diagnoses and treatment plans for a human doctor who reviews and makes a final determination based on information received from the AI and the virtual patient visit.

With AI superpowers, doctors can spend less time searching and entering information in medical records and more time focusing on patients. This means patients are being seen faster, with wait times going from weeks to minutes. Plus, patients also have an AI to guide them along their health journey.

K Health's AI Agent Stack

Creating a closed-loop ecosystem of Clinical AI Agents to power a high-quality Primary Care experience

EMR(s)

2. EMR Retrieval Agent
Requests & returns most appropriate history from the patient medical record

1. Care Navigation Agent
Identifies patient intent for routing, acts as a digital front door

Patient Validated
200M AI interactions
>3M patient visits

Trained on **tens of millions of patient records** from Mayo Clinic, Cedars-Sinai, Maccabi and K Health **over 8 years**

3. Medical Chat Agent
Creates a medical chart for the clinician including history of present illness, and insights on triage diagnosis and treatment.

Provider

Patient

6. Knowledge Agent
Answers medical/health-related questions

4. Expert AI Agent
Provides diagnosis & treatment predictions

Verified medical sources

5. Monitoring Agent
Proactively checks in with patient between visits

With many patients passing through K Health's clinics every day, AI Physician Mode is constantly learning from doctors and improving over time. This constant learning is core to K Health's identity. Even the smartest doctors with the best intentions are stumped on occasion. Humans and diseases are complex, and we each have our own unique biology. When we set out to create the "best doctor in the world," we knew that we needed to constantly improve and

learn from the collective wisdom of doctors.

That's why we are committed to validating our AI and care delivery within world-class healthcare institutions. That's why we've published this study in the *Annals of Internal Medicine*. That's why we are continuing to study the performance of AI Physician Mode in head-to-head tests with human doctors on real patients.

We are building AI Physician Mode for our families, our friends and for you. We believe everyone deserves better healthcare.

How we built a machine that's as smart as a human doctor

It all started with unleashing the power of the billions of data points that human doctors had already entered into medical records. If you want to determine the best treatment for a patient at the point-of-care, you have to first understand how similar patients fared with different treatment options over time.

K Health trained its predictive AI models on the most comprehensive and longitudinal deidentified patient datasets available from Israel-based vertically integrated payer-provider Maccabi, U.S.-based Mayo Clinic and more than three million patients who have used K Health's app. These datasets cover hundreds of millions of deidentified doctor's notes, prescriptions, labs, tests, hospitalizations, treatments and outcomes.

At first, K Health's models were built to learn from what doctors did. Next, the models evolved to learn from the doctors whose patients had the best outcomes. Real doctors gather data by asking patients questions in order to rule out the most unlikely scenarios. That interview between a patient and their doctor holds the key to unraveling the best diagnosis and treatment. If a patient doesn't share certain information, the doctor can't narrow down the possibilities to make a diagnosis.

This is one area where K Health's AI Physician Mode excels: being able to sift through the complexity and help doctors more easily distinguish low-risk conditions from true emergencies. In medical school, human doctors are taught "when you hear hoofbeats, think horses, not zebras." The idea being that common conditions are common–for a headache, it's more likely to be a tension headache than a brain tumor.

It's the doctor's job to prove that the patient has a common condition and to rule out the potential for a rare or dangerous condition. Often, this rule out will involve additional steps, such as labs, tests or images.

AI Physician Mode creates time and space for doctors by parsing through the interview and the immense amount of data that's collected in the medical records, helping doctors rule out the dangerous and rare "zebra" diagnoses and charting a path forward to the best diagnosis and treatment.