

FINN Health Information Technology Group

HUMAN-FIRST HEALTH INFORMATION: HOW AI, DATA, AND INNOVATION ARE REWRITING THE FUTURE OF CARE

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INTRODUCTION

THE NEXT WAVE OF HEALTH IT: AI, LLMS, AND THE ROAD TO CONNECTED CARE



By Beth Friedman

The U.S. health system underwent a dramatic technological change in the early 2010s. Fueled by the passage of the HITECH Act, millions of dollars were invested in Electronic Health Records (EHRs) and other health information technology (health IT) infrastructure.

While significant progress was achieved, many clinicians remain frustrated, and health information is often disconnected. Promises were made, mistakes occurred, and lessons were learned. These realities are all part of our collective learning journey in health IT.

Today's health organizations are in the midst of another wave of innovation. This time, Artificial Intelligence (AI) and Large Language Models (LLMs) are ushering in a new era of change across the health ecosystem. As we face this decade of health IT déjà vu, the same critical questions must be asked:

1. What promises is AI making for health?
2. What new lessons will we encounter?
3. What is the learning curve for this transformation?
4. Will we finally realize the full potential of health IT to achieve The Quintuple Aim?

This FINN Partners e-book brings together the brightest minds in health to answer these questions, guide us through the journey, and paint a clear picture of our ultimate destination. Experts remind us that despite AI's potential, errors are probable, with real consequences for patient safety. A highly responsible and cautious approach is essential.

What's Different in Health IT Innovation Today?

The authors highlight a key differentiator of today's health IT transformation: AI possesses iterative intelligence and continuous learning. Systems improve with each interaction, and end-users become active constructors of knowledge. This shift isn't limited to health IT; it impacts every element of our lives and society.

Furthermore, AI's capabilities emphasize the urgent need for high-quality, accurate, and relevant health data. AI amplifies whatever information it is fed, including erroneous clinical data. Herein lie three important data management challenges for health executives and solution vendors to recognize:

1. Clinical data must be accurate and trusted.
2. Quality data is essential for AI success.
3. AI is creating an unprecedented volume of data.

As the role of clinical data expands, clinicians will have more patient data than they can reasonably process and use effectively.

As John Lynn, Founder and Chief Editor at *Healthcare Scene*, reminds us, "New solutions must also interpret information by filtering, contextualizing, and surfacing only the most relevant insights at the moment of care, turning data into actionable intelligence."

The capacity for informed clinicians to provide the right clinical data, at the right time, and to the right users is perhaps the most promising aspect of AI in health care.

Reaching the Ultimate Destination

Humans working collaboratively with AI are well-positioned to transition from hybrid information environments to connected, AI-enabled care. Better patient experiences and healthier care outcomes remain the ultimate destination.

For example, multiple case studies and clinical experiences demonstrate that physicians' cognitive load is significantly reduced by using ambient clinical documentation – and that is just one use case for AI, LLMs, and other nascent health IT. This one technology alone could free up time for care conversations, build trust, and unburden the most important people in health care: patients, caregivers, and clinicians.

We invite you to explore the following six expert articles authored by the most trusted and respected voices in health. Progress is a journey, and we're all in this one together.

AUTHOR BIOGRAPHIES



Gil Bashe [in](#)

Champion for health innovation to sustain life and improve people's care, Gil is FINN Chair Global Health and Purpose, editor-in-chief of Medika Life, and host of the HealthcareNOW Radio show on health innovation. He is an MM&M Top 10 Innovation Catalyst, a PProvoke Media Top 25 Creative Influencer, a PRWeek Top 50 Health Influencer, a recipient of the PM360 Lifetime Achievement Award, and the PR News All-Star Award.

Gil now serves on the advisory boards of the American Diabetes Association, the Marfan Foundation, Let's Win for Pancreatic Cancer, and The Galien Foundation, as well as the strategic advisory boards of digital health companies Briya Health, StuffThatWorks and VyTrac. A former chair of the American Heart Association Founders Affiliate, he focuses on communication related to prevention and early intervention. Gil, a Fellow of the American College of Health Data Management, dedicates his energies to ensuring people with health urgencies and their communities have a voice in their care.



Amber Doster [in](#)

Amber Doster is a vice president at FINN Partners, bringing her sector passion and marketing expertise to health information technology and health information management organizations. Her proficiency spans 25 years and encompasses strategic planning, market research, event and trade show management, as well as comprehensive brand and communication strategies. Before joining FINN, Amber held marketing leadership roles within leading health care companies serving the acute care and ambulatory markets, including Ciox (now Datavant) and WebMD.



Beth Friedman [in](#)

With 30+ years of experience in health, technology, and communications, Beth helps health IT, revenue cycle, and digital health companies amplify their impact, grow their brands, and deliver measurable results. Before FINN Partners, Beth founded Agency Ten22, a boutique PR and marketing firm devoted to health IT. She has partnered with more than 100 clients to share their stories and grow their businesses through effective public relations and thought leadership programs.

Beth's career began in acute care hospitals, where she gained firsthand insights into the challenges and opportunities of the health sector. With an associate's degree in health information and a bachelor's degree in hospital administration, Beth's provider foundation continues to fuel her passion for advancing the industry through meaningful narratives and results-driven strategies.



Rob Havasy [in](#)

Rob Havasy is the Senior Director, Informatics Strategy at HIMSS. In this role, he focuses on how emerging technologies might impact health and health care. Currently, Rob focuses on artificial intelligence, digital health transformation, and issues surrounding data accessibility and the economics of health data exchange. In the decade that Rob has been with HIMSS, Rob also led the Personal Connected Health Alliance, a business unit focused on personal and connected health issues.

Before joining HIMSS, Mr. Havasy served as the Corporate Team Lead for Product and Technology Development at the Center for Connected Health (CCH), a part of the Mass General Brigham System in Boston, Massachusetts. Significant achievements of the Center include connecting remote patient monitoring data to Mass General Brigham's electronic medical record (EMR) system, integrating consumer activity monitoring data with the EMR, and developing a new platform for acquiring and integrating Patient-Reported Outcome Measures (PROMs) data into clinical practice. In 2018, Mr. Havasy served on the ONC's USCDI Task Force.

Mr. Havasy holds a B.S. in Environmental Science from Keene State College and an M.S. in Health and Medical Informatics from Brandeis University.



Goel Jasper [in](#)

Goel Jasper is the Managing Partner of FINN Israel and a leading voice in digital health innovation. He advises organizations across the health sector ecosystem on strategies that advance patient-centered care. Goel collaborates with health systems, investors, and emerging startups to identify opportunities for meaningful transformation and bridge the gap between technological breakthroughs and real-world impact.

Known for his ability to distill complex ideas into clear, compelling narratives, Goel regularly writes and speaks about the trends shaping the future of health in the U.S., Israel, and beyond. He is a connector of people and ideas, championing collaborations that bring together innovators, industry leaders, and investors to accelerate progress, expand access, and improve outcomes for patients worldwide.

AUTHOR BIOGRAPHIES



Tom Lawry [in](#)

Tom Lawry is a globally recognized advisor on AI transformation in health and medicine, helping leaders harness intelligent technologies to improve systems, outcomes, and patient experience. As Managing Director of Second Century Tech and a best-selling author, he provides strategic guidance informed by decades of experience spanning health, technology, and organizational performance.

A former Microsoft executive, Tom served as National Director for AI in Health and Life Sciences, holding multiple leadership roles that shaped the company's early health innovations. His career also includes senior positions at GE Healthcare, founding two venture-backed health tech companies, and serving as a health system executive. His insights have been widely featured in major outlets, and he is consistently recognized as one of the most influential voices driving change in the health industry.

Tom continues to speak and write extensively on the future of intelligent health, most recently as the author of *Health Care Nation – The Future is Calling and It's Better Than You Think*. He brings a unique blend of technical expertise and practical vision, helping leaders navigate rapid transformation and embrace the possibilities of AI-enabled care.



John Lynn [in](#)

John Lynn is the Founder and Chief Editor at *Healthcare Scene*, which includes the Healthcare IT Today and Swaay.Health communities, publications, podcasts, and conferences. Healthcare IT Today is the leading healthcare IT community with over 19,000 published articles, 1000+ video and audio podcasts, and a community of 200,000 followers. Swaay.Health is the only place where health B2B marketers and hospital and health system marketers come together to improve patients' lives. *Healthcare Scene* has established a strong presence in the health IT media landscape. John also advises health IT companies and can be found on Twitter/X as @techguy.



John Nosta [in](#)

John Nosta is recognized worldwide as the foremost innovation theorist driving the dialogue at the intersection of technology, artificial intelligence, and medicine. With a career defined by bold thinking and boundary-breaking ideas, he is a leading architect of the digital health movement and a trusted strategic voice for organizations seeking to understand and capitalize on transformative change.

As a global keynote speaker, author, and advisor, John distills emerging scientific and technological trends into insights that shape policy, influence industry leaders, and accelerate groundbreaking innovation. His work with Fortune 500 companies, academic institutions, and international organizations reflects a deep commitment to advancing human health through the intelligent application of technology.

Renowned for his clear vision and provocative perspective, John empowers audiences to think differently about progress, possibility, and the future of medicine.



Angela Radcliffe [in](#)

Angela Radcliffe is a best-selling author and influential voice in health, data, and AI literacy, dedicated to equipping young people with the skills they need to navigate an increasingly digital world. Her work bridges the gap between complex technological concepts and real-life understanding, most notably through *Quantum Kids: Guardians of AI*. This interactive book introduces children to foundational AI principles in an engaging and accessible way.

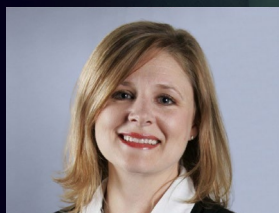
With over two decades of experience spanning medical research, health marketing, and digital innovation, Angela brings a deep understanding of how data, trust, and technology shape the future of healthcare. She writes and speaks widely about the intersection of AI, patient experience, and education, drawing on both her professional expertise and personal journey. A natural connector and storyteller, she collaborates with industry leaders, educators, and patient communities to advance digital literacy, empower families, and ensure that the next generation is prepared to thrive in a rapidly evolving world.



Chapter 1

THE PATIENT AT THE POINT OF QUERY IN AN AI ERA

THE PATIENT AT THE POINT OF QUERY: HOW AI IS REDEFINING HEALTHCARE TRUST



By Amber Doster

A Moment of Uncertainty

My patient portal alerted me to a new test result. The physician was unavailable. In that instant, anxiety spiked as I confronted an unexplained medical diagnosis. I did what millions now do: I turned to an AI: “What is it? How dangerous is it?” ChatGPT’s empathetic response began, “I’m sorry to hear that. Dealing with a new diagnosis can be overwhelming.” It offered clear, immediate answers, enough to let me sleep.

The New Patient Dynamic

That moment captures the challenge now facing health IT and data governance. Patients are no longer passive recipients of care; they are proactive, AI-enabled investigators. The point of care now begins the moment curiosity sparks online, often before clinical contact. This shift challenges traditional trust and communication models, forcing healthcare systems to adapt to patients’ new information velocity.

From Hierarchy to Exchange

Healthcare is undergoing rapid changes, thanks to the advancements of AI and large language models (LLMs). For decades, health IT has reinforced a static, hierarchical flow of knowledge,

where interpretation has remained centralized. LLMs have shattered that structure, transforming information into a real-time, interactive exchange. Clinicians, administrators, and patients alike are now co-authors in a continuously evolving knowledge system.

This shift redefines the mission of health IT leaders. Their role has evolved from managing data systems to stewarding digital literacy and responsible interpretation. The new mandate requires striking a balance between innovation and accountability, ensuring that AI-generated insights are applied ethically, validated by humans, and understood within their context.

Trust as the New Currency

In these high-stakes environments, trust becomes both the product and the prerequisite of progress. To achieve this trust, health organizations must establish clear frameworks for how AI supports clinical and administrative decisions, including:

- Establish transparent review protocols.
- Invest in staff education and maintain human oversight where consequences are most significant.

AI represents a generational leap in capability, a once-in-a-century general-purpose technology, but its success depends on governance, ethics, and equity. Technology that accelerates knowledge must also reinforce compassion, privacy, and fairness.

Charting the Responsible AI Frontier

Responsible AI is not optional; it is foundational to the future of healthcare. Embedding transparency, trust, and equity into every AI-enabled process is how the industry will harness innovation without losing humanity. The organizations that succeed will treat AI not as a shortcut but as a catalyst for deeper collaboration between patients, clinicians, and systems.

AI can advance healthcare only when it serves clarity over complexity and empathy over automation. The future of care depends not just on smarter machines but on wiser systems.

This collection of insights examines how innovations in AI and LLMs are transforming the delivery of care, patient experience, and the pursuit of health equity. Health leaders will use these new technologies not as a replacement for human judgment but as tools to strengthen it.

BECOMING THE MASTER OF YOUR AI LEARNING JOURNEY



By Tom Lawry

“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”
— Alvin Toffler, Futurist, Author of *Future Shock*

As an AI practitioner, advisor, author, and speaker, the two words I use the most in my work are **“Done Right.”**

Done Right is a prerequisite to achieving the holy grail of AI, which is to create value at scale in the service of being better at the things we care about, like improving the quality of health and medical services or reducing the cognitive burden faced by clinicians and caregivers today.

In reality, most people and organizations start their AI journey by *doing things wrong*. Having said this, it's essential to note that this is not a criticism. Instead, it's an acknowledgement that all of us — companies, clinicians, and consumers alike — are at the beginning of a long and hopefully fruitful learning journey.

Think about the process of mastering anything. Do you get things right the first time?

While AI had been smoldering for decades, the conflagration of transformation exploded into everyone's consciousness in the fall of 2022. Without warning, large language models and Generative AI seemingly emerged from nowhere. The velocity of change our new creations are driving has surprised everyone, including those working in the field of AI.

We often measure new technology in terms of the time it takes to reach 100 million users. Instagram did it in 2.5 years. TikTok did it in nine months. ChatGPT hit 100 million users in just two months after its introduction.

Today's AI is changing everything, from how we do work to how new business models are born. AI is what economists refer to as a general-purpose technology. They typically come along

once every 100 years. Think electricity. Think internal combustion engines. When they do, they change everything, from how we live and work to the very fabric of how societies operate. Even though we're still in the early days of our collective AI journey, too much attention is focused on pointing out where projects have stumbled or failed. Every misstep gets headlines. What's missing is the recognition that failure, when approached responsibly, is not the end of the story; it's part of the learning process. Each setback should be seen as a source of insight, a chance to refine our understanding and improve what comes next.

Nowhere is the principle of *done right* more urgent than in medicine. Healthcare is not a sandbox for experimentation. When AI is applied in clinical settings, mistakes can't be written off as growing pains — they can have real consequences for patient safety. That's why every health organization must operate within a responsible AI framework, one that ensures safeguards, oversight, and transparency are built into every use case. In this model, AI doesn't replace clinicians; it augments their expertise, giving them sharper tools to make better decisions for patients.

When AI is *done right*, even our failures become fuel for progress. Every lesson learned — every false start, every recalibration — moves us closer to what really matters: creating a system of care that is safer, smarter, and ultimately better for all.

The Learning Curve of Transformation

Every general-purpose technology starts with both promise and confusion. When electricity was first introduced, factories didn't immediately redesign their workflows. They replaced steam engines with electric motors and expected a transformation. When Alexander Graham Bell, a young inventor, invented the telephone, no one knew what to do with it.

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Early ideas included using the phone to alert customers that a message had been received at the telegraph office.

AI is at a similar point today. Most organizations are still experimenting with “plug and play” use cases — swapping out human effort with AI in existing processes. But the fundamental transformation will come when we reimagine healthcare itself: not just digitizing forms, but rethinking diagnosis, triage, patient engagement, and clinical decision-making from the ground up.

This reimagination requires learning at individual, organizational, and societal levels. And, like any journey worth taking, mistakes are an inevitable part of the process.

I am not talking about free-form experimentation and making mistakes with no consequences. Again, the development and use of a *responsible AI framework* is the first brick to be laid in creating a foundation on which to build an AI platform.

Individual Learning: The Human Side of AI

For clinicians, patients, and caregivers, the first step in the learning journey is simply exposure. Trying AI, experimenting with it in daily work, and discovering both its utility and its limitations.

- **Clinicians** are learning how AI can reduce documentation burden, surface insights from patient records, and act as a tireless assistant — but also where its hallucinations and biases require human oversight.
- **Patients** are discovering new AI-driven tools for self-care, symptom checking, and personalized recommendations, while also realizing that trust, privacy, and transparency are non-negotiable.

- **Caregivers** are beginning to rely on AI for reminders, monitoring, and coordination, but must learn how to balance these aids with the wisdom, empathy, and intuition machines cannot provide.

Individually, we are all students of AI now. Just as we once had to learn to use email, smartphones, and electronic health records, we must now know how to live and work alongside AI — not as a replacement, but as a partner.

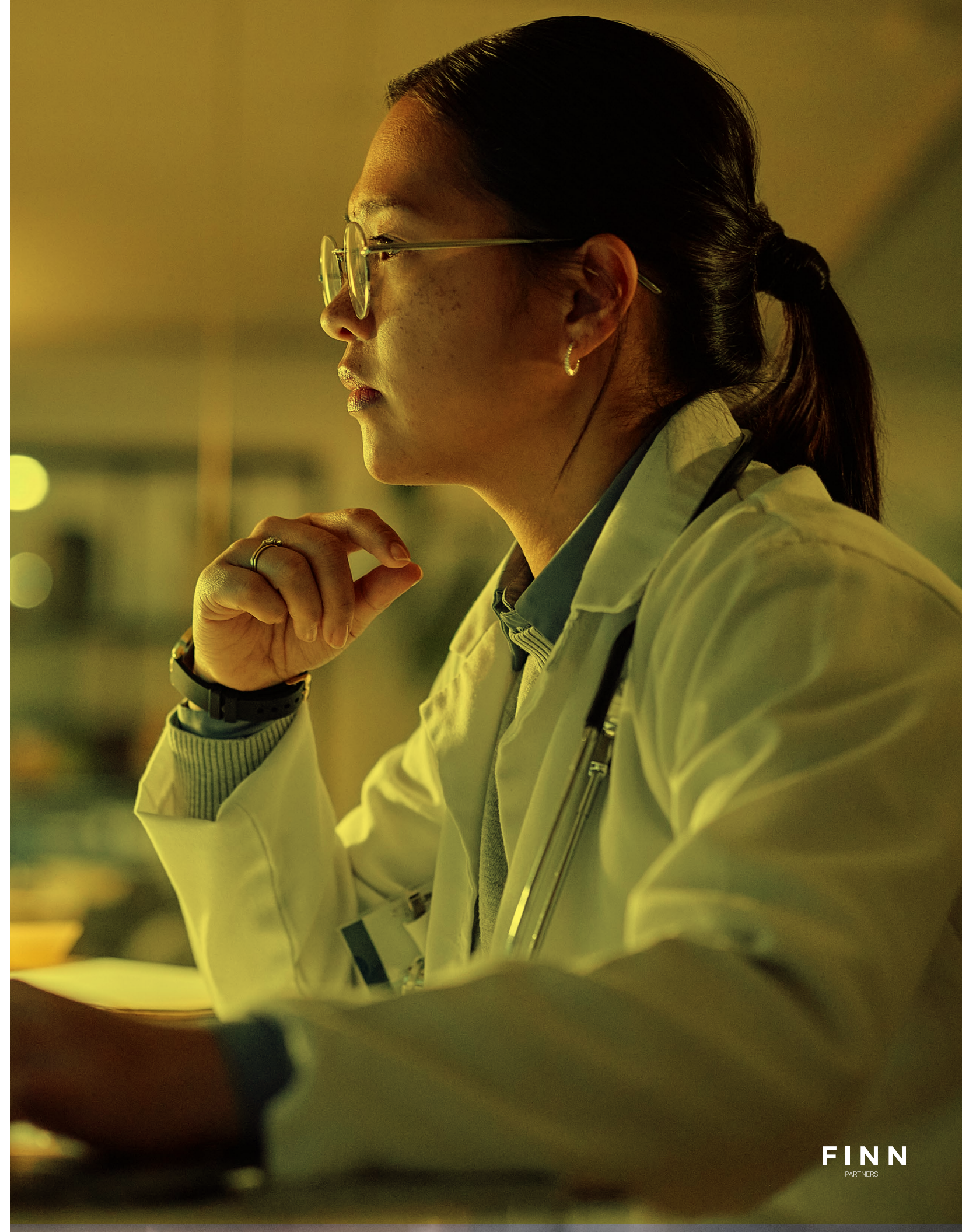
Doing Good, Done Right

Done right means more than technical accuracy. It means aligning AI with values, ethics, and the real-world needs of patients and providers.

- **Equity:** Ensuring AI does not widen disparities in access to healthcare.
- **Transparency:** Making clear when and how AI is involved in care decisions.
- **Trustworthiness:** Building confidence that AI recommendations are safe, fair, and evidence-based.
- **Sustainability:** Designing AI systems that reduce burden rather than create new ones.

When these principles are applied, AI can amplify what healthcare does best: caring for people. Done right, AI won't replace clinicians; it will restore humanity to medicine by giving clinicians back the time and focus to engage with patients.

Our collective learning journey will not be a linear process. There will be false starts, unintended consequences, and ethical dilemmas. But there will also be breakthroughs — moments when the right combination of human expertise and machine capability leads to better care, faster diagnoses, and healthier communities.





By John Nosta

FROM TEAR SHEET TO THOUGHT PARTNER: THE RISE OF LEARNER-CENTRIC HEALTHCARE

Walk out of any pharmacy, and you'll likely receive a single piece of paper. It's the infamous information tear sheet, a block of dense, redundant, and oddly impersonal drug information. Designed for universal comprehension, it's written at a fifth-grade level. Which means, ironically, it's written for no one. Most patients fold it once, stuff it into a bag, and never read it again. It doesn't really exist to educate, but rather to fulfill a regulatory obligation.

Clinicians, too, often distribute printed materials intended to inform and reassure. But these documents suffer the same fate. Static and templated, they are relics of a one-way communication model that treats learning as compliance.

And yet, that tear sheet is a perfect symbol of what patient education is today.

It's important information that remains largely detached from the learner. And interestingly, this is similar to many aspects of medical education.

But I believe that something is changing. A new form of engagement is emerging, and it does not merely transmit information but co-creates understanding. At the center of this transformation is the rise of large language models (LLMs) and a broader cultural shift toward what I call [learner-centricity](#). Not just in medicine, but across the entire arc of health, from patient education to continuing professional development to medical school curricula.

We're not becoming LLMs.

We're becoming LLLs: [lifelong learners](#) who are informed and engaged.

Patient-Centric to Learner-Centric

In healthcare and life sciences, patient-centricity has long been a guiding mantra. It's written into corporate mission statements and even clinical trial protocols. But what if the fundamental shift isn't just about centering on the patient's needs, but empowering the patient's epistemology? That is, not just what they need to know, but how they come to understand it.

Learner-centricity reframes the patient not as a passive recipient of information, but as an active participant in the construction of understanding. And it demands more than better content — it requires a fundamental shift in how we think about knowledge itself.

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Static Maps to Dynamic Webs

Medicine was built on textbooks. From *Harrison's Principles of Internal Medicine* to *Braunwald's Cardiovascular Medicine*, knowledge was centralized, authoritative, and, in many ways, inert. Updates came in new editions, but those were years apart. The learner's job was to memorize the map.

But today, that map has been rendered obsolete. LLMs don't serve static pages; they generate [dynamic webs](#) of context, explanation, and personalization in real time. A patient with type 2 diabetes can ask, "What should I eat for lunch today?" and receive a tailored response that considers cultural food preferences, glycemic index, cost, and even tone of voice. And while it's not perfect, the trajectory of this innovation suggests that it could become a viable opportunity very soon.

And here's the key: this isn't just an upgrade in user experience, it's a shift from broadcast to dialogue, from instruction to iteration.

The Power of Iterative Intelligence

In a 2024 editorial in the *American Journal of Hematology*, I introduced the term [Iterative Intelligence](#). This is a form of cognition defined not by fixed facts, but by the ability to revise, adapt, and reorient in real-time. LLMs are the catalysts for this kind of intelligence. They allow learners — including patients, clinicians, caregivers, and students — to ask again, test an idea, and even refine their understanding.

This is especially powerful in healthcare, where confusion is common, literacy varies, and time is scarce. Imagine an AI tool where a patient doesn't just receive a tear sheet about drug X, but can have a conversation about how it works, how it feels, and a wide variety of peculiarities that might appeal to an isolated user.

Speaking with the Entire Healthcare Ecosystem

Learner-centricity doesn't end with patients.

Clinicians, too, are being pulled into this new educational paradigm. Continuing medical education (CME) platforms will integrate AI-driven case simulations. Medical schools will leverage AI tutors that don't just test knowledge, but challenge reasoning. And pharma? The shift is already underway. No longer can medical affairs or brand communications operate as linear pipelines of information. They must now account for how LLMs interpret, reframe, and disseminate that information in the wild. Branding is no longer about message control; it's about message shape. Pharmaceutical companies will need to consider not only what they say, but also how those messages will be parsed, reconstructed, and relayed by machines in dynamic patient and provider conversations. The logo won't shape the future of engagement, it will be shaped by the algorithm.

Caveats and Cautions

Of course, no discussion of LLMs in healthcare is complete without confronting the flaws. Yes, these systems hallucinate. Yes, they can propagate outdated or biased information.

But we must move beyond the dystopian myths of Hollywood and address these issues empirically. Studies increasingly show that when prompted with well-framed medical queries, LLMs can perform on par with or even exceed human answers in terms of [factual accuracy](#) and [empathy](#). The real issue isn't whether these tools are perfect — no clinician or textbook ever has been. The issue is how we design for iteration, embed transparency, and train users to engage critically with these systems.

Let's recognize that LLMs should never be trusted blindly. But neither should the dusty assumptions of the analog world.

The Age of Cognitive Co-Authorship

If Gutenberg unlocked words, and Google unlocked facts, then AI and LLMs are [unlocking thought itself](#). I believe we're entering a new era where information is no longer provided — it's constructed in real-time. This shift marks the evolution from knowledge as an object to knowledge as a collaborative process.

In this context, we're not just consuming information, we're co-authoring it. LLMs serve as a type of cognitive platform, helping patients, clinicians, researchers, and educators shape, challenge, and evolve ideas.

They generate perspectives, suggest alternatives, and reveal unexpected connections across vast and often underappreciated datasets.

It's important to recognize that this doesn't diminish the authority of the clinician or the credibility of the educator. It repositions them from fixed sources of truth to engage participants in a living [dialogue](#). In a learner-centric ecosystem, authority isn't lost; it becomes more relational, interactive, and adaptable to context.

The result is a richer, more participatory health experience. It's one where thought itself is the medium of progress, and where every stakeholder, from patient to policymaker, has a seat at the cognitive table.

Compliance to Curiosity

Yes, the tear sheet may stick around a bit longer, but its time as a cornerstone of patient education is ending. What's emerging instead is a conversational interface, a responsive guide, and for many, a genuine learning companion.

AI may not replace human judgment anytime soon. But it can help make that judgment more thoughtful by meeting people where they are and moving with them as they learn. That's not just a technical shift; it's a practical one. The future of healthcare isn't just about delivering more information. It's about helping everyone make better use of it.

THE NIGHT MY DAUGHTER ASKED CHATGPT FOR MENTAL HEALTH ADVICE WHY DATA LITERACY IS NOW A MATTER OF LIFE AND DEATH



By Angela Radcliffe

It was 11 p.m. when I found my 13-year-old daughter, Vivian, at the kitchen table, the blue light of her laptop catching the tears drying on her cheeks.

“Mom,” she whispered, “I asked ChatGPT why I feel so anxious all the time, and it told me things that actually... helped.”

My first instinct was panic. My second was curiosity. My third, the one that matters, was recognition. Our children are turning to artificial intelligence for mental health support before they turn to us. And that reality demands we rethink how we approach health information, data literacy, and the very foundation of care.

From Information Gap to Equity Crisis

I know how much the proper support at the right time can matter. I lost my 21-year-old brother to an undiagnosed heart condition. Later, I watched family members and friends lost to schizophrenia and substance use disorders in a system too broken to help them.

When I entered clinical research, I met patient advocates whose biggest barrier wasn't a lack of information; it was a lack of agency. They lacked the tools and rights to manage their own health. That realization changed my life.

Today, we're living through the greatest shift in health information since the invention of medical textbooks. Large language models like ChatGPT and Claude aren't just digitizing knowledge; they're democratizing it. Information is everywhere. Tools are powerful. But without literacy, the ability to question, interpret, and act, we risk repeating old mistakes, this time at machine speed.

A Stanford study showed that medical AI can diagnose certain conditions with accuracy that rivals or surpasses that of human specialists.

Yet the deeper truth is sobering: these systems are only as good as the data on which they're trained. And that data reflects decades of inequity.

Feed biased data into AI, and you don't just preserve disparities, you amplify them. That's why data literacy is now a matter of social justice.

From Patients to Partners

For generations, patients were told to sit quietly. The doctor knows best. Take your pills. Don't ask questions.

That world is gone, but a new one is emerging: the era of the empowered health consumer.

At Bristol Myers Squibb, where I led digital innovation, I saw that patients who understood their data achieved far better outcomes. They caught errors. They adhered to treatment. They changed the dynamic with their care teams.

But empowerment without education can be dangerous. My daughter's late-night AI session proves the point: she received helpful coping strategies, but still required a framework to determine if they were safe for her.

The Three Pillars of Modern Health Literacy

From my work teaching families how to live alongside AI, three essentials emerge:

1. Data Ownership and Agency

Your health data is your digital DNA. Every time you click “accept” on a health app, you decide who can use, sell, or profit from your most intimate information. Teaching kids that their data has value isn't just about privacy; it's about power.

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2. AI Interpretation Skills

Understanding what AI says is only half the battle. We must also understand how it arrives at answers. That means spotting hallucinations, distinguishing correlation from causation, and knowing when to trust a human expert.

3. Systemic Health Navigation

Even the smartest AI can't help if you don't know how to navigate the system itself: insurance, patient rights, and advocacy. Literacy isn't just digital; it's systemic.

Stories That Show the Stakes

Maria, a single mother in Philadelphia, joined one of my AI literacy workshops. Her son has Type 1 diabetes, and she was overwhelmed trying to manage his care while working two jobs.

I taught her how to utilize AI to track her glucose patterns and communicate more effectively with her son's care team. Six months later, his A1C levels have improved dramatically. "For the first time," she told me, "I feel like I'm driving the car, not just along for the ride."

Or consider my husband, a firefighter and EMT. He began using AI to manage the station's back-office tasks. Still, it opened his eyes to how AI will be utilized in the future for emergency response, including predicting cardiac arrest patterns, optimizing fire routes, and even assisting with triage.

"Imagine in a multi-vehicle accident," he mused, "if AI flagged internal bleeding that wasn't obvious. Those extra minutes saved a life."

For him, literacy isn't abstract. It's survival.

Literacy as Liberation

Two advocates I met early in my career embody why literacy equals liberation.

Regina Holliday lost her husband to kidney cancer after weeks of poor care coordination. In response, she began painting patient stories on the backs of jackets worn to medical conferences, forcing patients' voices into rooms where decisions are made.

"Mighty" Casey Quinlan tattooed a QR code on her sternum linking to her medical records and advance directives. It took six months to find a tattoo artist willing to do it. But Casey persisted. Her tattoo wasn't art; it was a permanent protest against a system that treated her data as proprietary instead of personal.

Both women understood that when patients own their data and understand their health, they become unstoppable.

The Human Revolution

My daughter's ChatGPT session wasn't the real problem. The real problem was that she felt more comfortable asking AI than talking to her parents or a counselor.

But that moment became a gift. It sparked conversations about mental health, trust, and how to live wisely in a world where AI is increasingly part of our most intimate decisions.

Regina painted stories. Casey tattooed her protest. Maria used AI to manage her son's diabetes. My husband will use it to save lives. My daughter used it for comfort in the night. All point to the same truth: the future of healthcare is profoundly human.

As health and AI converge, we face a choice. We can let fear lead us to reject these tools, or we can embrace them while building the literacy to use them wisely.

This requires all of us: families starting conversations and setting agreements about AI use, educators making health and AI literacy a core part of the curriculum, healthcare leaders treating AI as a bridge to equity rather than an IT problem, and policymakers investing in literacy programs alongside regulation.

When we achieve proper health and AI literacy, we don't just improve care; we also enhance patient outcomes. We liberate potential. We honor advocates who refused silence. We empower families like Maria's. We prepare our children for a world where technology and humanity must work together.

Data literacy is the new health literacy. Health literacy in the age of AI isn't optional. It's survival.

Three Questions to Ask Before You Trust AI with Your Health

1. Who owns the data behind this advice?

Check whether the app or platform collects, stores, or sells your health information. Your data is your digital DNA; treat it with the same value.

2. How did the AI get here?

Ask yourself: Is the AI pulling from reputable medical sources or general internet content? Remember, even advanced systems can hallucinate and present confident but wrong answers.

3. What's my next human step?

AI can guide you toward possibilities, but it should never replace consultation with a doctor, counselor, or trusted professional. If the advice is essential, always validate it with a qualified human expert.



Chapter 2

HUMAN FIRST, SYSTEM SMART: THE NEW RULES OF HEALTH INNOVATION

HUMAN- FIRST, SYSTEM- SMART: DESIGNING INNOVATION THAT SERVES PEOPLE



By Gil Bashe

Technology is reshaping more than how we use machines. It is redefining how we understand care and what it means to place patient wellbeing and outcomes at the center of the health system.

Within the health ecosystem, this transformation is more than technical or economic. It is profoundly personal. Because care has never been about systems alone, it is about people navigating uncertainty, vulnerability, resilience and hope. Information is essential to guide us forward.

Artificial intelligence now sits at the center of this moment. Not because it is new or powerful, but because it compels us to confront a more important question. Who should innovation serve? Guided by purpose, technology will not distance us from care. It will help restore what matters most within it.

In *Healing the Sick Care System: Why People Matter*, I wrote that systems do not heal people. People heal people, supported by tools that respect the realities of human life. AI, “big” data and digital innovation are powerful tools. Their value lies not in replacing human judgment, but in honing it. When used wisely, they reduce friction, reveal insight, and return time and attention to where healing actually occurs, between individuals and those who care for them.

This is not a moment for technological spectacle. It is a moment for intentional design that respects science and policy. Real progress begins not in theory, but in lived experience, in the places where care happens every day. Innovation succeeds when it solves day-to-day problems for those championing people’s health and wellbeing, while acknowledging the complexity of human life.

Consider an older adult with heart failure after hospital discharge. Remote monitoring matters. It can detect early warning signs and prevent readmission. However, information must meet lived reality. Sometimes, the breakthrough is not the technology alone, but a simple one-page care plan in plain language, listing medications, daily weight, fluid limits and when to call for help. The device provides data. The care plan includes meaning; technology-informed and humanity-guided. That is human-centered innovation in practice.

When innovation begins with technology rather than people, we risk creating elegant systems that falter in the real world. Data becomes overwhelming instead of meaningful. Tools become complex rather than helpful. Patients, families, and health professionals are then left to navigate fragmented systems that feel impersonal, and too often add burden instead of relief.

The essays that follow explore this inflection point from complementary perspectives. Goel Jasper, a global leader in digital health innovation, examines how innovators are reshaping health systems by redesigning care around intelligence, accessibility and human experience rather than layering digital tools onto outdated structures. His work illustrates how transformation occurs when technology is grounded in the realities of people’s lives and in the practical needs of care delivery.

John Lynn, a community builder within the health information ecosystem, reflects on the evolution of health data, tracing its journey from scarcity to overwhelming, anxiety-producing abundance. He reminds us that the challenge today is not simply collecting information, but the ability to translate it into insight that can be acted upon. As clinicians and patients confront growing complexity, intelligent systems must filter, contextualize, and surface what matters while preserving trust, transparency, and ethical responsibility.

Rob Havasy, a policy leader in the global society HIMSS, turns our attention to governance, demonstrating that responsible AI does not require reinvention as much as alignment. Many of the necessary safeguards, ethical principles and oversight structures largely exist. When thoughtfully coordinated and applied with a risk-based, equity-aware lens, they can enable innovation while strengthening safety, access, and confidence in the systems people rely on.

Together, these perspectives reveal a shared truth. The future of health innovation cannot be written by technology alone. It will be shaped by balanced judgment, shared responsibility and a commitment to dignity and equity. Progress will come not from automation alone, but from the integration of human insight and intelligent systems working together in the service of people.

This chapter invites us to listen before we build, to learn from the lived experiences of patients, caregivers, clinicians, and innovators, and to ensure that technology advances serve people rather than the other way around. Human-first innovation begins with listening. In health care, listening is where healing begins.

HOW INNOVATORS ARE REWRITING THE HEALTH INFORMATION FUTURE



By Goel Jasper

Innovation Pushes Health Toward Patient-Centric Care

If the health system were a startup, it would have run out of runway long ago.

Legacy systems, administrative friction, and patient experiences that still begin with clipboards reflect a system overdue for transformation. Fortunately, a new generation of innovators, across Israel and the United States, is stepping in with the speed, imagination, and discipline needed to rebuild the health information infrastructure.

What distinguishes these startups is not the novelty of their technology but their ability to reframe how health systems work. Instead of layering digital tools onto outdated processes, they are redesigning care around intelligence, accessibility, and speed. They are moving healthcare toward a model that prevents illness before it advances, personalizes treatment for each individual, and predicts what patients need rather than reacting to symptoms as they appear.

Startups have long served as the R&D engines of broader industry advances. They take on the risks that larger companies would naturally avoid, move faster than regulations can evolve, and test approaches that challenge long-held assumptions. While traditional health systems move slowly and are powerful yet complex to redirect, startups move with precision, experimenting with new care models, unlocking data, and revealing opportunities that larger institutions may shelve.

Examples from both sides of the Atlantic show this shift in action. Boston-based [PhaseV](#) utilizes machine learning to assist biopharmaceutical companies in designing adaptive clinical trials that reduce costs and duration while enhancing the likelihood of success. Patients will never see this innovation directly, yet it has an enormous downstream impact: more efficient studies mean faster access to lifesaving therapies.

Based in the world's start-up capital, [Healthy.io](#) demonstrates how diagnostics can be reimaged for modern life. Its smartphone-enabled urinalysis transforms a routine lab test into something consumers can perform from home, expanding access for those with limited mobility, tight schedules, or geographic barriers. The company exemplifies Israel's strength in converting complex medical science into intuitive, widely usable tools that transform public health.

At the core of the health information revolution is [MDClone](#), another Israeli innovator. Its synthetic data platform enables hospitals and researchers to generate de-identified datasets that retain statistical integrity while protecting patient privacy. Essential health information often sits locked within institutional silos, but MDClone offers a responsible path forward, one that accelerates discovery without compromising trust.

These examples reinforce a pattern: Israel and the U.S. innovate differently, but each complements the other's strengths. Israel's integrated health system and high-quality anonymized datasets create an ideal environment for experimentation. The U.S. provides scale, capital and commercial pathways to bring proven ideas to global markets. Innovation, in this context, is not local; it is the product of shared strengths and complementary perspectives.

The philosophical shift underway is as significant as the technological one. Health is moving from reactive treatment to proactive management. Algorithms detect disease earlier than the eye can see. Sensors track chronic conditions in real time. Clinical and genetic insights allow therapies to be tailored to individuals rather than populations. These advances suggest a future where data and humanity coexist and where the correct information, delivered at the right time, prevents suffering before it begins. Despite their modest size, startups exert influence far beyond their market share. They validate ideas, force incumbents to evolve, and reset expectations for what constitutes good care. Digitized records, AI-assisted triage, and telehealth expansions often trace their lineage back to a small team that proved a better model was possible.

This is the quiet power of innovators: they move industries by showing – and telling – what the future can be. While challenges remain, from regulatory hurdles to the high bar of trust in health, these young companies, through their ability to confront the status quo, demonstrate that meaningful progress does not require legions of people or vast infrastructure. It requires a clear business model, informed risk-taking, and a willingness to rebuild assumptions from the ground up.

The future of health will be shaped by hospitals, health systems, and policy institutions working collaboratively, as well as the constellation of startups — Israeli, American, and global — constructing the information backbone for what comes next. Their mission is simple but profound: to make staying healthy as intuitive as unlocking a smartphone and as seamless as streaming your favorite show.

THE EVOLUTION OF HEALTH DATA FROM NEVER CAPTURED TO VITALLY IMPORTANT



By John Lynn

Lately, I've been thinking about how healthcare's relationship with data has evolved, not just what we capture, but how we use it. Both have changed dramatically over the years, and the balance between using data to improve patient care versus managing the business of healthcare has always been a delicate one.

When I think back to the early days of healthcare data collection, my mind goes to "Little House on the Prairie" and Doc Baker making his rounds. The entirety of health data he collected lived in his head and for a small community like Walnut Grove, that worked just fine. He knew every patient personally and could treat them in context, all from memory. Medical knowledge at the time was limited, so his brain served perfectly well as the local health record.

Fast-forward to modern healthcare in big cities, where a physician may only have the information a patient provides on intake forms. Add to that the exponential growth of medical knowledge compared to Doc Baker's day, and it's clear the data landscape has changed beyond recognition.

Of course, EHR software made access to a patient's health data even easier. With a couple of clicks, you could instantly pull up a full medical record or chart past lab results, a huge leap from the paper-chart days. Yet it's important to acknowledge that much of this digital access was driven more by billing needs than by clinical ones. If EHRs had truly been designed for patient care, they'd look and function very differently. The \$36 billion in federal EHR stimulus funds poured fuel on that fire, adding another layer of government-required data collection to the mix.

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As EHR adoption matured, the next evolution focused on **interoperability**, the ability to exchange data between systems, vendors, and care settings. This opened the door to real progress: emergency physicians could spot drug-seeking behavior, specialists could view test results from outside hospitals, and clinicians finally began to see a more complete picture of each patient. In my opinion, a truly seamless, longitudinal patient record is a pipe dream, but interoperability has undeniably improved the quality and availability of health data across care teams.

Now we're entering the next chapter in that evolution: **AI-driven data capture and intelligence**. Technologies like AI medical scribes and ambient clinical voice tools have exploded, automating documentation and lifting a huge burden off clinicians. These systems are not only recording encounters more efficiently but also capturing nearly everything that's said or done in the exam room. The result? An extraordinary and sometimes overwhelming influx of both relevant and irrelevant data.

As one doctor aptly put it, "The beauty of the EHR is that you have access to all this information. The downside is... you have all this information." I recently heard one interoperability provider note that they have a patient that has over 5000 documents in their clinical record.

This fundamentally describes where we are with health information today. Clinicians now have more data about their patients than ever before, often more than they can possibly process. Healthcare is awash in information, yet even with all this sharing, the picture is never truly complete.

The good news is that doctors have always practiced medicine with imperfect data. The challenge now is helping them find the right insights in a sea of incomplete ones. That's exactly why we're entering one of the most exciting times in healthcare. For the first time, we have enough data to make a meaningful difference in how care is delivered. The explosion of data from clinicians, patients, wearables, genomic testing, and more will only accelerate, creating an ever-expanding foundation for more personalized, precise care.

But as we collect and connect more data, new responsibilities emerge. Protecting patient privacy and ensuring individuals have control over how their data is used are just as important as building smarter systems. The true power of data isn't just in its volume, it's in using it transparently and ethically to empower patients, giving them greater insight into their own health and a stronger voice in their care.

Of course, this abundance brings its own problem: cognitive overload. The volume of clinical knowledge and patient data is already beyond what any human mind can fully absorb.

That's where **AI, large language models, and generative tools** come in. These technologies are not only revolutionizing how data is captured, through scribes, chatbots, and automation but also how it's interpreted. AI is helping ensure that data isn't just abundant, but trusted. More importantly, it's changing how clinicians interact with information itself.

Previous IT systems simply dumped all available data in front of users. AI, in contrast, filters and contextualizes, surfacing only what's relevant at the moment of care. As many have said, AI is turning data into actionable information.

While that may sound unsettling to some, it's simply the next natural step in healthcare's long evolution.

A few things are clear as we look to the future of health information. The volume of data from patients and from medical research will continue to grow, likely at an exponential rate. And as that happens, the need for AI to help us use this information for good will only become more critical.

Let's hope that innovation stays rooted in what truly matters: improving patient care, not just executives' bottom lines. If we stay focused there, the quality-of-care patients receive will be orders of magnitude better than what Doc Baker could offer on the prairie.

Yet there's a beautiful irony in that. Even as technology propels us forward, it might also help bring us back to something timeless, freeing doctors from administrative burden so they can connect with patients as people. If AI and data can restore that kind of personal, compassionate care, it will be a remarkable win for both clinician and patient.



By Rob Havasy

HARMONIZE THE EIGHT LAYERS: A PRACTICAL PLAYBOOK FOR REAL-WORLD HEALTH AI REGULATION



Fifteen years ago, I co-presented at an innovation conference in Brussels and was privileged to share the stage with Dr. George Crooks, then the head of the Scottish NHS and Ambulance Service. To the audience of eager innovators, he said something so profound and unexpected that it has shaped my perspective on health ever since. Attempting to do justice to what is now a fading memory, Dr. Crooks said to this: *“None of my colleagues nor I are waiting for your next big thing. If we could deploy the technology we already have, we’d save a million lives tomorrow.”*

As I contemplate AI in health and how we will govern its use to maximize its potential, these words ring in my ears every day. And they’ve led me to realize that health care isn’t lacking oversight capability, or even oversight specific to AI. However, calls for AI oversight might lead one to believe otherwise.[1] But AI oversight suffers from fragmentation and duplication, and it’s missing a few key pieces.

The fastest path to safe, equitable AI is to harmonize the eight layers of control we already have into a risk-based, equity-aware framework that accelerates low-risk uses. Organizations and their members, including the AMA[2] and HIMSS [3], are calling for a risk-based framework, and I believe we already have most of the components in place to create one. We can’t legislate away all potential AI harms, but we can operationalize our way forward with the controls we already have in place.

The problem to solve

AI is embedding itself at the heart of care, not creeping in from the edges. It’s now used in clinical decision support, documentation, triage, scheduling, claims, supply chain management, patient engagement, and more. Neither patients nor clinicians experience nor desire frameworks; they experience and demand safety, access, and trust. Yet, the governance reality today is a patchwork: more robust in pre-market device controls, but thin in post-deployment monitoring — and often silent on operational and administrative AI tools. These tools could expand access for underserved communities and make health care a smoother experience for most patients. While sweeping new laws will take years to enact and risk stunting or even freezing progress, practical alignment of existing layers of control can deliver guardrails now.

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The eight layers we already operate under

The health system already has multiple layers of oversight. The opportunity is to coordinate them.

- **Federal regulation (devices):** Strongest for high-risk clinical tools but traditionally emphasizes getting to market over monitoring performance once deployed.
- **State laws:** Define scope of practice and consumer protections; powerful levers for use-of-AI regulation in care delivery, mainly where constitutional and statutory limits bind federal authorities.
- **State licensing boards:** Set professional expectations and discipline; can clarify AI-supervision standards and documentation norms – without new statutes.
- **Scientific evidence:** Peer-reviewed, real-world studies, the backbone of clinical legitimacy, create evidence-based guidance for states and other bodies to build upon, and directly influence clinician behaviors.
- **Institutional rules:** AI governance committees, IT change management, credentialing, and quality improvement already exist; they need explicit AI functions, risk identification and classification, and incident response playbooks.
- **Specialty society guidelines:** Translate evidence into practice; can define when AI outputs are helpful in specific contexts and guide safe human-AI collaboration.
- **Voluntary industry frameworks:** Useful scaffolding, but to be truly effective, they need stronger mandates within quality and safety systems to avoid becoming shelfware.
- **Professional ethics:** “Do no harm” must expand to “monitor for harm,” with expectations for documentation, disclosure, and escalation when AI is involved.

The insight is that these layers aren’t missing; they’re just misaligned.

Where alignment is most urgent

- **Post-deployment monitoring:** Current regulations focus on approval and procurement, but problems often emerge after deployment. Diverse patient populations, changing demographics, algorithmic drift, and workflow issues can all cause harm — but they’re usually difficult to identify before launch. Every layer of oversight should treat continuous monitoring and incident reporting as essential.
- **Administrative and access-expanding AI:** Policy attention focuses heavily on high-risk clinical tools, but administrative systems — scheduling, intake, documentation, prior authorization, navigation — can meaningfully improve access and experience, especially in under-resourced settings, when appropriately governed. They need clear pathways to ‘presumed-safe’ use with defined guardrails.
- **Human oversight calibrated to context:** ‘Human in the loop’ is prudent, but a blanket mandate can unintentionally restrict care in rural or chronically understaffed settings; oversight should scale with risk and local staffing realities, not as a one-size-fits-all rule. Interoperability as an enabler of safety signals: When health systems share data, they also need to share information about the AI models being used — where they came from and how they’re performing.

Supporting Equity: governance should accelerate access where risk is low

Access to care reduces harm. The WHO acknowledges that delays and lack of access themselves cause damage. Access to care reduces harm. The WHO recognizes that delays and lack of access themselves cause damage. [4] Our frameworks should strike a balance between risk and access — streamlining low-risk tasks that reduce wait times and administrative burden, while focusing oversight where clinical stakes are highest. That’s governance that serves

both safety and equity. States and institutions are best positioned to identify their coverage gaps and govern AI use accordingly. Our frameworks should strike a balance between risk and access — streamlining low-risk tasks that reduce wait times and administrative burden, while focusing oversight where clinical stakes are highest. That’s governance that serves both safety and equity. States and institutions are best positioned to identify their coverage gaps and govern the use of AI accordingly.

Coordinating the Eight Layers: A Framework for Real-World AI Governance

Effective governance of AI in health care is less about adding new controls or isolated initiatives and more about ensuring the eight existing layers act in concert, combining statutory, institutional, scientific, and ethical safeguards into a living fabric that adapts to change and supports safety and equity.

The Coordination Imperatives

- **Clarify, Document, and Share Risk Levels:** How does each of the eight layers define and respond to different risks? Coordination means agreeing on categories and how evidence is shared between layers.
- **Distinguish and Enable Low-Risk Innovation:** Can federal, state, and institutional actors agree on “presumed-safe” uses where less oversight is warranted, freeing resources for high-risk applications? Coordination means aligning safeguards and enabling rapid innovation where possible.
- **Calibrate Oversight to Context:** How can licensing boards, institutions, and regulators scale oversight to staffing realities, especially in under-resourced environments? Coordination means using monitoring data to inform policy, rather than enforcing static mandates.

- **Elevate Continuous Monitoring and Incident Sharing:** How do institutions, societies, and regulatory agencies quickly share safety signals, incidents, and lessons learned after deployment? Coordination requires common reporting standards, consistent categories, and feedback loops across all layers.
- **Foster Workforce and Ethical Readiness:** How do specialty groups, institutions, and ethics boards ensure practitioners are ready for real-world AI use: sensitive to bias, documentation, and escalation needs and pathways? Coordination requires shared training standards across all sectors.

In Closing

The path forward for health AI isn’t more isolated controls or top-down mandates. It’s essential to maintain practical, sustained coordination across the eight governance layers, utilizing evidence, shared learning, and adaptive standards to ensure AI serves both safety and equity. Collaboration, not duplication, is what bridges the digital divide and accelerates meaningful, trustworthy innovation. This approach avoids the trap of waiting for perfect new laws or singular frameworks while real patients encounter new AI systems every day. It leverages the governance muscle health care already holds, modernizes it for adaptive AI, and explicitly centers equity by accelerating low-risk, access-expanding uses.

[1] Angus DC, Khera R, Lieu T, et al. AI, Health, and Health Care Today and Tomorrow: The JAMA Summit Report on Artificial Intelligence. JAMA. Published online October 13, 2025. doi:10.1001/jama.2025.18490

[2] [AMA recommends a risk-based approach in its new AI governance framework | Healthcare IT News](#)

[3] [HIMSS Calls for Risk-Based Regulatory Approach to AI in the U.S. | HIMSS](#)

[4] [Ethics and governance of artificial intelligence for health](#)

CONCLUSION



THE FUTURE OF HEALTH INFORMATION AND HUMANIZATION OF CARE



By Gil Bashe

Cognitive Intelligence Will Change What Patients and Physicians Achieve Together

Health systems are drowning in data. However, what matters isn't the volume we collect, but how we can utilize it to enhance efficiency and the patient experience. For many years, digital health systems functioned as passive data containers that record what occurred during the clinical encounter without supporting what should follow."

Now a different future is emerging. Informatics leaders, **HIMSS** strategists, and innovators across global health envision a system where information becomes fluid, anticipatory, and aligned with the needs of scientists, health professionals, and patients rather than the demands of billing and compliance.

At the center of this shift is the next generation of electronic health records (EHRs) and real-world patient experience. These systems will no longer resemble the fragmented screens people navigate today. They will function as intelligent partners in interpreting the patient's story. Instead of asking clinicians to sort through disconnected fields, in the near future, records will bring together what is meaningful, align clinical history with pressing patient concerns, and present information in ways that support the care journey.

From mega-companies like Amazon, Epic, Google, Microsoft, and Oracle, to waves of innovators that will redefine how information is sourced and deployed, the coming wave will demand systems that are intuitive and better able to alleviate the administrative burden that takes clinicians away from their patients. As interoperability shifts from aspiration to operation, records will follow the patients throughout their journey, rather than remaining confined within the walls of a single institution.

The Exam Room Becomes a Source of Insight Rather Than a Lost Conversation

A parallel transformation is occurring in the exam room. Ambient listening technology is capturing the spoken interaction between clinicians, patients, and caregivers. This exchange represents one of the richest sources of clinical insight, yet historically, most of it was lost the moment the appointment ended and the patient walked out the door. Emerging systems now preserve this narrative with accuracy, transforming it into structured information that strengthens diagnosis, care planning, and follow-through. This technology does more than record. It identifies patterns in patient descriptions, highlights inconsistencies that may signal concern, and reinforces care plans that benefit all involved. The clinical encounter becomes more present and more human. Technology steps back while the relationship moves to center stage.

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Diagnosis Evolves Into a Connected Process

For generations, diagnosis was limited by time, memory and partial access to past data. The future holds clinical insights that are continually updated as new information becomes available. Laboratory values, changes in imaging, wearable data, and shifts in environmental or behavioral factors can influence the trajectory of a patient's condition. When these elements are combined within intelligent systems, subtle changes — once overlooked — can guide renewed clinical attention.

Information will serve as a lighthouse to enhance safety and reduce diagnostic errors, especially for conditions that evolve gradually or present intermittently. Clinicians remain the ultimate decision-makers, but their decisions will be supported by a continually updated view of the patient. The physician of the future will require knowledge in medicine and health informatics.

Precision Therapies Rise from Integrated Patient Information

This evolution extends well beyond clinical practice into the architecture of biomedical research. Clinical trial recruitment has long depended on geography, physician referral, and patient awareness. Information-driven systems, based on real-world patient evidence and experience, are overcoming those limitations.

Modern medical records can identify potential participants based on clinical patterns, biological markers, and real-world conditions. Recruitment timelines shorten, and representation improves as more diverse populations become visible to researchers.

Real-world data are increasingly used to inform trial designs before they are finalized. Safety concerns can be detected earlier. Endpoints can be refined through analysis of patient experiences across broad communities. Research becomes more efficient, more inclusive, and more closely aligned with the realities of care.

This enriched information environment advances the promise of precision therapy. Scientific progress in genomics and proteomics has been substantial, yet these advances have been limited by the lack of integration across the full spectrum of patient information.

When biological data is connected directly to medical records, patient-generated information, clinical observations, environmental exposures, and social context, treatment can be selected based on the specific characteristics that define each individual. In this future, therapy decisions are shaped by the totality of a person's experience, rather than being limited to set inclusion criteria. Care becomes personalized and more reflective of people's actual needs.

Even with the accelerating sophistication of emerging technologies, the most critical shift may be the renewed focus on the human dimension of care. Intelligent systems will reduce the burden of documenting visits, retrieving records, reconciling medications, and managing administrative mandates.

Information Will Shift Patient Expectations

If the system recognizes that patients who bond with their physicians are more adherent and engaged, clinicians will have more time to listen, explain, and guide them. Patients, supported by clear and understandable information, will become more active participants in their own care. Families will navigate the health system with greater confidence because the information they need will be accurate and easy to grasp. Communities that have historically faced barriers due to data gaps or system fragmentation will find more equitable access to prevention and treatment.

The future of health information is not defined solely by technology, but by the experience and expertise it amplifies. Its potential is care that is less fragmented and more personal. It unlocks an environment where clinicians and patients are supported by intelligent systems that work quietly in the background. It envisions a research ecosystem capable of learning from every patient, not just those participating in formal studies. It calls for governance frameworks that evolve in tandem with innovation, safeguarding safety, equity, and trust.

This transformation is already visible in the work of leading health systems, technology developers, medical device companies, and life science innovators. Leaders who recognize where information is heading and align their business models, design, and communications with this future will be at the forefront in the next chapter of health innovation. Those who remain anchored to past processes will find themselves building solutions for a world that no longer exists.

The coming decade will bring a profound rebalancing. Data will serve people. Intelligence will enhance judgment. Technology will strengthen relationships at the center of healing. Health information, used with intention and responsibility, can deliver better outcomes, along with a renewed sense of clarity, connection, and confidence throughout the care experience.

Communication is Critical to HIT Innovation

The ideas in this e-book serve as a catalyst for innovators, both large and nimble enterprises, who are shaping a very different future of care. When information becomes clear, connected and actionable, the leaders behind these advancements gain the authority to speak with greater clarity. Their stories resonate because the technology is remarkable and proven, and the intention behind it is unmistakable.

These pages elevate a new generation of thinkers and pioneers who are proving that progress in health requires both vision and responsible communication, by giving voice to approaches that strengthen trust and bring people back to the center of care — people — we hope to move the field forward in the service of humanity.

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