Health 2035

A Bold Path Through the Uncharted Future of Health

HSBC Innovation Banking

LINUS

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A Letter From the Authors

Health 2035 is about preparing ourselves and each other for a range of possible futures of health by asking questions that others may not be asking.

We are building the foundation for innovation and forward-looking investments our industry needs to achieve real progress and meet tangible health goals of the future. Driven by our expertise in illuminating human behaviors and our insights into innovation trends across the life science and healthcare sectors, we saw an opportunity to create novel destinations for the future of health.

We're challenging embedded assumptions. We're developing audacious strategies. And we're back-casting from future scenarios to build for real change.

Imagine with us, a future of healthcare we are already prepared to lead — one where our industry delivers on both promises of "health" and "care."

Sincerely,

HSBC Innovation Banking

LINUS

Shaping Our Future

Two popular threads dominate the discourse in healthcare:

> *Healthcare is too complex*

> *Technology will fix healthcare*

If we, as leaders in the healthcare ecosystem, want to make real progress, we need to acknowledge that the reality of today's healthcare does not align with the intentions of those who will make the biggest impact.

Where most research that explores the future of health tends to be techno-centric, we considered this research through a few alternate lenses:

> *Tomorrow's healthcare providers*

> *Future scenarios that will change where and how healthcare is practiced*

By 2035, today's medical students, residents, attending physicians, and fellows will implement the best practices that will shape tomorrow's care delivery. To understand the future of health, we need to first understand the perspectives, impact, and dreams of these young care providers.

We must disrupt today's habit of reaching immediate answers. This initiative isn't about solely reviewing historical trends and casting a guess at how next year will unfold. It's not about finding answers to the problems of today and tomorrow. It's about shaping our future.

Shaping Our Future

To disrupt healthcare and healthcare delivery in 2035, we must:

Reinvent Trust

With the growing erosion of trust between patients and physicians and between people and institutions, we can no longer rely on the goodwill culture of the past. There is an opportunity to reexamine efforts that ensure physicians and patients achieve the best outcomes.

Reinvent Togetherness

Physical connection and in-person interactions are paramount to the future of health. By 2035, new definitions of community will arise, as togetherness ushers healthcare networks into the future. We require a feeling of purpose beyond work, as our population lives longer, healthier lives.

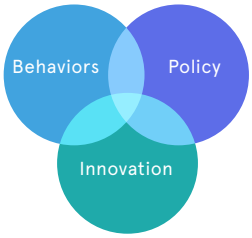
Reinvent Interfaces

Given the current fragmentation of the critical facets of healthcare, the future of health is in peril. The interfaces between each facet of healthcare offers rich areas of opportunity. By reconsidering individual incentives, we can leverage new behaviors, break old silos, and create new care models and standards of health.

Our Methodology

Over the course of a year, we completed a multi-stage process that offered insights, inspiration, and ideas from diverse perspectives.

Fundamental Influencers of Change



Behaviors: actions from individuals, organizations, or systems

Policy: regulations, protocols, or guidelines from governance bodies

Innovation: implementation of ideas that introduce new goods or services

Visionary Discussions

Discussions with visionaries who are directly or tangentially involved in the health ecosystem to collect a variety of viewpoints and opinions from leaders

Qualitative Study of Young Physicians

Eight, 60-minute, in-depth interviews with physicians between the ages of 21 and 35 from across the U.S. to understand their vision of the state of care in 2035

Quantitative Survey of Young Physicians

1,019 young physicians between the ages of 21 and 35 from across the U.S. to measure how tomorrow's healthcare leaders feel about their future

Development of Innovation Territories

Scenario planning and bold predictions as a backdrop to innovate for the future

Health 2035 Innovation Summit

Immersive, in-person summit with healthcare visionaries to collaboratively innovate for health in 2035

Foresights

Back-cast what needs to happen with today's investments and innovation to realize that future

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Preparing for 2035 Innovation

How our research and methodology informed our predictions

YOUNG PHYSICIAN PERSPECTIVE

Understand their vision on the state of care in 2035

FUTURE SCENARIOS

Explore independent scenarios to anticipate possible futures

Foresights to drive change by 2035

Make predictions that will inspire meaningful innovation for the future of health

The State of Young Physicians

About this Research

This study captures the values and goals of young physicians and medical students, exploring the factors they believe will influence the delivery of healthcare, and in turn, will inform where the future of care and care delivery will be by 2035.

In July of 2024, we hosted conversations with eight physicians aged 21 to 35, followed by an engagement of 1,019 physicians of the same age range in a nationwide, online survey.

KEY INSIGHT

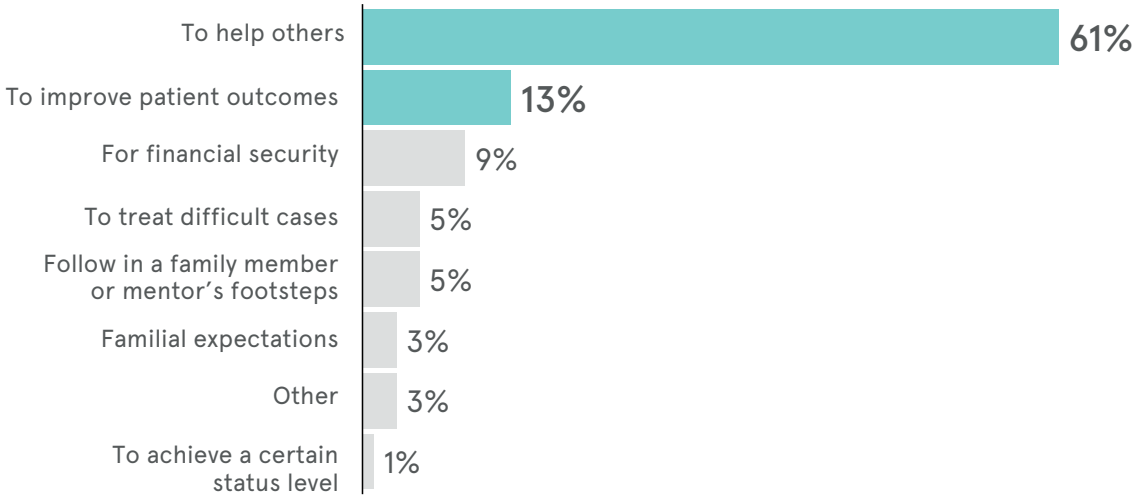
DRIVEN BY PERSONAL CONNECTIONS

Young physicians are deeply motivated by the personal connections they make with their patients.

At the core of young physicians' values is the desire to help and heal. Nearly three-quarters of young physicians indicate that their initial motivation to pursue a career in medicine was to help others and improve patient outcomes. That is in sharp contrast to what they are **not** motivated by: money and prestige. This sense of altruism reflects their intentions when they began their journey in medicine.

> *"Most of the people become doctors for the human part of it ... Most of us who decide to do the doctor part, we like the science stuff a little bit, but we like the people stuff a lot more."*
>
> — Dr. Shirlene Obuobi, Cardiology Fellow

INITIAL MOTIVATION TO PURSUE A CAREER IN MEDICINE



Administrative burden is a significant roadblock in physicians' ability to deliver care, with 45% of respondents considering it to be a leading barrier to delivering care in 2035. Such an administrative load gets in the way of physicians' desire to develop connections that both drive personal motivations and **lead to better health outcomes**.

MOST IMPACTFUL BARRIERS IN DELIVERING HEALTHCARE

45% Administrative Burden

39% Physician Reimbursement

"If you get the processes that are necessary in a visit, it gives you more time to interact with your patient and get to know them. That's what makes being a doctor worth it. The less time I can spend on the computer and the more time I can spend face-to-face with the patients makes me the happiest."

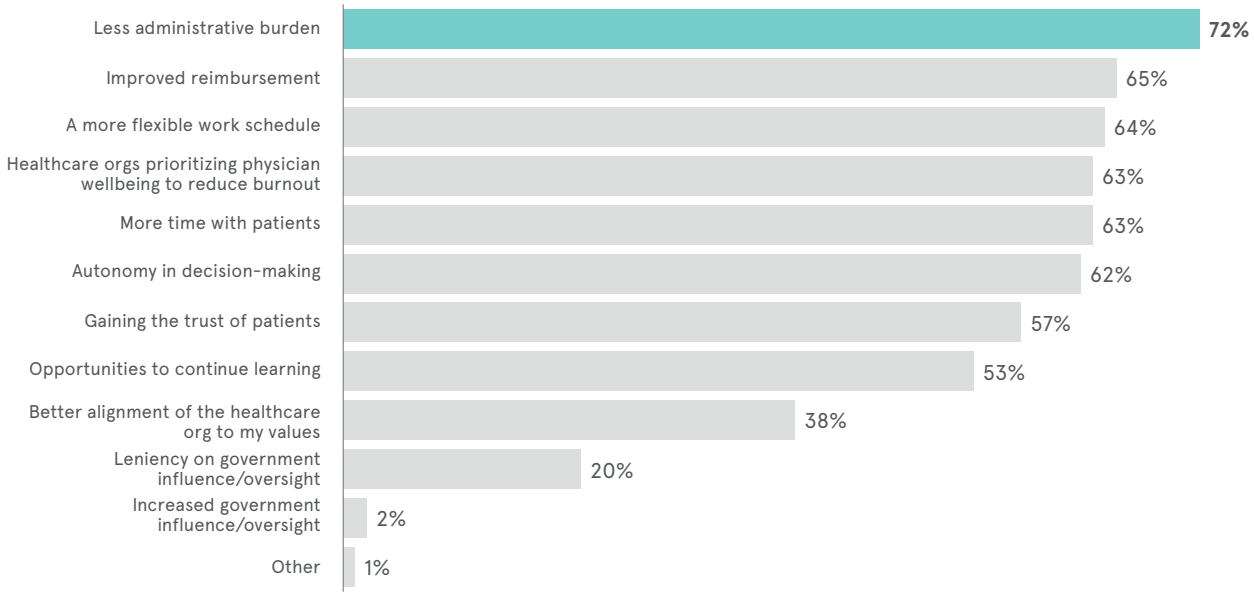
— Medical Student

"It is difficult getting through all the paperwork and administrative work. I spend too much time putting information into the computer and not being able to have enough facetime with my patients."

- Resident Physician
Pediatrics

Remove the personal connection from the doctor, and you remove the heart out of healthcare.

WHAT IS REQUIRED TO PRACTICE HOW YOU WANT



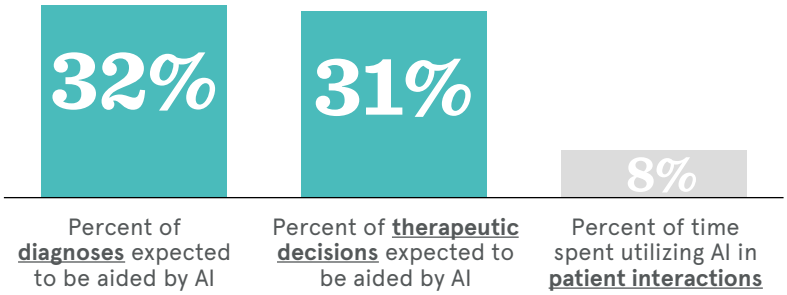
Nowhere is this more apparent than young physicians' expectations in how artificial intelligence will change the way they practice. Around two-thirds of our respondents predict that integration of AI into the medical field will change how they engage patients.

Specifically, young physicians see the potential of AI being effective in clinical decision-making, rather than in patient relationships. Young physicians predict by 2035, 32% of **diagnoses** and 31% of **therapeutic decisions** will likely be aided by AI, compared with a staggeringly low 8% of time spent using AI to interact with patients.

"AI could have the power to change the documentation process, which is an extreme burden on physicians in all fields of medicine."

- Fellow
Surgery

PERCENTAGE OF TIME AIDED BY AI IN 2035



Personal connections are the key motivator for tomorrow's physicians. If AI interferes or disrupts this primary source of patient interaction, then technology and administrative processes will further contribute to physician burnout, instead of fostering relationships.

KEY INSIGHT

THE FUTURE OF CARE IS TREATING UPSTREAM

Young physicians feel strongly about the impact of early interventions. They consider them to be key drivers that will make the most positive impact on the delivery of care in 2035. These include:

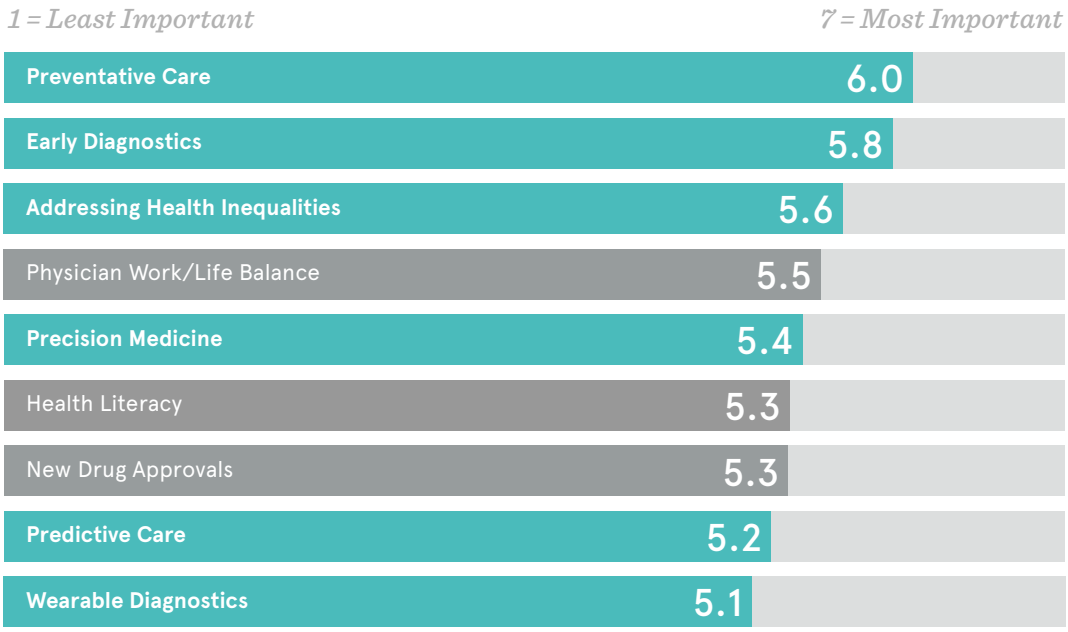
Preventative care	*Early diagnosis*	*Addressing health inequalities*

The systemic embracing of early interventions creates significant potential for the realignment of incentives for all actors within the healthcare ecosystem, creating healthier populations and new forms of connection between physicians and their patients, changing the role of physicians in their communities.

The next generation of physicians are attuned to the advantages of preventative care and will continually encourage their patient interactions to move upstream.

> *"Imagine from birth having your unique digital biometrics record that would inform a lifetime of early interventions, turning sick care to longitudinal preventative care."*
>
> – Tia Newcomer
> Chief Executive Officer, CaringBridge

VARIABLES CONTRIBUTING TO THE DELIVERY OF HEALTHCARE BY 2035

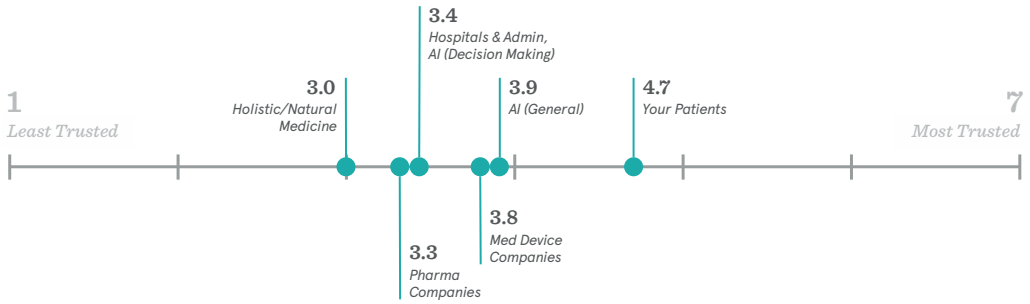


KEY INSIGHT

THE VAST, TWO-WAY TRUST GAP

Trust is significantly eroding between **both** patients and physicians. Well over half (59%) of young physicians predict that in 2035, patients will be less trusting of their doctors. On the other hand, physicians also express a lack of trust in patients.

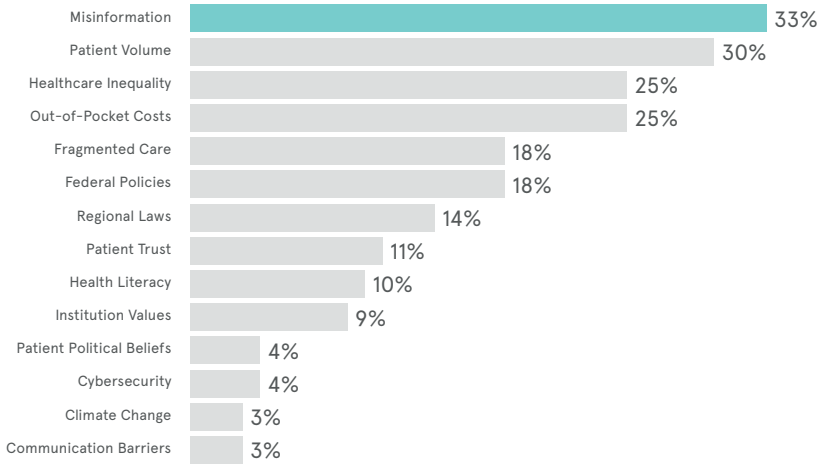
PHYSICIANS' LEVEL OF TRUST



The success of personal connections relies heavily on trust, which is increasingly challenged by misinformation. By 2035, young physicians project misinformation to be their top challenge in the delivery of care.

Of those who predict patients will trust them less, 76% of young physicians believe that this lack of confidence will be driven by misinformation.

MOST IMPACTFUL BARRIERS IN DELIVERING HEALTHCARE



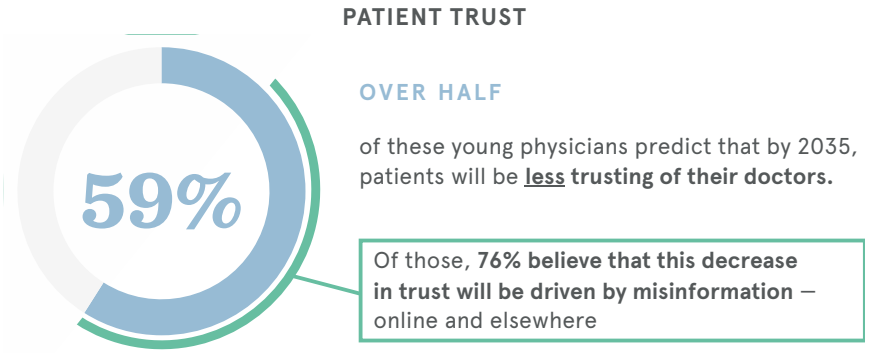
"I want to have a dialogue with my patients. I want to be friendly and let them know that I truly care. This builds more trust in the physicians and creates an open environment for patients to ask questions and have a deeper understanding of their health."

- Medical Student

"Social media is making pediatrics a whole lot harder. People are hesitant to believe doctors as they can find false information on the web and are too quick to believe it. People are wary about anything medicinal."

- Resident Physician
Pediatrics

Notably, the segment of medical students and physicians between the ages of 21 and 25 are most concerned with gaining the trust of their patients compared to those young physicians currently practicing. Nearly 70% of medical students selected "gaining the trust of patients" as a requirement for how they want to practice medicine.

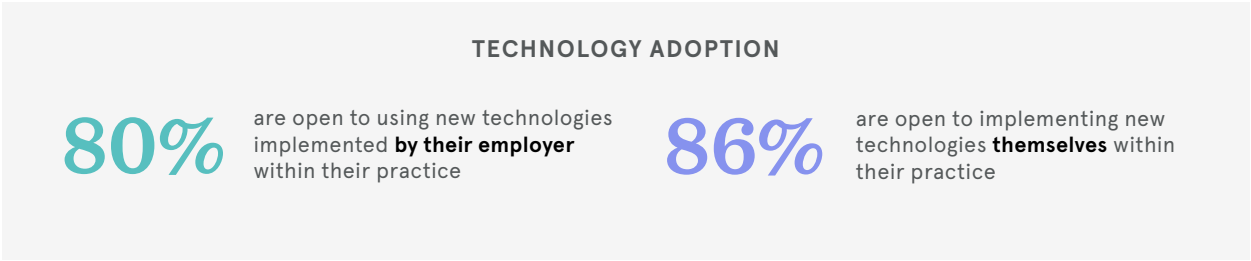


This suggests a potential focal point — establishing trust — for how the next generation of physicians will practice.

KEY INSIGHT

THE BURDEN OF SLOW TECHNOLOGY INNOVATION AND ADOPTION

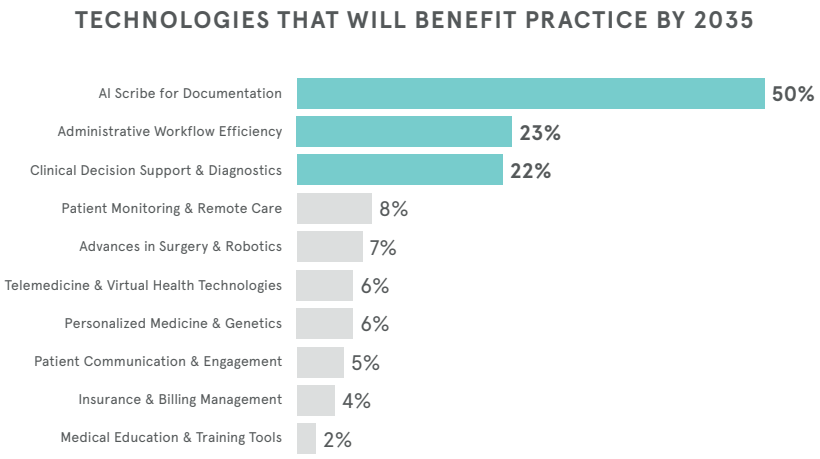
Nearly 90% of young physicians are open to implementing new technologies themselves within their practice, and another 80% are open to using new technologies provided by their employer.

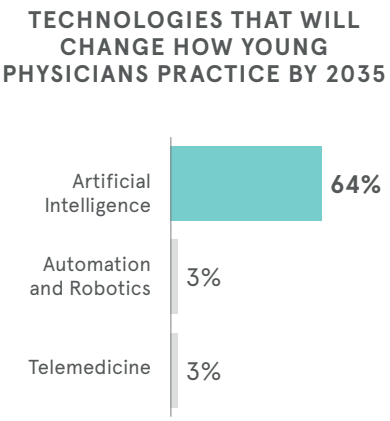


Young physicians see more potential in AI for clinical decision-making, as opposed to helping with patient relationships. By 2035, young physicians expect AI to change the way they practice. Around two-thirds of young physicians predict that the integration of artificial intelligence in the medical field will change how they treat their patients. This is over 60 percentage points higher than the second-most mentioned technology, telemedicine, indicating that this is a significant concern for young physicians.

This may signal their prediction and desires to relegate AI's role in their practice as one that is objective and administrative.

Half of respondents see the most useful tool for AI is as a scribe for documentation (50%), followed by administrative and workflow efficiencies (23%), and diagnostics and clinical decision support (22%).





While young physicians self-identify as eager early technology adopters, the slower pace of technology innovation in healthcare may limit the true potential of the role technology may play in 2035.

Summary

Young physicians are deeply motivated by personal connections with their patients. With waning trust in both directions of the physician-patient relationship, such personal connection is at risk. Despite this, young physicians see immense potential in integrating new technologies to grow trust by informing clinical decision-making and reducing administrative burdens.

Future Scenarios

We developed three scenarios that are rooted in data and insights to ideate for the future of health

---

What is a future scenario?

A conceptual sketch of a future-inspired exploration and development of transformative ideas, products, and services. These scenarios are independent of each other and intentionally forward-looking. The goal of each is to anticipate and shape future trends, rather than react to current demands.

In each future scenario, we:

1. Recognize the **early indicators** that orient us toward this future scenario
2. Identify **emerging investment trends** that align with this vision
3. Speculate on the **myths that we need to bust** today
4. Discuss why this future scenario is **significant to health in 2035**

FUTURE SCENARIO

Migration Nation

In 2035, the world will be shaped by migration. The truest sense of place is disrupted. We are in constant movement.

Migrations define HOW and WHERE care is delivered, whether driven by environmental impact, ideological beliefs, access to resources, institutions, or online communities.

At an environmental level, entire populations are being affected (e.g., increased respiratory illnesses) or displaced (e.g., rising sea levels), and require providers trained for climate afflictions and increased demand. In ideological communities, "truth" only comes from within. The influence of institutional powerhouses is de-emphasized, and federal norms and standards are relegated to regional regulations and standards. Insular communities take the responsibility of caring for their own, in the way that they see fit. Belonging to online communities takes precedence over physical communities.

In this future territory, the majority of people are migrants, including physicians. This constant sense of movement requires a health ecosystem to meet people and patients where they are in these micro and macro communities.

When migration drives community and community drives care, that care is no longer limited — nor defined by — place. It's defined by beliefs.

INSPIRATION FROM OUR VISIONARY LEADER DISCUSSIONS

"There is a growing divide in belief systems ... Social media has impacted this and has failed in providing a basic understanding of science to the general population. Universities have not properly prepared people to understand modern medicine [or] having unrealistic expectations and stresses that we have not anticipated in our system."

- Dr. Christine Cassel
Presidential Chair, UCSF,
leading expert in geriatric medicine

"If the changes are sudden then the medical systems are not geared towards it — the world will fall apart and the medical system will be overwhelmed. If the changes are slow, we can be conscious of how it affects our own areas and better prepared for the future. We need to build systems that can handle these changes."

- Visionary

EARLY INDICATORS AND DRIVERS

What is happening today that is leading us toward this inevitable future?

The Impact of Climate Change on a Sense of Place

Climate-driven migration will continue to reshape the pillars of today's healthcare by introducing new challenges in how care is delivered and accessed. Illnesses associated with air quality, heat zones, rising tides, environmental disasters (wildfires and floods), and secondary biological shifts (novel infectious diseases) will require new types of healthcare practitioners and models of delivery that will redefine healthcare as we know it.

"Issues that are already happening with lung-related health crises are because of air quality. The impacts of extreme weather in general. I wonder about flooding and the things that we're seeing and how that impacts health."

- Amy Merrill
President, Eyes Open and Co-Founder, Plan C

The movement of humans across literal and figurative borders requires healthcare to constantly modify and redefine itself. As populations shift, healthcare systems will need to adapt to a more diverse set of patient needs. Healthcare providers need to consider approaches to addressing disparities to ensure equitable access.

"There will be a shift from being in the office to care now being at home. All the lab work would be done at the point of care, the home."

- Visionary

Knowing that the very definition of 'place' will change, opportunities are presented for healthcare to reinvent itself.

The Abundance and Scarcity of Resources

Health outcomes are dependent on access to resources. Typically, healthy communities are rich in resources — access to care, diversity of specialties, local foods, parks, and green spaces — and can significantly affect overall health and well-being. In contrast, a severe scarcity of resources, from access to clean water and healthy foods to limited economic opportunities, will likely lead to poor health and poor quality of life.

"We are not addressing the gap in primary care. We aren't increasing the sizes of physicians entering medical school or incentivizing doctors to go into primary care especially in rural, underserved areas. This gap needs to be addressed."

- Resident
Orthopedics

Increasing access to health resources will demand a diversification of the types of healthcare providers and decentralized care delivery models.

The Boom of Ideological Borders

Ideological immigrations are drawing new borders and concentrating groups who want to live in communities with shared views and beliefs. As an example, in some medical communities, doctors and patients are moving to regions with healthcare practices and policies in line with their own ideological, health-related beliefs. Today, those beliefs are rooted in political views, or a reflection of regional rights such as women's health or end-of-life rights.

The magnetic effect of these ideological beliefs will swell into communities that may uphold ideological divides among their neighbors — both pulling in new citizens and pushing away others. This will lead to homogeneous communities that uphold and adhere to beliefs that may or may not greatly differ from the medical community's current standards or best practices.

Bold Prediction:

Ongoing technological innovation will lower administrative burden on physicians, enabling them to spend more time with patients. This will help address the gap in primary care by increasing the supply of physicians entering medical school while also enabling them to go into primary care in rural, underserved areas.

INVESTMENT TRENDS

Trends in the market that support future innovation

Evolved Models of Care in Niche Communities

As of the first half of 2024, investment trends reflect a desire to support evolved models of care - specifically for specialty and mental health needs. The ability to deliver care remotely, that is tailored to each patient, showcases the opportunity to right-size care, on-demand.

Notably, the common investment theme of funding a strong and diverse network of therapists may signal the need to address specific communities across the healthcare ecosystem.

HEALTHTECH LARGEST FINANCINGS (1H 2024)

		Subsector	Size of Round	Date/ Round	Location
1	innovaccer	Provider Ops Workflow	250	4/30 F	SF, CA
2	abridge	Provider Ops Workflow	150	2/23 C	Pittsburgh, PA
3	INFINX	Provider Ops Workflow	150	5/21 B	Cupertino, CA
4	sword	Alternative Care Specialty Care	130	6/4 E	Draper, UT
5	Talkiatry	Alternative Care Mental/Behavioral	130	6/18 C	New York, NY
6	transcarent	Healthcare Nav Provider Matching	126	3/7 D	Denver, CO
7	Capital Rx	Medication Mgmt. Pharmacy Benefits	115	3/21 E	New York, NY
8	rightway	Medication Mgmt. Prescription	109	3/29 D	New York, NY
9	ESSENCE HEALTHCARE	Insurance	100	4/22 A2	Saint Louis, MO
10	Harbor Health	Provider Ops Workflow	96	1/11 A2	Austin, TX

		Subsector	Size of Round	Date/ Round	Location
11	amino	Healthcare Nav Provider Matching	90	5/22 B	SF, CA
12	grow therapy	Alternative Care Mental/Behavioral	88	4/8 C	New York, NY
13	Advantia HEALTH	Alternative Care Women's Health	83	1/16 C	Arlington, VA
14	willow	Alternative Care Women's Health	81	1/22 A1	Mountain View, CA
15	reveleer	Provider Ops Workflow	81	2/26 F	Glendale, CA
16	LORE	Wellness/Education Health & Wellness	80	5/9 A	San Diego, CA
17	two chairs	Alternative Care Mental/Behavioral	72	4/16 C	SF, CA
18	SmithRx	Medication Mgmt. Pharmacy Benefits	60	1/23 C	SF, CA
19	Advanced Medicine Partners	Clinical Trials Workflow	60	6/6	Lake Forest, IL
20	fabric	Provider Ops Workflow	60	2/21	New York, NY

Valuation[1] Step-Up Flat Rd Step-Down

MYTH TO BUST

Debunking today's myths to accomplish progress in the healthcare ecosystem

Health Literacy is the Antidote to Social Media

The current discourse among the healthcare enterprise is that health literacy is a keystone to the future of care and necessary to eliminate health disparities and achieve health equity[1]. But health literacy is mostly subjective and based on an individual's motivations.

Consumers receive their health information from a mix of sources, including online search engines and social media platforms. A recent survey of 2,000 Americans[2] found that one in five Americans turn to TikTok for advice before their physicians, and this trend will very likely continue.

Generally, it's only when people are afraid that they turn to various sources of information, and in those instances, they may be far more susceptible to becoming emotionally hijacked by false information.

To combat this, we need to reimagine how we deliver health information. Delivering factual, educational content through entertainment mediums that society is increasingly gravitating toward has a much higher chance of improving literacy than today's health information norms.

"Healthcare education directly ties to outcomes and disease prevention globally. We need more health literacy for the public."

– Dr. Raven Baxter
President, Dr. Raven the Science Maven

"Accuracy of information is going to be a huge issue. We're seeing it with deep fakes and the proliferation of online forums where people can put whatever they want on the Internet. We're going to need some serious guardrails, or we're going need better media literacy and internet literacy training or some way to sort through the misinformation and the noise."

– Amy Merrill
President, Eyes Open and Co-Founder, Plan C

Bold Prediction:

Communication channels evolve to capture the masses, including those in underserved communities. We acknowledge that "health literacy" is subjective in individual motivations and consider educational content as entertainment.

The Significance to Health in 2035

Why this matters to leaders in the healthcare ecosystem

The Erosion of Trust

What happens when we have more mass movements with higher concentrations of ideological beliefs, health deserts, and regional laws?

Healthcare needs to navigate an entirely new landscape of trust.

The concept of trust is eroding, and with it, the entire foundation of today's norms in patient care. This erosion of trust begins at the macro level. According to Edelman's Trust Barometer[3], "This perception is contributing to the decline of trust in the institutions responsible for steering us through change and towards a more prosperous future."

Today's healthcare enterprise is vulnerable to profound risks that affect its ability to deliver care and maintain solvency, as patients' trust in their providers and institutions continues to decline.

Research shows[4] that distrust in healthcare can lead to worsened health outcomes, more disparities, and increased healthcare costs. Distrust jeopardizes the essential relationship and empathy between clinicians and patients.

Nearly every stakeholder within the healthcare ecosystem will be affected by this erosion of trust. Merely hoping to restore trust based on today's norms will not be sufficient. Reinventing trust is crucial. It is the first step to a new type of health ecosystem that is effective and optimized for a future where migration — whether physical, digital, environmental, ideological, or economic — drives care that is defined by place **and** defined by beliefs.

"We are at a fork in medicine. We will either join together and start listening and sharing information with each other to get to a healthier life or we will have patients run away from doctors due to the lack of communication."

– Resident
Pediatrics

FUTURE SCENARIO

The Healthspan Mandate

Let's explore a world where by 2035, fragmentation of care is over. The breakthrough in predictive medicine is realized. The individual rules.

In this future, we live in a healthcare ecosystem where unification of data gives us powerful insights into tomorrow. When people live longer in a healthcare system that is always one step ahead, care delivery focuses on predicting our needs and early, upstream diagnosis, rather than a reactionary approach to yesterday's problems.

Predictive, preventative, and precise medicine is the standard, and the goal of treatment is our healthspan — the length of time the person is healthy — not just our life span — the length of time in which we are alive.

With the integration of AI and multi-omics, everyone has access to comprehensive data that holds the answer to highly personalized treatments. While the vast amount of health and patient data and the use of AI systems predict health outcomes, they also present a health narrative that focuses on prevention, mental health, and holistic wellness, increasing the satisfaction of healthcare as a whole.

In a world where mere longevity is no longer the sole endpoint and is combined with a high, healthy quality of life, healthspan rules, and the healthcare ecosystem becomes one that is proactive — already meeting the needs of tomorrow.

INSPIRATION FROM OUR VISIONARY LEADER DISCUSSIONS

"Another future is one where we are proactive versus reactive, creating a space for healthcare communities that can understand the full picture of an entire family unit, providing better care extending into a system."

– Ian Mulvany
Chief Technology Officer,
British Medical Journal

"We've basically ... created a system that rewards treating disease more than preventing disease. We could be in a situation where there's a lot of disease that's being driven by some external factor, whether it be allergic reactions or asthma."

– Ted Love, MD
Chair of Board of Directors,
Biotechnology Innovation Organization

EARLY INDICATORS AND DRIVERS

What is happening today that is leading us toward this inevitable future?

The Interconnection of Sick Care, Health Care, and Self Care

Our young physicians indicate a strong desire to move care upstream. We also see many actors innovating the current health ecosystem from two key perspectives: patient journeys and healthcare infrastructure.

Moving from today's predominant ecosystem of sick care to that of true health care has been long in the making, but it is hampered by the version of value-based care that still focuses on treating ailments.

TODAY

Reactive

Today's patient journey revolves around sickcare

2035

Proactive

In 2035, the patient journey will revolve around healthspan

Redefining Longevity

The boom of longevity-focused startups, biotechs, and pharma is not new. Exploring technologies and methodologies through epigenetic reprogramming, regenerative medicine, cyborg technology, or off-label medication[5] promises to boost someone's lifespan.

The conversation around healthspan — the length of time the person is healthy — is directly linked to longevity. As a desire for healthspan grows, more patients may opt to focus on this over their lifespan.

So where does the rest of the healthcare ecosystem participate in this innovation boom?

Today, the most common endpoint for clinical trials is measured by lifespan-related metrics such as overall, or disease-free, survival. Although rising in prevalence because of pressure from regulators, less than half of all trials contain a quality-of-life endpoint[6]. In 2035, patients may not be faced with a trade-off between survival and quality of life. Healthspan will be the most desired outcome rather than mere lifespan.

Bold Prediction:

Precision medicine is the norm. By breaking down silos, creating standardized approaches, and creating new communication channels for patient health literacy, the promise of precision medicine will be realized.

Innovations in Precision Medicine

The promise of precision medicine and its approach for disease treatment and prevention promises to overcome the limitations of traditional medicine. In a podcast series from the American Medical Association[7], Dr. Mira Irons states, "It's allowing health professionals to shift the emphasis from reaction — people come in with symptoms of a disease — to prevention by predicting susceptibility."

But precision medicine is currently fragmented. Barriers such as[8] siloed approaches, a lack of standardization, and patients' health literacy all pose obstacles.

Bold Prediction:

Quality of Life becomes a mandatory endpoint for clinical trials in 2035. Today, the most common endpoint is measured by lifespan-related metrics such as overall, or disease-free survival. In 2035, healthspan is the most desired outcome.

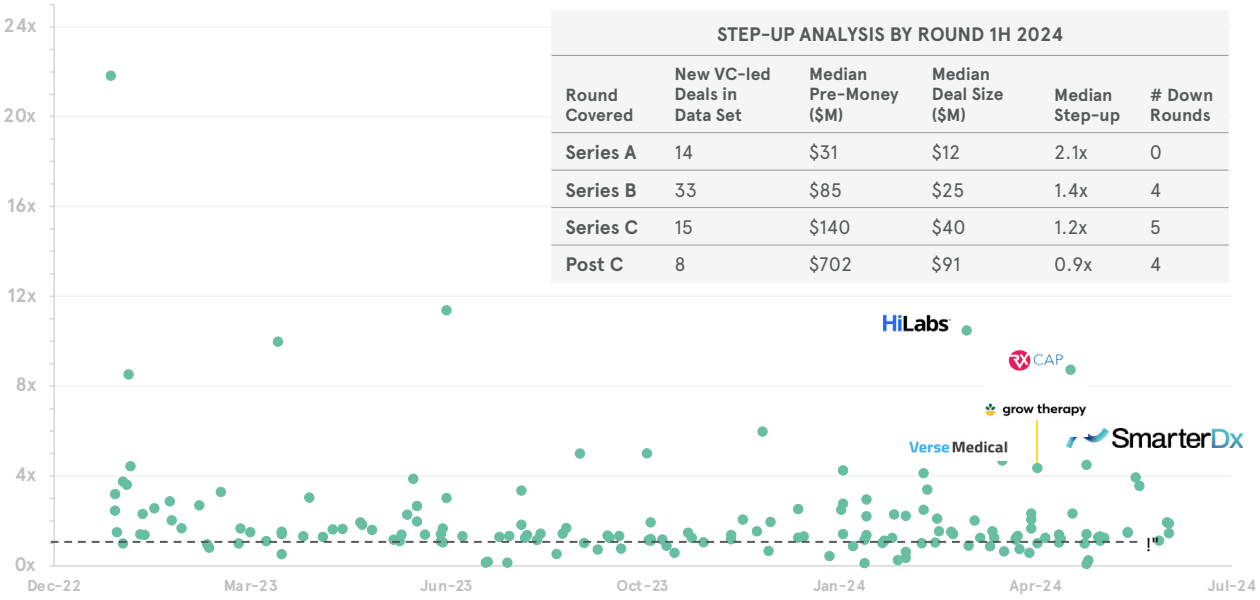
INVESTMENT TRENDS

Trends in the market that support future innovation

The Rise of Alternative Care

The highest multiples in 2024 are in mental health and workflow improvements. Investors signal confidence in mental health, with one of the highest multiples in the first half of 2024. Alternative care had the second highest number of 2x step-up companies.

HEALTHTECH NEW INVESTOR STEP-UP ANALYSIS



STEP-UP ANALYSIS BY ROUND 1H 2024

Round Covered	New VC-led Deals in Data Set	Median Pre-Money ($M)	Median Deal Size ($M)	Median Step-up	# Down Rounds
Series A	14	$31	$12	2.1x	0
Series B	33	$85	$25	1.4x	4
Series C	15	$140	$40	1.2x	5
Post C	8	$702	$91	0.9x	4

With a sharp decline in investment for general primary care in 2024, more specific, population-based care is being backed by investors now. For example, the evolution of growth in women's health investment highlights a broader, more holistic approach to care — focusing on adult stages of a woman's life — from fertility through menopause.

"For women's care in particular, we'll need to really think about how to bolster certain states so they can continue to see women for the care that they need."

- Felicity Yost
Chief Executive Officer, Tia

"Wearables or ways with which patients are connected in a more continuous and non-invasive way to get measurements and continuity are vastly underutilized. And there are many ways in which you just can't, as a physician, get this information out of EPIC or the medical record."

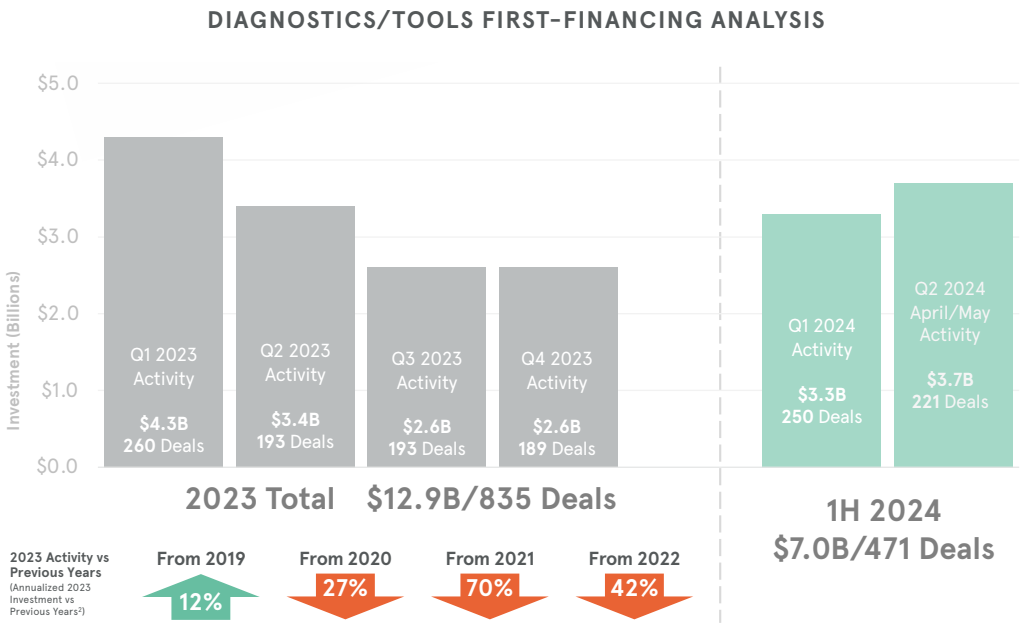
- Visionary

For women's health in the first half of 2024, 17 deals were completed, totaling $431M, almost matching the entire year's investment in women's health in 2023, at $578M.

Another highlight of the movement to predictive care is in the diagnostic testing market. Diagnostic test investment was up in the second quarter of 2024, led by the six largest financings in the first half of 2024. A move to support predictive diagnosis is reflected in the largest funding for PinkDx, a discovery-stage diagnostics company focused on women's health.

"We should have a lot more data today using AI and access to EMR systems of millions and millions of patients to better predict outcomes. I think for the last decade the FDA has been looking at how they can better use these data models to predict and get drugs approved faster, and then do post real-world monitoring to make sure they're living up to what was predicted. That's a very different way [of thinking] for the FDA, but I think that could be a positive."

– Bonnie Anderson
Chief Executive Officer
and Founder, PinkDx



MYTH TO BUST

Debunking today's myths to accomplish progress in the healthcare ecosystem

Everyone Needs a Primary Care Provider

While there is alarming evidence on the shortage of primary care physicians in the U.S.[9], there is no shortage of content touting the future of primary care, and its evolving role in healthcare.

While primary care physicians play a critical role in today's health landscape, they may benefit from a shift toward precision medicine.

Some large health networks have indicated that they are experimenting with building internal communities of care providers who are acting as 'always on' care teams for a portion of their patients who may not be in a stage of life or have easy access to forge a relationship with a primary care physician.

Bold Prediction:

Primary care physicians become the exception, not the norm. Specialization becomes the way forward for the majority. Not everyone is in a stage of life that requires an "always on" physician, and not everyone desires this level of personal interaction with a generalist.

The Significance to Health in 2035

Why this matters to leaders in the healthcare ecosystem

Community is the New Epicenter of Healthspan Innovation

To significantly improve health outcomes, the new definition of 'community' needs to shift away from the superficial, digital connections used by social media and embody the concept of "Interdependent Networks." These tightly-knit, in-person relationships will set the foundation for the practical and emotional support essential for longevity and well-being. Research from Blue Zones, regions in the world where populations live exceptionally long and healthy lives, demonstrates the roles that these interdependent social networks — based on care, trust, and mutual support — play as the foundation of health.[10]

To lead this charge, doctors and hospitals will need to go beyond treating isolated illnesses and view patients within the context of their social networks, working to strengthen these community ties as part of preventive care and active treatment. For example, doctors will begin by providing family visits and coordinate care for the entire family, or prescribe social interventions, in addition to medicines.

Pharmaceutical companies must innovate by developing therapies that support long-term health within these networks by beginning with the specific needs of a community, emphasizing prevention and mental health checks as part of any treatment regimen for any condition. Leveraging and expanding patient support programs, pharmaceutical companies can think more holistically about the needs of the populations they serve.

Health tech companies will play a critical role, creating tools that enable meaningful interactions, rather than merely connecting people digitally. Today's technology capabilities can easily be used to coordinate whole family care and foster community engagement.

"New education models of more community care focus will emerge and candidates that are accepted into those programs are going be graded equally on their academics and ability to provide holistic care...We might accept 50 people into a community program that's being created to create community healthiness, not just patient by patient, but change community healthiness. I think it'd be a really good outcome, especially in underserved communities."

– Bonnie Anderson
Chief Executive Officer
and Founder, PinkDx

"What will finally break down the barriers for communities that have long mistrusted healthcare? It's embracing a truly community-driven approach that will transform how they access care."

– Liana Guzman
Chief Executive Officer,
Folx Health

To make this vision a reality in health tech, the healthcare industry must embrace interdependent networks as an integral part of treatment, focusing on holistic health, prevention, and community support as key drivers for improved outcomes.

Both communities[11] and families[12] are key social determinants of health; physical connection and in-person interactions are especially critical to the future of health and well-being.

Bold Prediction:

There will be a shift from patients going to a primary care office to care being delivered at home — from lab work to diagnostic testing and more. This reduction in administrative burden allows doctors to provide home visits and care for the entire family, prescribing social interventions in addition to medicines.

Bold Prediction:

A shift to community-based care is driven by increasing demand for more human connection. People are hungry for reconnection, but more specifically reconnection with THEIR micro-communities.

"Is there any way that physicians start to come into a community to see people in a space that's moving out of the traditional hospital healthcare setting and using collective spaces that are community-oriented? How do we move back to smaller pockets of people like we used to live? ... People are getting lost in city systems... Is it a case where you start at home? ... It's changing the brick-and-mortar nature of it."

– Amy Merrill
President, Eyes Open and
Co-Founder, Plan C

"Once we fully embrace getting back to the basics of caring for each other, it's going to be a little harder to divide people."

– Dr. Raven Baxter
President, Dr. Raven
the Science Maven

FUTURE SCENARIO

Access Abundance

It's 2035, and access to care is unlimited. The stream of health data is infinite. Control is in the hands of the individual.

In this future scenario, gone are the intermediaries that occupy the space between people and their health. Patients thrive in a restrictionless world, accessing the therapeutics they need, thanks to a healthcare ecosystem that is deeply integrated into their homes, their diagnostics, and their wearables.

The need for hospitals, surgery theaters, and clinics exists only in urgency when everywhere is a clinic, everything is a datapoint, and everybody is an advocate for themselves. The entire care delivery continuum is disrupted because everyone has access to everything, anywhere they may need it.

To sustain a world where access is standardized across all populations, free and universal medical education allows medical school students to pursue a diverse range of specialties and locations that align with personal values, instead of the quickest path to relieve student loans.

In a healthcare model where access to everything is everywhere and integration at every corner — not just care-delivery centers — there are endless possibilities.

INSPIRATION FROM OUR VISIONARY LEADER DISCUSSIONS

"Technology is here to stay, and it is on us to figure out how to use it best. We need to be able to synthesize data faster, allowing us to spend more time making the connections with our patients and their health."

- Attending Physician
Psychiatry

"We need to get out of the unneeded complexities. If patients can self-diagnose and can do a home diagnostic test, it will help unload the burden of the whole system allowing the smartest doctors to focus on the biggest problems."

- Dr. Josh Emdur, DO
Chief Medical Officer, SteadyMD

EARLY INDICATORS AND DRIVERS

What is happening today that is leading us toward this inevitable future?

Automation's Promise of Plentitude

The role of AI is already transforming the future of health.

A key promise of AI and automation is to significantly reduce costs, ushering in an age of plentitude[13]. Such an outcome would make tests and therapies much cheaper and accessible to many more people. More than merely focusing on data, AI has the potential to produce a myriad of tools available for both sick care and health care.

"Patient autonomy is great, and the patient gateway has opened for them to have more insight to their care."

– Mark Anderson, MD
Assistant Chair, Abdominal Radiology, Massachusetts General Hospital

The Vertical Integration Movement

Through every vantage point, the healthcare system is fraught with silos, and many organizations from within and outside the healthcare ecosystem are trying to streamline care by breaking these partitions.

From the traditional integrations of payers and providers to the more recent integration of payers and pharmacies, to more novel ideas of the integration between pharmaceutical companies with providers, or the assimilation of patient data and real-world evidence for discovery, organizations have long seen the opportunity in removing barriers in healthcare.

This trend is poised to continue in the next 10 years, driven by the push to continue aligning incentives and deliver on the promise of value-based care. Continued mergers and acquisitions bring together the underlying data and operations of currently independent or disparate parts of the healthcare system, and regulatory mandates for data interoperability.

Bold Prediction:

Free and universal medical education will be adopted by leading medical schools. To sustain a world where access is standardized across all populations, this medical education model allows medical school students to pursue a diverse range of specialties and locations that align with personal values, instead of the quickest path to relieve student loans.

Every Industry is the Health Industry

Whether it's because healthcare represents an enormous opportunity, or because it is easy to imagine many ways to realize improvements, many organizations and entities are interested in playing a part to innovate in healthcare. Companies such as Google, Walmart[14], Amazon[15], Best Buy, Uber[16], and Mastercard have all put significant effort into offering novel models in different facets of the healthcare value chain. While some have abandoned these efforts and others have succeeded, the traditional definition of access is already changing in profound ways, and such outsiders will continue challenging the traditional healthcare ecosystems by breaking boundaries to drive improvements.

Bold Prediction:

Outsiders will continue to challenge the traditional healthcare ecosystems by breaking boundaries and driving improvements. We will continue to see a push to align incentives and deliver on the promise of value-based care.

INVESTMENT TRENDS

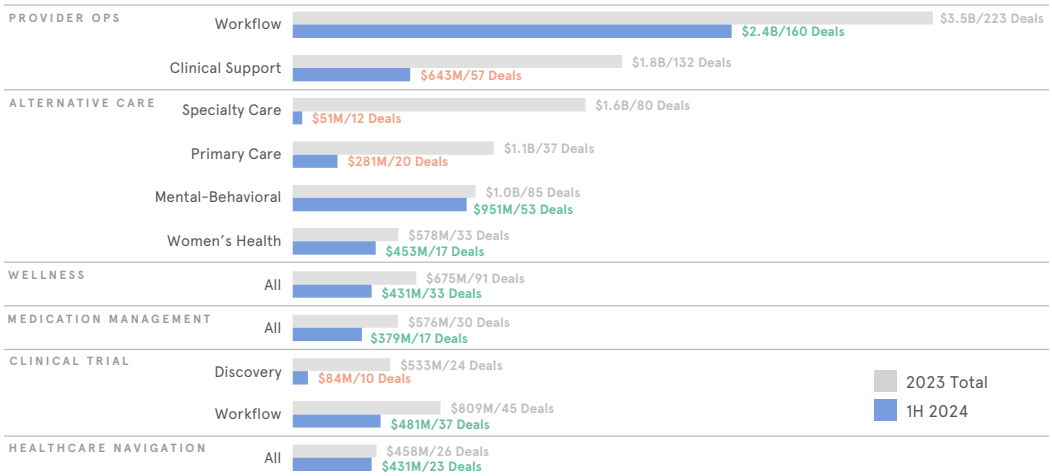
Trends in the market that support future innovation

Technology that Addresses Administrative Friction

Generative AI/LLM (artificial intelligence/large language models) remain in their early stages according to the first half of 2024 funding data from HSBC. Despite some high valuation investments, these platforms are still in their infancy.

In the first half of 2024, provider operations and clinical trial workflow solutions saw high investment. AI-enabled technology drove significant investment in the provider operations space, as early adopters focused on reducing administrative friction, cutting unnecessary costs and identifying new revenue opportunities.

HEALTHTECH BY SUBSECTOR



MYTH TO BUST

Debunking today's myths to accomplish progress in the healthcare ecosystem

Access Doesn't Mean Adoption

In a future where access to affordable and advanced healthcare services, consumer health devices, and therapies is abundant, we should not assume that people will want to engage in such offerings. Providing cheaper or better options does not translate to higher adoption, and it may miss a few critical behavioral signals to create new norms.

Human behavior is shaped by deeply ingrained habits, biases, and social influences, which are not easily overridden by the availability of better resources alone[17].

While consumers and patients will have an increasing array of tools and services, some may actively resist or passively ignore or reject such offerings, even at the detriment of their own health.

Even consumers who access health products such as fitness trackers or weight-loss apps may only enjoy a transient level of engagement with them, without long-term benefit[18]. Such a gap between intentions and real action will persist as we step into a world of plentitude.

To move beyond the myth that healthcare suffers solely from an access problem, we must recognize the opportunity to innovate how people interface with healthcare options, once they do have access to them.

The Significance to Health in 2035

Why this matters to the leaders in the healthcare ecosystem

Exploring New Vantage Points for Incentives

The traditional healthcare complex is a mature marketplace, from a technology diffusion perspective. As with any mature market, innovations are usually focused on operational efficiencies and business models[19].

An example of such business innovation dates back to the 1940s, when Kaiser Permanente introduced a model innovation[20] to reimagine the relationship between payer and provider in ways that serve patients. Breaking down one silo and reimagining another gave Kaiser Permanente a powerful edge.

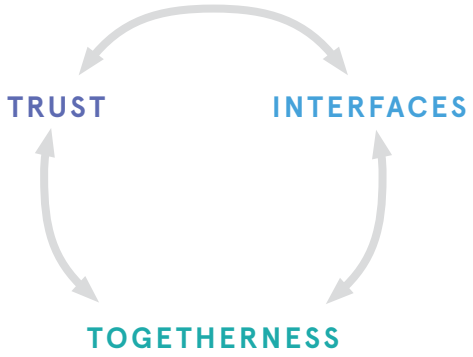
Fresh perspectives to examine the interfaces between different, disparate facets of healthcare will lead to significant value creation in the next 10 years as the industry takes advantage of the abundance of tools and technologies to provide new opportunities for health.

Foresights

While we fiercely rejected the temptation to predict the future during the exploration of scenarios, the result of our visionary sessions points clearly to three predictions that we hope will provide everyone in the health enterprise the ability to focus on how to innovate and **where** to place special emphasis when embarking on change.

We believe that they hold profound opportunities for those who consider that we are at an inflection point with the convergence of unprecedented change. Simply put, we cannot take these three areas for granted. We must reinvent them.

Three Foresights for Innovation



REINVENT TRUST

With the growing erosion of trust between patients and physicians, as well as between people and institutions, the opportunity to fundamentally re-examine the trust that is required for all parties will lead to more positive healthcare experiences.

To do so, today's leaders need to keep these factors in mind:

Accept Nomadic Borders

The continuation of ideological and physical migrations will disrupt the sense of place and create ideological and medical islands of trust within niche communities.

Welcome Diverse Perspectives

As divisiveness in communities becomes more commonplace, broadened views can enhance our relationships, rather than alienate or discriminate.

Prepare for Divergence of Care

Care will be delivered everywhere to everyone and that will create an eventual difference between universal standards and community-centric preferences.

REINVENT TOGETHERNESS

Physical connection and in-person interactions are critical to the future of health and well-being. From facing the toughest healthcare challenges to combating the silent mental health epidemic plaguing our society, togetherness must be redefined beyond the patina of connection that we experience through social media and online communities.

Today's leaders need to keep in mind the forces that lead to togetherness:

Recognize the Need for Haptic Communities

Humans live in a haptic (online and offline) community, and the balance of these two worlds plays a role in fostering togetherness and community.

Remove Barriers to Authentic Connection

The trust between patients and providers is essential to their connection. When patients feel understood, it improves overall health outcomes. For physicians, authentic interactions with patients creates a more fulfilling work environment.

Treat Technology as an Enabler

Technology is a tool that enables access to diverse forms of communication, crucial data points to help physicians make clinical decisions, and gateways to breakthrough technology. Today's physicians that are embracing AI are using it to lessen administrative burdens rather than distract from patient connections. Successful technology integration should consider enabling physician relationships with patients instead of creating barriers.

REINVENT INTERFACES

The future of health requires collaboration. The interfaces between different facets in the healthcare ecosystem offer rich areas of opportunity. By re-examining and aligning new incentives in healthcare, organizations can find creative ways to innovate and create new interfaces.

Leaders need to keep in mind the forces needed to reinvent interfaces:

Leverage Unconventional Innovation

With several factors in flux — from resources to borders to the very definition of health literacy — leaders can leverage such a dynamic to identify creative solutions and novel revenue cycles.

Resolve Silos

The independent and disparate parts of the healthcare system make business model innovation difficult.

Reimagine Incentives

Normalizing the shift from sick care to health care requires re-examination of how incentives are changing for all the contributors and beneficiaries of the health landscape.

PREPARE FOR THE FUTURE:

Three Key Questions

As you prepare your organization for 2035 and the inevitability of the need to reinvent trust, togetherness, and interfaces, consider the following questions to guide the decisions you are making. Ask yourself:

TRUST

Will my idea thrive in a 'trust-less' ecosystem, where everyone questions the authenticity or validity of everything? If so, how?

TOGETHERNESS

Will my idea create a new way for bringing people together? If so, how?

INTERFACES

Have I mapped the interfaces for my idea from every direction?

What's Next

Practical starting points for different contributors of healthcare

Different facets within the health ecosystem can put these three foresights into practical use today to guide investments, inventions, and interventions. The ideas that we put forth in this initiative will undoubtedly be dwarfed by the boundless creativity of the industry's many leaders, all of whom are already making significant strides toward a better healthcare future.

Unearthing these three foresights will align the industry's creative power toward a unified vision of the future. To begin this process, we offer a few starting points for how to rethink healthcare.

HOSPITALS AND PLACES FOR CARE DELIVERY

Today, the physical manifestation of healthcare is in the hospital or clinic. With minimal investment in infrastructure or technology implementation, hospitals can transform their physical manifestation from a place of sick care to a place of fostering community. Many populations have different places of gathering (e.g., shopping centers, recreation centers), experiencing health (e.g., gyms), gaining spiritual fulfillment (e.g., places of worship), and taking care of families (e.g., daycare, education). By repositioning a hospital or clinic as a center of health, breaking down any two silos would lead to fostering community connections and building trust.

"The public's trust plummeted in health systems during Covid. Now, health systems are eager to regain their reputation in their communities... Our partners are talking about trying to show up for the community that they serve. And so the question is, 'How can health systems become more community-centric over the next decade?'"

– Felicity Yost
Chief Executive Officer, Tia

PHARMACEUTICAL, DIAGNOSTICS, AND MEDICAL DEVICE MANUFACTURERS

Today, many companies are focused on creating interventions for disease by way of patient access or patient support programs that promise the reduction of burden for patients. Such programs suffer from low awareness and understanding with providers and patients, but they hold tremendous promise. Patients will increase their demand of easy access and easy to navigate healthcare solutions. This will drive healthcare communities to better align incentives with models that empower patients and foster trust. Redefining patient support to include support for healthcare providers and patient populations would redefine trust.

"The biggest issue we could tackle in 11 years is to fix the access and diagnostic problem. We need a healthcare system that prevents people from getting sick. Anything we can do to nudge in that direction would be a great thing."

– Lisa Suennen
Managing Partner,
Venture Valkyrie, LLC

PHYSICIAN AND HEALTHCARE PROVIDERS

By increasing their visibility within the populations they serve, they can deepen their relationships with their patients and reinvent trust, while creating and fostering communities and breaking down the intimidating interfaces between patients and the current industrial healthcare complex. We imagine doctors and practitioners as community leaders who play a role within the everyday lives of their community members. By spending time outside of the clinic as part of the care they deliver, they can bring patients together for physical and mental health interventions that will benefit both patients and the providers themselves. We recognize that incentives need to realign to reduce, not increase, the already overburdened healthcare provider workforce. Physicians can become the new community leaders as their 'specialty.'

"There are already new specialties beginning to form. The open question is whether they will be more like public health physicians, helping states and localities develop strategies for populations rather than individual healthcare providers."

– Dr. Christine Cassel
Presidential Chair, UCSF,
leading expert in geriatric medicine

TECHNOLOGY PROVIDERS

User interface design is familiar to health technology providers, but the emphasis on creating interfaces that add tangible value varies across companies. Healthcare, as a whole, suffers from a usability problem; the solution could unlock tremendous value for all stakeholders. To be clear, we are not focusing on software, but on an abstraction of user interface design to the whole of the complex, siloed healthcare ecosystem. We can only delight at the idea of a healthcare system whose interfaces were designed by the captains of the consumer technology industry, where access, connection, adherence, and transitions of care are streamlined with the same design diligence as the highly engineered experience of unboxing a new technology.

"The infrastructure is already in place. Digital healthcare has the power to democratize healthcare across this country. By allowing patients to transcend wealth and geography to access to top practitioners, we eliminate the need to live in cities like New York or Boston to receive world-class care."

– Liana Guzman
Chief Executive Officer,
Folx Health

PAYERS AND PHARMACY BENEFIT MANAGERS

As the late, pragmatic Charlie Munger said, "Show me the incentives and I'll show you the outcome." Payers and PBMs hold tremendous opportunities to examine and realign incentives between every facet of the healthcare landscape. The opacity in the cost of care and the perceived secrecy with which payers operate continues to engender animosity, distrust, and political rhetoric. We imagine an innovation that provides complete transparency in the cost of care to all parties involved.

"What I like to say to people is that we have a healthcare cost problem, not a drug cost problem since drugs are less than 15% of healthcare costs. In fact, we already know drugs would be cheaper in the United States if we didn't make innovators spend so much time and money trying to get through the barriers to get treatments to patients. The rebates to PBMs, discounts to payers and co-pay assistance to patients are major drivers of higher drug costs in the US. It is also true that most nations want to get innovation without paying their fair share for its benefits. However, there is massive waste the healthcare system that we need to solve since total drug cost is less than 15% of healthcare costs, and better drug utilization is likely to be part of that strategy."

– Ted Love, MD
Chair of Board of Directors,
Biotechnology Innovation
Organization

Conclusion

The realization of health in 2035 will be nudged by migration, by access, and by healthspan. It's up to us — leaders in our community — to authentically innovate and invest in a future our young physicians are eager to serve.

About the Authors

HSBC Innovation Banking

About HSBC Innovation Banking

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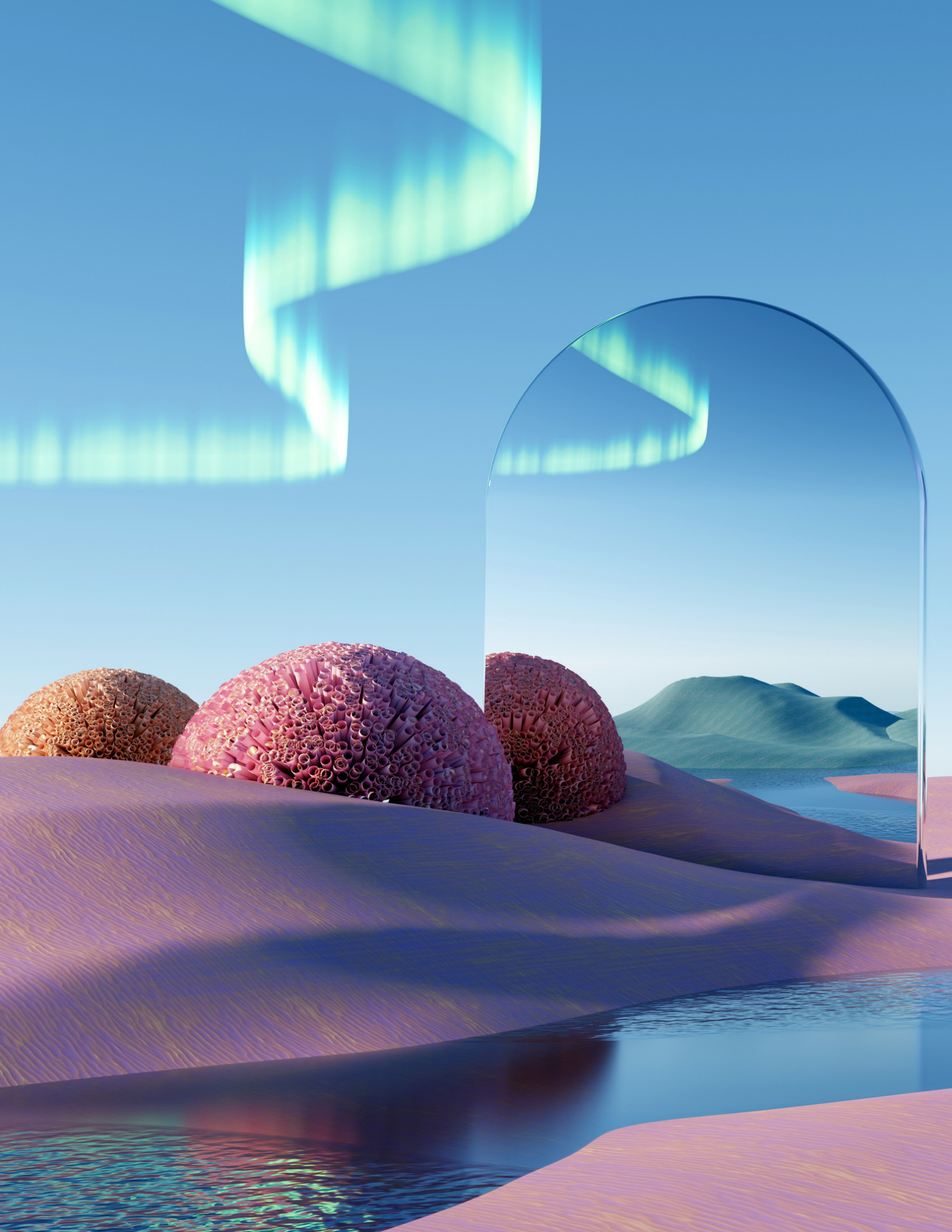
Data and Figures

1. INITIAL MOTIVATION TO PURSUE A CAREER IN MEDICINE: n=1,109; Question: What motivated you to pursue a career in medicine?
2. MOST IMPACTFUL BARRIERS IN DELIVERING HEALTHCARE: n=1,109; Q: Which challenges or barriers do you believe will impact how you deliver healthcare in 2035?
3. PERCENTAGE OF TIME AIDED BY AI: n=1,109; Q: Specific to your specialty, what percentage of your diagnoses will be aided by an AI clinical decision-making tool by 2035?; Q: Specific to your specialty, what percentage of your therapeutic decisions will be aided by an AI clinical decision-making tool by 2035?; Q: In 2035, how do you think your time will be spent interacting with patients?
4. VARIABLES CONTRIBUTING TO THE DELIVERY OF CARE: n=1,109; Q: How will the following variables contribute to the delivery of healthcare by 2035? (Scale 1-7)
5. PHYSICIANS' LEVEL OF TRUST: n=1,109; Q: In 2035, what do you anticipate your trust level being in the following? (Scale 1 to 7)
6. MOST IMPACTFUL BARRIERS IN DELIVERING HEALTHCARE: n=1,019; Q: Which challenges or barriers do you believe will impact how you deliver healthcare in 2035?
7. PATIENT TRUST: n=1,019; Q: In comparison to today, how might trust change between patients and their physicians in 2035? What is the reason for your choice from the previous question?
8. TECHNOLOGY ADOPTION: n=1,109; Q: Please choose the answer that best describes your feelings on the following statement: I am _ using new technologies implemented by my employer.; Q: Please choose the answer that best describes your feelings on the following statement: Overall, I am _ implementing new technologies within my healthcare practice.
9. HEALTHTECH LARGEST FINANCINGS (1H 2024): HSBC Venture Healthcare Report - HSBC Innovating Banking Analysis - 1H 2024; Data from PitchBook though 6/28/24. Covers private, venture-backed investment. 1Step-up analysis uses PB supplied valuations if available. Data Sources: PitchBook, company websites, internal analysis. Thanks to Mind Machine for slide strategy, creative and design.

Data and Figures

10. HEALTHTECH NEW INVESTOR STEP-UP ANALYSIS: HSBC Venture Healthcare Report - HSBC Innovating Banking Analysis - 1H 2024; Data from PitchBook as of 6/28/24. Covers private, venture-backed investment. 1New Investor Step-Up refer to companies that had a new investor in its recent 2023 – 1H `24 financing, with that equity financing equal to or greater than the last financing round. Companies included if valuation information was available for both the new and last financing. Step-Ups calculated using PitchBook valuation data for previous and new 2023 – 1H `24 financing as follows: Divide new pre-money valuation by previous round post-money valuation. Data Sources: PitchBook, company websites, internal analysis.
11. HEALTHTECH NEW INVESTOR STEP-UP ANALYSIS: HSBC Venture Healthcare Report - HSBC Innovating Banking Analysis - 1H 2024; Data from PitchBook as of 6/28/24. Covers private, venture-backed investment. 1New Investor Step-Up refer to companies that had a new investor in its recent 2023 – 1H `24 financing, with that equity financing equal to or greater than the last financing round. Companies included if valuation information was available for both the new and last financing. Step-Ups calculated using PitchBook valuation data for previous and new 2023 – 1H `24 financing as follows: Divide new pre-money valuation by previous round post-money valuation. Data Sources: PitchBook, company websites, internal analysis.
12. HEALTHTECH FIRST-FINANCING ANALYSIS: HSBC Venture Healthcare Report - HSBC Innovating Banking Analysis - 1H 2024; Data from PitchBook as of 6/28/24. Covers private, venture-backed investment. Healthtech defined as companies or product/solutions that help in delivering care, helping doctors or other forms of medical solution deliver care, or helping the broader ecosystem deliver care. 1First-financing defined as initial Seed or Series A financing of $2M+. 2Using specific PitchBook search functions to approximate sector-specific funding from previous years. Data Sources: PitchBook, company websites, internal analysis.
13. HEALTHTECH BY SUBSECTOR: HSBC Venture Healthcare Report - HSBC Innovating Banking Analysis - 1H 2024; Data from PitchBook though 6/28/24. Covers private, venture-backed investment. Healthtech defined as companies or product/solutions that help in delivering care, helping doctors or other forms of medical solution deliver care, or helping the broader ecosystem deliver care. Data Sources: PitchBook, company websites, internal analysis.