REPORT

2025 ZS Future of Health Report

A prescription for better healthcare

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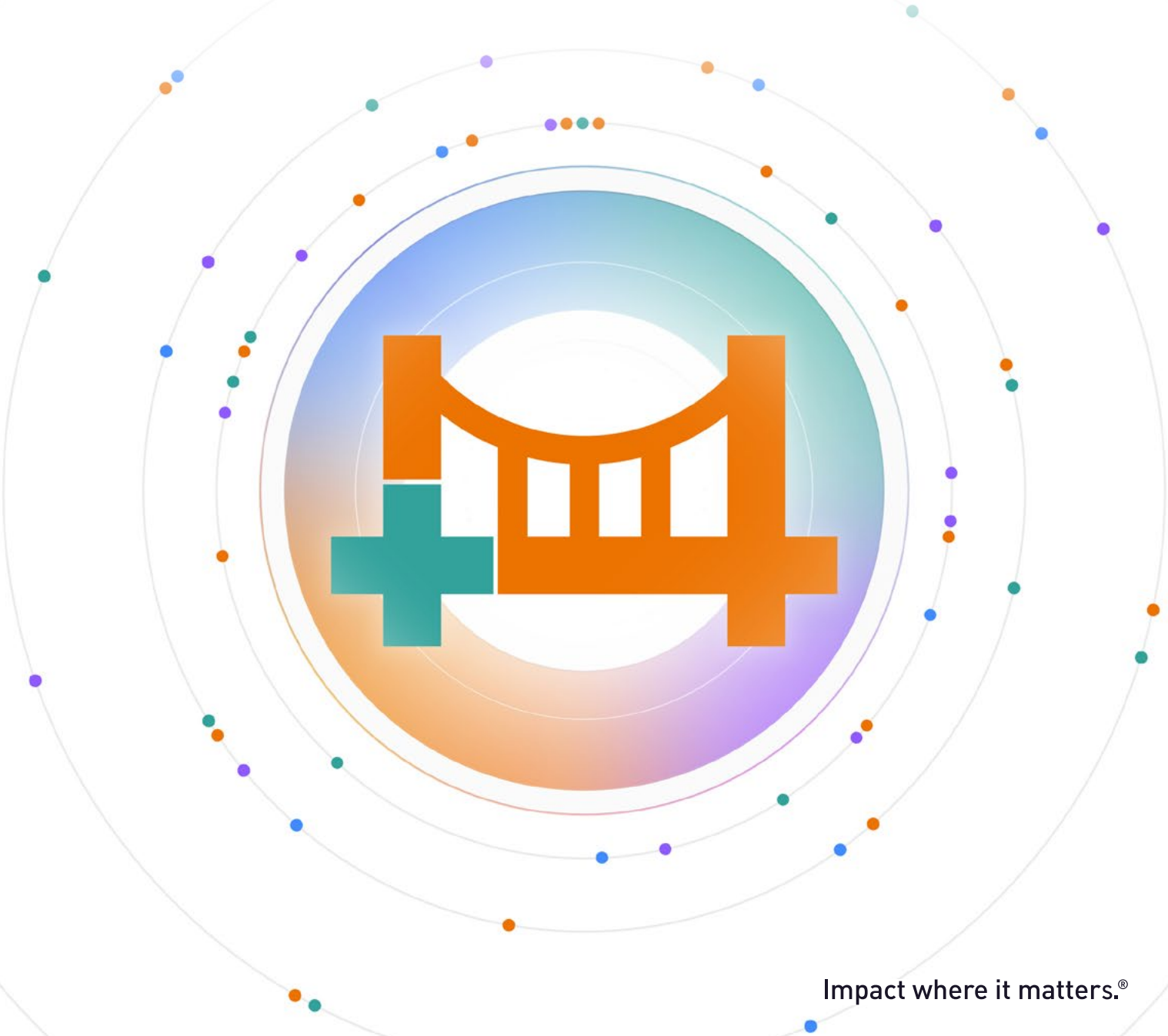

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Survey reveals cracks in healthcare's foundation—but also opportunities

Consumers feel increasingly let down by overburdened healthcare systems that don't deliver the kind of care they crave. The good news: The healthcare industry has an opportunity to use data, AI and technology to transform healthcare by plugging care gaps, empowering patients and enabling healthcare providers to deliver care where, when and how consumers need it.

Our findings come from the fourth annual ZS Future of Health Survey of 12,000 healthcare consumers and 1,500 healthcare providers (HCPs) in the U.S., Brazil, U.K., Germany, India, China and Japan. Building on our deep domain expertise and experience serving clients end-to-end across the healthcare continuum, ZS uses insights from this survey to help our clients create pragmatic solutions that improve healthcare and how it's delivered.

Let down and left out: How consumers feel about healthcare today

Across the world, healthcare in 2025 is being shaped by two interrelated trends: Growing demands on healthcare supply that threaten health systems' ability to keep up and heightened expectations from consumers for experiences that mirror those they receive outside healthcare. Thanks to the lingering effects of the COVID-19 pandemic and aging populations, the World Health Organization estimates a global shortage of 2 million doctors—in low-income countries and wealthy ones alike. At the same time, consumers around the world have come to expect greater control of their healthcare data and agency over how, when and where they receive care.

In other words, consumers expect more from healthcare at a moment when healthcare systems are least prepared to give it to them. To avoid widening the gap between what people want and what they get, stakeholders from across healthcare will need to collaborate to make new forms of care possible. If, on the other hand, we fail to heal the healthcare experience, we risk exposing ourselves to a future where only the wealthiest among us benefit from medical innovation and healthcare systems face a "doom loop" of soaring costs, reduced levels of service and sicker populations.

> **"Healthcare costs are continuing to rise. Industry forecasts indicate that expenditures are greater than what health systems can afford. It's concerning."**
>
> – SVP, global access, a global biopharma company

Avoiding this dystopian future will require harnessing the power of data, technology and AI to empower healthcare consumers and enable healthcare providers. Worryingly, healthcare systems and providers today are already overwhelmed with data. And technology designed to cope with healthcare data too often adds complexity or doesn't fit clinical workflows. Meanwhile, disparities in the level of trust in AI between burgeoning and mature healthcare markets threaten to stall progress in countries where trust remains low. A better healthcare future is possible, but it's not guaranteed.

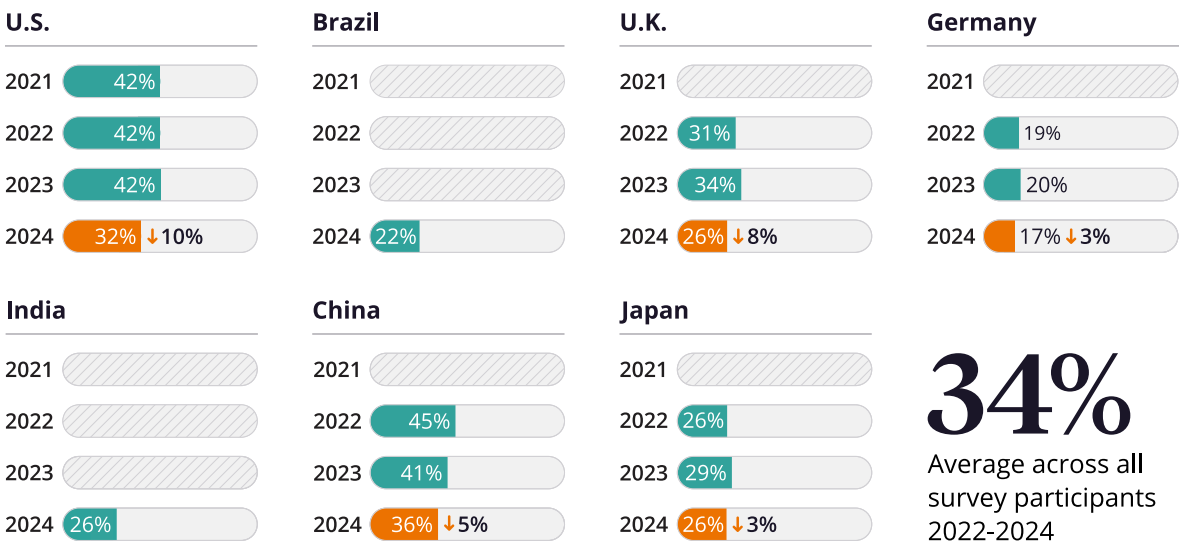
The latest diagnosis: Consumers across countries feel worse than ever

Given this dynamic, it's no surprise consumers in all seven countries we surveyed this year expressed growing frustration with healthcare's status quo. Consumers from the U.S., Brazil, the U.K., Germany, India, China and Japan shared widespread dissatisfaction with the current state of healthcare and a growing openness to newer approaches such as remote care, AI-assisted care and care delivered by HCPs other than doctors.

Since the inaugural ZS Future of Health Report in 2022, we've been asking healthcare consumers a question: "How does your experience with the healthcare system make you feel?" While the share of consumers across all countries who feel "cared for" has never been high, the numbers have held steady—until this year. In 2025, for every country for which we had year-over-year data, the proportion of consumers who say they feel cared for by the healthcare system dropped, in some cases precipitously.

Healthcare is leaving people feeling less cared for than ever

Share of healthcare consumers who felt 'cared for' after their most recent healthcare interactions



34%
Average across all survey participants 2022-2024

Source: ZS Future of Health Survey

2021-2024 Q. Adult public: "Please take a moment to think about your recent healthcare interactions. Overall, how does interacting with the current healthcare system make you feel?" 2024 base: 12,000 adults; U.S.=4,000; India=2,000; China=2,000; Brazil=1,000; U.K.=1,000; Germany=1,000; Japan=1,000. Brazil and India were not surveyed prior to 2024.

What's causing these symptoms: Higher costs and lower access

When it comes to accessing healthcare, too many consumers are feeling left out. Across the U.S., U.K., Brazil, Germany and India, more than two-thirds of consumers say healthcare is becoming less accessible. These perceptions have real-world consequences: In the U.K., where 80% of both HCPs and consumers say healthcare is getting less accessible (the highest shares of any country), the proportion of newly diagnosed cancer patients who start treatment within two months has fallen from 85% to 65%. This equates to 100,000 patients waiting longer than they should to begin medically necessary treatments.

When it comes to cost, at least two-thirds of consumers in all seven countries agree things are getting worse. This includes 88% of healthcare consumers in the U.S., 90% in Brazil and 85% in Germany where, despite universal healthcare, consumers face mandatory contributions, co-payments and substantial out-of-pocket expenses for advanced treatments. High-quality healthcare is in danger of becoming a luxury for the privileged few who are often wealthier, older or sicker than other populations.

Unsurprisingly, who you are affects your views of healthcare just as much as where you are. In every country besides the U.K., women are more likely than men to believe healthcare is getting less accessible and less affordable. (Given the diagnostic and treatment disparities affecting women, it's no wonder.)

People want more face time with their doctors

Even as healthcare access remains a challenge, the primary care physician (PCP) continues to be a vital component of healthcare for many. Unfortunately, doctors everywhere are scarce and increasingly pressed for time. In four of the five countries for which we have survey data from 2023 and 2024, the proportion of PCPs who saw more than 100 weekly patients rose—in some cases dramatically. In the U.K., the share rose from 34% to 42%, in Germany from 71% to 79%, in Japan from 44% to 60% and in China (for doctors of internal medicine) from 49% to 65%. In both the U.K. and Japan, PCPs' weekly patient loads climbed by 20% or more.

The result of higher patient rosters: Consumers today spend more time than ever navigating the healthcare system, traveling to care sites and sitting in waiting rooms—basically, everything besides interacting with their doctors. In Germany, Japan, China, Brazil and India, consumers said they spend at least as much time in their doctor's waiting room as they do in the exam room. Across all seven countries we studied, no cohort said they spend even a third of their overall "healthcare time" interacting with their doctor. (The U.S. came closest at 31%.) Is it any surprise that approximately one-quarter of consumers, across all geographies, said they avoid care altogether due to either cost or hassle?

This dynamic will only worsen in the coming years as healthcare systems adjust to an influx of older—and, by definition, sicker—patients. In the U.S., the portion of the population aged 65 or older is projected to surge to 22% by 2050 (up from 18% today); in Japan, it will climb to 37% by 2050. How healthcare systems will fund care for this expanding population of elderly patients remains an open question—in the U.S., the ratio of working-age adults to retirees is expected to drop from 4:1 to 2:1 by 2035.

Consumers want healthcare on their terms. Today's outdated healthcare systems aren't designed to deliver this.

When asked for their prescription for better healthcare, consumers we surveyed were remarkably consistent, regardless of where they live. The most popular choice, placing in the top three in every country besides the U.S., was faster and more accurate diagnoses. Next up were:

- Making healthcare more affordable
- Quick and easy appointment scheduling
- Access to "anytime, anywhere" care

These answers reflect a rising desire among healthcare consumers for the agency and convenience they experience elsewhere in their lives. In an age when we can order a refrigerator for same-day delivery; customize everything from our running shoes to our car; and use AI to plan our meals, order our groceries and analyze the nutritional value of what we've eaten, healthcare so often places the onus on consumers. They may want agency and convenience, but what they get instead are appointments by telephone, paper health forms each time they visit a new HCP and mandated in-person visits for routine services—such as pacemaker tuneups or prescription refills—that could be safely and conveniently performed virtually.

Consumers are ready for alternative care models. Are health systems?

Doctors remain healthcare's cornerstone in most parts of the world. But plugging today's supply shortage will mean relying on other healthcare providers—such as nurse practitioners, physician's assistants and community health workers—to shoulder some of the load. Pockets of progress exist, including U.K. pharmacists who can now diagnose and prescribe antibiotics for a limited number of common illnesses and U.S. nurse practitioners who can order diagnostics, interpret lab results and prescribe medications for many ailments. These pockets must expand.

Good news on this front: Most consumers in our survey said they're open to receiving many forms of care from someone other than a doctor. This includes interactions like prescription refills and referral requests as well as more personal and high-acuity ones, such as annual exams and chronic disease management. This could be tied to the public's desire for more convenience in care, or it could be a side effect of reduced access to healthcare leading to more transactional interactions with healthcare providers. Consumers today may not have the option to see "their" doctor or they may not even have a doctor—yet they still have medical needs to meet.

"Healthcare delivery will fundamentally shift in the future. Fewer people will seek care in a doctor's office, and they'll be more likely to use wearable devices that predict health issues before symptoms appear."

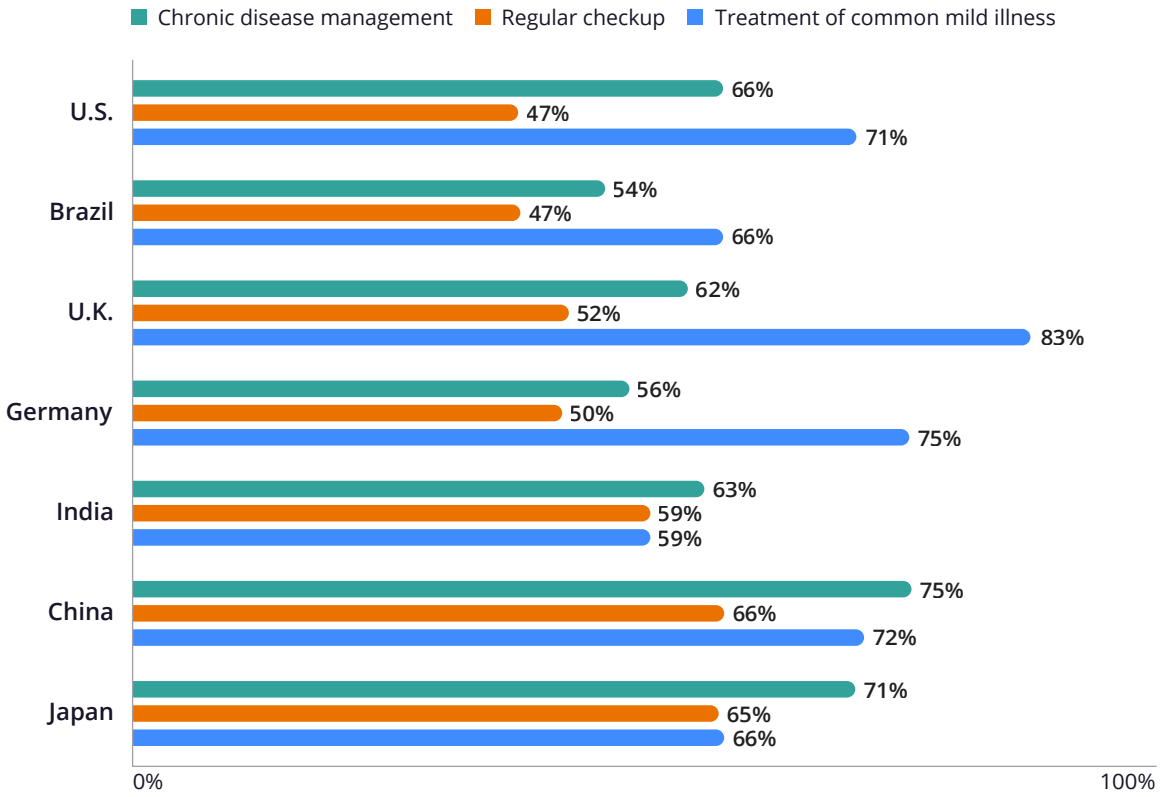
– CIO, a global biopharma company

This dynamic has the potential to trade an expensive, scarce resource (doctors) for a less expensive and more elastic one (nurses, physician's assistants, pharmacists and others). At the same time, there's been a dramatic shift toward lower-acuity sites of care for a range of procedures, interventions and diagnostics. Administering some procedures outside the hospital setting should reduce overall costs while boosting convenience, but shifting care outside the hospital must be done deliberately to avoid devastating hospital finances.

Expanding lower-acuity care won't fix an ailing healthcare system on its own; consumers often face social or environmental barriers that prevent them from getting to traditional sites of care. Changes in consumer preferences may help. This is because many healthcare consumers in our survey said they're open to virtual modes of care, including telehealth and other forms of remote diagnosis, for nearly every type of healthcare interaction—even for annual checkups.

The (virtual) doctor will see you now

Share of patients open to virtual care for various types of healthcare interactions



Source: ZS Future of Health Survey

Q. Adult public: "In which of the following healthcare situations do you feel it is not essential to see a healthcare professional in person rather than via telehealth or an online portal?" Base: 12,000 adults; U.S.=4,000; India=2,000; China=2,000; Brazil=1,000; U.K.=1,000; Germany=1,000; Japan=1,000.

It's important to note that, although patients and HCPs may be philosophically onboard with virtual care, reimbursement systems in the U.S. have, in many cases, reverted to pre-pandemic approaches that encourage in-person visits and vary from state to state. Virtual care isn't inherently superior to in-person care, but it's a critical puzzle piece because it can alleviate health system burden while also driving better outcomes. That's because some consumers will use it who would otherwise avoid care until they're even sicker.

This is why we need a healthcare system flexible enough to allow consumers to choose the right care option given their condition, circumstances and past experiences. The appropriate touch point will differ for someone seeking mental healthcare versus someone needing a diagnosis and prescription for strep throat. It's true that some consumers will avoid virtual

care even when offered, suggesting a need for policies that mandate virtual care in certain circumstances—such as receiving routine lab results, triage services for common illness and other engagements where the urgency and risk are low.

Without payment and coverage models that allow consumers to receive care on their own terms, we'll continue to default to in-person medicine. The result will be increasingly frustrated healthcare consumers, harried healthcare providers and overburdened healthcare systems.

AI will be key to expanding convenient access to healthcare—if we let it

Roughly half of the world's 8 billion people lack access to essential health services, leading to millions of preventable deaths every year. Most of this shortage is concentrated in low- and middle-income countries, but it afflicts wealthy ones too: In the U.S., as many as one in three consumers lack access to primary care. Germany and the U.K. also face severe shortages of doctors and other healthcare providers.

Basic arithmetic suggests that maintaining the status quo will only make things worse. The world's population aged 60 and older is projected to double to 2.1 billion by 2050, meaning an ever-growing share of total healthcare resources devoted to caring for the world's older patients. Meanwhile, more than 40% of HCPs in the U.S., Europe and Central Asia are at or near retirement age, meaning there will be fewer HCPs to handle this surge.

> **"The reduction of the healthcare workforce is a key trend. Fewer people are entering the profession. And more and more, doctors are generalists."**
>
> – North American leader, a global pharmaceutical company

To avoid a negative spiral of shrinking resources to care for needier patients (leading to even needier patients, leading to even fewer resources ad infinitum), the healthcare industry must continue to embed AI and other advanced technologies across the care continuum to make doctors more efficient and effective—expanding healthcare supply without waiting the 10 to 14 years it takes to train legions of new doctors. Later in this report, we explore opportunities for using data, technology and AI to address healthcare's supply problem while delivering more of what consumers say they want from healthcare.

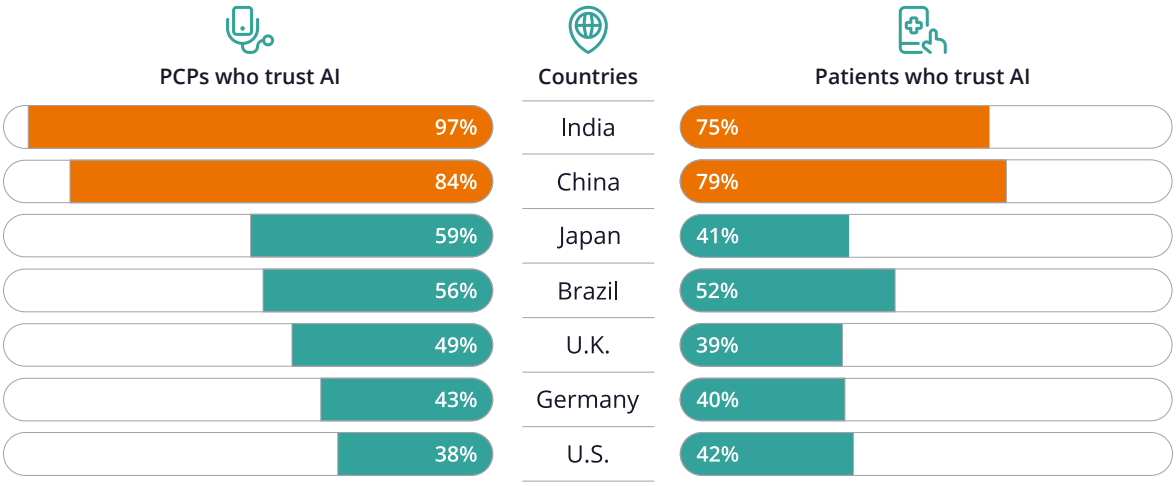
So, are consumers and HCPs prepared to embrace AI to help fill some of the cracks in healthcare's foundation? PCPs and consumers in India and China, the world's two most populous countries, trust AI (in general) far more than their counterparts in more established healthcare markets.

"Different parts of the world evolve differently. Burdensome regulations around AI and data in some countries can result in drug access challenges. Countries that are more open to innovation will see more advancements."

– CIO, a global biopharma company

Is your doctor all-in on AI? Depends on where you live

Share of doctors and consumers in each country who trust AI in general



Source: ZS Future of Health Survey

Q. Adult public and PCPs: "Artificial intelligence, or AI, refers to a technology that involves computer programs designed to mimic and perform tasks that typically rely on human intelligence. Some well-known examples of AI include OpenAI (like ChatGPT), Siri and Alexa. In healthcare specifically, AI can be used to evaluate medical images, predict risks and results, give personalized advice, and help create new medications. In general (i.e., not specific to healthcare), how much do you trust artificial intelligence (AI)?" Base: 12,000 healthcare consumers and 1,199 PCPs; U.S.=4,000; 597. India=2,000; 100. China=2,000; [Internal Medicine] 100. Brazil=1,000; 100. U.K.=1,000; 102. Germany=1,000; 100. Japan=1,000; 100.

Gaining HCP and patient trust for AI in the exam room is critical, but it's only step one. AI tools also must be intuitive to use, value-additive and designed around the needs of consumers, HCPs and complex health systems. Recent failures to transform care using AI spotlight the need for solutions that address consumer and HCP pain points. People don't want their healthcare "disrupted," they just want it to be high quality and on their own terms.

The treatment plan: How industry players can collaborate to heal healthcare by 2030

Based on what we've learned from consumers and HCPs this year, our experts at ZS envisioned what a modern, accessible and equitable healthcare system would look like in 2030—and what the healthcare industry must do now to get us there. Our experts focused on the choices that must be made now to ensure consumers can exert greater control over their health data, choices and experiences. And they must be able to access healthcare at a cost they can bear and in a setting of their choice. The healthcare industry must act today to meet consumer demand and reinforce under-resourced and overburdened healthcare systems. The industry must harness the increasing availability of data and AI to offload nonclinical tasks from HCPs, address clinical queries in real time, reduce dependencies on resource-intensive sites of care and enable wellness and prevention at scale.

While building a stronger healthcare system by 2030 won't be easy, those invested in this vision should take heart: Our survey results clearly show a low bar in many areas. As an industry, we can make meaningful progress by addressing immediate opportunities in the short term while working toward more ambitious goals in the medium term. What follows is part prescription for a better healthcare system, part description of how companies are already coming together to solve healthcare's biggest hurdles.

Our prescription: Deliver personalized healthcare built around each patient's unique context

Consumers may hold a list of common complaints about healthcare today. But their views reflect the beliefs and experiences, as well as the social, behavioral and demographic traits they bring to each healthcare interaction. For instance:

- In the U.S., U.K., Germany and Japan, women are much more likely than men to report poor healthcare experiences. They're also more likely to avoid medical care due to hassle.
- Across all countries, consumers who are also caregivers—more than 80% of whom are women—experience higher barriers to care and hold significantly less favorable views of healthcare.

- For those living with one or more chronic conditions, lack of coordination across the healthcare system creates friction and drives negative sentiment—especially for those with complex diseases such as cancer, neurological conditions and immunological conditions. These individuals are also more likely to use connected health tools, such as telehealth and online health portals.

Demography isn't destiny, but it's easy to see how the experiences of different groups drive healthcare perceptions, needs and barriers. Given the idiosyncrasy of individual healthcare journeys, aggregate solutions can only get us so far.

When designing healthcare engagements, context is key

To understand why context reigns, imagine a woman visiting an urgent care doctor. Her affect and demographics suggest affluence, relatively good health and a high likelihood of compliance. What isn't captured in her electronic health record (EHR), however, is her "grin and bear it" upbringing, her bias toward forming her own opinions rather than blindly following her doctor or her general distaste for medication. Nor can it know that she's recently retired, living in a new location and on a tight budget.

While the doctor's recommended course of treatment (whatever it may be) may be clinically correct, it could fail to deliver an optimal outcome because of all the confounding factors not captured through traditional systems. This woman's deeper story reveals itself in data—if healthcare companies have the systems and processes to collect it, connect it and act on it.

Luckily, healthcare consumers say they're willing to share many forms of healthcare data if they believe it will improve their healthcare experiences and outcomes.

Consumers are willing to share their health data if it benefits them

Percentage of patients who said they'll share their health data in certain circumstances

Q. Adult public: "Which of the following are reasons that would convince you to share personal health information?"
Base: 12,000 adults; U.S.=4,000; India=2,000; China=2,000; Brazil=1,000; U.K.=1,000; Germany=1,000; Japan=1,000.

While life sciences companies have long embraced patient centricity, the reality is that most customer engagement strategies revolve around HCPs. They've focused on gathering traditional behavioral information—such as patient roster demographics, payer mix, channel affinity, social media usage and prescribing habits—that supports understanding of business performance. But these metrics are just proxies for what they really want to know about individual HCPs: Are they an innovation champion? What are their patients' most prominent barriers to care? How tech-savvy are they? These unique contextual clues define who doctors are and what motivates their decision-making. If we want to produce a better outcome, whether for a patient or an HCP, we need to use their context as the foundation. It's the context that illuminates the barriers and the drivers of action.

Health plans have made strides using AI to improve member experiences, but significant opportunities remain untapped. Designing engagement strategies around each member's unique context requires using data to understand employer context and member needs, and then using this to craft the right engagement at the right time. Putting patients, HCPs, members and employers at the center demands mining each person's past experiences for insights that can be used to positively influence their future.

This can mean detecting signals in consumer data indicating care gaps and invisible barriers, then using these signals to guide tailored interventions to surmount them. It can also mean consumers consenting to share data from wearables with care teams, allowing them to flag issues earlier. If this happens, fewer patients will slip through the cracks. If we can also find the hidden barriers and drivers of action for HCPs, then we can maximize the value of one-on-one time with patients. Given how little time HCPs and patients spend together, every minute counts.

Healthcare your way: Engaging people where they are

We're living through what The New York Times has called "A Golden Age for Medicine," a period of rapid scientific progress driven by deeper disease understanding, smart medical devices featuring continuous monitoring with real-time analytics and algorithms that can match or even exceed clinicians in many facets of clinical care. But this scientific surge is outpacing the capacity of healthcare systems and individual HCPs to absorb the increase in medical knowledge. This means only some healthcare consumers benefit from the fruit of all this medical innovation. But what good is scientific progress if our healthcare systems aren't built to deliver it to everyone who would benefit?

It's not just advanced treatments healthcare consumers are being denied. Access barriers prevent many from seeking even basic medical care, meaning health disparities widen as people either don't get the care they need or lack the support to remain on therapy.

"Pharma previously had one role: Providing medicine. We now have an expanded role across the whole patient pathway, from early detection to diagnosis to treatment to long-term care. And we'll continue to play a greater role, helping with awareness and education of healthcare professionals, for example."

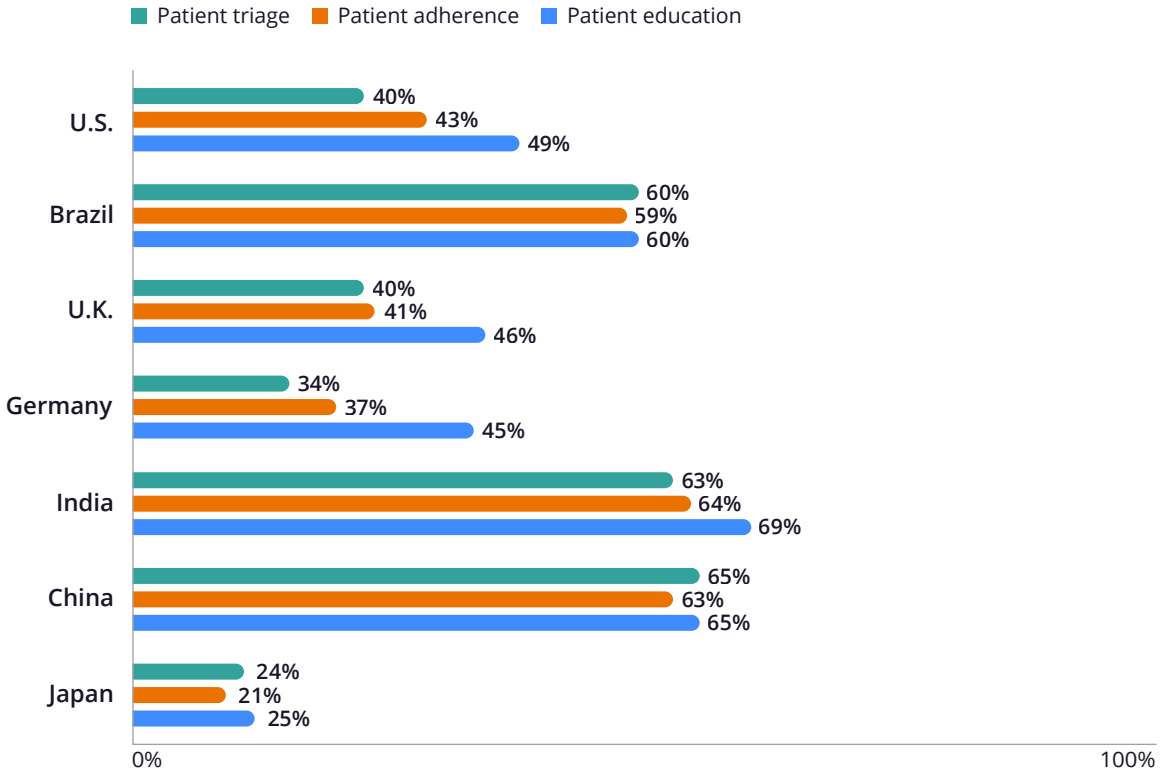
– CIO, a global pharma and biotechnology company

These care gaps open a door for healthcare companies to rethink their roles: From manufacturers of medicines or devices to providers of holistic, end-to-end patient care. This shift in approach and mindset will affect everything from how companies operate to their go-to-market and talent-management approaches. Given the aftereffects of the COVID-19 pandemic, poor overall healthcare experiences and the 21st Century Cures Act—which (among other things) gives patients greater control of their health data—life sciences companies and health plans are able to make good on their long-held ambitions for patient and member centricity. As they build new paradigms for patient care, they can use data and AI to bring healthcare directly to healthcare consumers—whether in the form of a faster diagnosis, help getting (and staying) on therapy or pursuing overall wellness and longevity through ongoing preventive health.

Except for Japan, where overall consumer trust in healthcare AI dramatically lags, healthcare stakeholders find themselves pushing against an open door. This is because many consumers say they're ready to embrace AI-powered apps that bring healthcare directly into their lives.

Consumers are ready for AI-powered, patient health apps

Share of patients who say they'd use healthcare apps for various purposes



Source: ZS Future of Health Survey

Q. Adult public: "How willing would you be to use the following healthcare applications (software, chatbots or tools)? Patient triage: e.g., to advise you on the most appropriate course of action or healthcare setting to go to. Patient adherence: e.g., to help with dosing reminders, to predict the likelihood of discontinuing care and suggest appropriate interventions. Patient education: e.g., to help better understand a condition or take preventive action to avoid it." Base: 12,000 adults; U.S.=4,000; India=2,000; China=2,000; Brazil=1,000; U.K.=1,000; Germany=1,000; Japan=1,000.

Helping people get diagnosed faster

Many consumers face cost and access barriers forcing tens of millions to avoid the healthcare system altogether. By integrating and analyzing large datasets—such as EHRs, claims data and social media—AI-driven tools can bring healthcare directly to patients by finding them where they are, serving them personalized communications and even proactively engaging HCPs who specialize in their condition. AI-powered mammography screening has been shown to increase cancer detection rates by as much as 21%, with faster and more accurate results translating into better future outcomes. Once a patient receives a diagnosis, AI can also be used to remove other common treatment barriers, such as prior authorization, benefit verification and clinical prework.

CASE STUDY

Speed saves: Accelerating time to treatment

UCB asked ZS for help reaching people experiencing myasthenia gravis symptoms to get them to treatment faster. Early detection of this autoimmune disease can help control symptoms, slow disease progression and reduce severe complications.

The challenge: For about half of patients, receiving a myasthenia gravis diagnosis requires between seven and 10 visits to HCPs over the course of two to four years.

The solution: UCB leveraged ZS's Zebra solution, which is designed to accelerate rare disease diagnosis and the path to care. ZS helped UCB launch a social media marketing campaign that invited users to complete a short, self-assessment about their symptoms. Next, each user received a free report from a board-certified myasthenia gravis specialist to share with a neurologist. A neurologist can then use the report, along with the patient's medical records and history, to potentially diagnose myasthenia gravis.

The impact: Zebra proved significantly more effective for UCB's patient activation than traditional marketing. The campaign led to 2,000 visits to the Zebra-powered website. About 250 users engaged in the self assessment on the website and 150 received personalized reports.

Why this matters: Investing in strategies that reach patients using technology and branded campaigns can help close care gaps by reaching patients who might otherwise go undiagnosed. When we accelerate the conversation between patients and providers, everyone wins.

Maximizing treatment outcomes

Ideally, receiving a diagnosis is only the start of a patient's health journey. Unfortunately, 30% of all prescriptions go unfilled, and half of patients discontinue medication within the first year. Not only does this prevent individual patients from managing their conditions, but it also costs health systems hundreds of millions of dollars every year. No wonder a ZS analysis of public announcements found that seven of the top 12 pharma companies by revenue announced major investments in digital patient support in 2023 and 2024.

By pairing longitudinal patient data (such as enrollment and shipment data, nurse liaison calls and patient emails) with aggregated HCP data (such as social drivers of health, payer and claims data), healthcare companies can identify patients most likely to not start or discontinue therapy. By then layering in unstructured data, such as call center interactions, companies can identify patient-specific insights about adherence barriers. With this, they can deploy the resource—information about a patient-assistance program, say, or a call from a field reimbursement manager—to help the patient get or stay on therapy.

Patient services isn't a novel concept; it exists to do exactly what's described here. The problem (until now) is that companies haven't had the data granularity or orchestration agility to deploy the right resource for the right patient at the right time. With the right context, now they can.

Enabling pharma companies to help patients get and stay on therapy isn't the only way AI aids treatment once a diagnosis is made. It's also being used (for instance) to supplement decision-making before, during and after surgeries—by predicting a patient's risk of postoperative complications, creating personalized surgical approaches, offering intraoperative guidance and streamlining hospital operations by predicting surgery durations.

CASE STUDY

2030 vision now: AI views of patient journeys

Takeda Pharmaceuticals asked ZS to reimagine patient journey analytics to uncover patient pathways and produce targeted insights. ZS partnered with Takeda to create a modular patient journey capability built on diverse real-world data to help it improve decision-making.

The challenge: Takeda wanted to be able to efficiently generate patient journeys at scale, providing actionable insights without the need for customized solutions for each dataset and therapy area.

The solution: ZS's AI-powered Wayfinder solution helped Takeda streamline the process for identifying patient cohorts and journeys. Wayfinder uses deep learning to analyze real-world data, uncovering patient pathways and progression patterns. By developing template codes and a library of key metrics, the team was able to generate therapy-area-specific dashboards quickly, offering a comprehensive view of patient journeys and archetypes.

The impact: The modular and scalable patient journey capability helped Takeda generate patient insights faster and more efficiently. An intuitive dashboard offers a unified view of patient journeys so that stakeholders can explore detailed insights into disease progression, treatment patterns and patient demographics. These insights have empowered Takeda to refine its clinical development strategies, optimize resource allocation and improve patient outcomes by fostering a deeper understanding of patient needs and behaviors.

Why it matters: AI-powered tools can help pharma companies gain a granular view of the patient journey to achieve patient-centricity goals and improve health outcomes.

Helping people stay healthy through always-on prevention

Whether due to cost, hassle or disillusionment with the medical establishment, a growing number of consumers avoid the healthcare system unless they're sick. In six of the seven countries we surveyed this year, a majority of consumers said they do exactly that. But consumers also demonstrate a growing focus on general wellness and longevity, among both younger and older generations. Considering the global wellness industry is roughly four times the size of the global pharmaceutical industry today, life sciences has a significant opportunity to address unmet needs in this market.

"There is a growing wellness and longevity movement. People want to be active into old age, and their focus on maintaining health could lead to cost savings for healthcare systems. Today's healthcare consumer is also more knowledgeable than in previous generations—the ecosystem needs to do a better job of answering their questions."

– Global commercial strategy leader, a leading pharmaceutical company

It's not that the healthcare industry doubts the importance of preventive health. The challenge—for governments, payers, providers and life sciences companies alike—is making the business case for investing in health measures for those who are not currently sick. Prevention costs money today, while the rewards accrue in the future. This is compounded, especially in the U.S., by the question of who pays for prevention and who benefits?

Wide-scale preventive health is exceedingly expensive to do at scale, and the return on this investment isn't guaranteed. And the entity that pays for it isn't always the one who benefits from improved outcomes (and lower costs) years or decades into the future. It also doesn't help that reimbursement for remote monitoring or community health applications remains low or nonexistent. Even if we devise effective uses for AI in prevention and early intervention, they won't be adopted if healthcare providers struggle to recoup their costs.

But prevention has a very close cousin—risk stratification—that is more focused and for which it is easier to connect investments to savings. Imagine an algorithm built to detect signs of a rare but serious heart condition. This algorithm would inevitably also flag patients at risk of developing more common forms of heart disease, many of which can be prevented using low-cost generics. While not technically population-scale "prevention," risk stratification and early intervention represent a win-win for the healthcare system: Health plans fund inexpensive interventions today, instead of expensive ones down the line; pharma companies

benefit in the long term by having patients in the system, even if they're on an inexpensive generic medication early in their course of treatment; health systems benefit from fewer patients with advanced disease; and patients benefit from medical intervention earlier in the course of disease.

Pharma's golden opportunity in patient engagement

Keeping people healthier and lowering costs by catching and treating conditions earlier can't happen at the requisite scale without technology that engages people in their ongoing care. For pharma, our survey contains encouraging news on this front, especially in less mature healthcare markets: For all the talk of pharma's low standing with healthcare consumers, a sizable number say they'd use patient engagement apps deployed by pharma companies for things like digital consultations, concierge medicine and digital lifestyle coaching.

In the U.S., for instance, roughly 75% of all consumers said they'd be open to using health apps that pair a telehealth consultation with an HCP with a service that can fulfill and deliver a prescription. (This includes 45% who said they're likely or extremely likely as well as those who expressed indifference.) When asked how their views would change if a pharma company administered the app, rather than an HCP, 75% said either that they would be more likely to use the app or that it would make no difference. Considering how many people are slipping through the cracks in the U.S. system today—to say nothing of those in India, China and Brazil, where healthcare systems and consumers express an even greater enthusiasm for digital health apps—this is an attractive opportunity for pharma.

Consumers may be open to health support from drugmakers, but that doesn't eliminate the centrality of HCPs in healthcare. In every year we've conducted this survey, a majority of healthcare consumers across every geography say they place the greatest share of trust in their own doctor. So, while life sciences companies should look to add value across the entire patient pathway, realizing our vision for better healthcare in 2030 depends on equipping HCPs with the tools and insights to ensure each patient interaction is of the highest possible value.

The AI-powered physician: HCPs need tech to spend more time with the patients who need them

Engaging consumers early in their healthcare journeys should mean fewer people falling through cracks in the system. Sooner or later, however, most healthcare consumers will become patients, and those patients will need to visit a doctor—either in person or virtually. As we know, this process is often fraught with frustration and inconvenience, leading to patients feeling let down by the system and experiencing suboptimal outcomes as a result. Unfortunately, the combination of aging demographics, the aftereffects of the COVID-19 pandemic and growing disease burden from obesity, cancer and other conditions means the healthcare system today is ill-equipped to absorb an influx of new patients.

Liberating HCPs from busywork so they can be more human

When asked what changes to care would most improve their patients' experiences, PCPs in the U.S., U.K. and Germany put "spending more time with my patients" in the top two. It's not surprising when you consider that, in Germany, the average PCP appointment dropped from approximately 15 minutes in 2019 to under eight minutes in 2023. Over the same timeframe, the average doctor's visit in the U.S. dropped from 25 minutes to under 15. No wonder healthcare consumers in our survey said they crave more direct communication with their doctors and for doctors to better understand them on a personal level.

It's hard to spend time getting to know patients when HCPs spend, on average, more than 15 hours per week on administrative tasks. Unsurprisingly, a strong majority of doctors across all seven countries we surveyed said they're ready to embrace AI tools such as administrative assistants, medical assistants and workflow management tools to streamline that work.

AI-based clinical note-taking tools are the most visible forms of doctor helpers, but they're not the only ones. Some health plans offer AI-based solutions that allow healthcare providers to benchmark their practices against others, helping them to better manage costs and improve patient experiences and outcomes. ZS has worked with the American Medical Association (AMA) to build a gen-AI-driven prior authorization tool on top of AMA's CPT codes to ensure providers are using correct procedural codes—removing a key source of friction for providers, health plans and patients alike. Tools like these (and many others) will liberate HCPs to spend more time getting to know their patients and partnering with them to achieve their health goals.

AI for patient care, not just admin

When consumers were asked what changes would most improve their healthcare experiences, large segments across geographies listed items such as quick and easy appointment scheduling, easier billing and insurance processes, and greater coordination across HCPs. But consumers also told us they want faster disease diagnosis and increased emphasis on preventive care and long-term health. On this, patients and HCPs are aligned: Except for Germany and Japan, where HCP trust in AI is lowest, most doctors say they're likely to use AI for use cases that directly improve clinical care.

Doctors are ready to embrace AI for patient care

How likely HCPs say they are to use AI for various use cases in the future

Likely or extremely likely to use AI in the future for	Disease prediction, risk assessment and diagnosis	Disease treatment	Administrative tasks	Patient triage and experience
Brazil, India and China	**77%**	**74%**	**80%**	**78%**
U.S. and U.K.	**58%**	**52%**	**63%**	**50%**
Germany and Japan	**44%**	**35%**	**49%**	**31%**

Source: ZS Future of Health Survey

Q. PCPs: "How likely are you to use AI in the future for the following applications?" Base: 1,199 PCPs; U.S.=597; U.K.=102; Brazil=100; Germany=100; India=100; China [Internal Medicine]=100; Japan=100.

AI adoption will depend largely on the degree to which AI is used to augment, amplify and improve human decision-making—as opposed to undermining or superseding it. There are many examples of accurate AI diagnostic tools that clinicians at first rejected on these grounds before later embracing them when reframed as HCP enhancements, rather than replacements. But adoption of the most compelling applications of clinical AI also requires reimbursement models that reward adoption. Very few AI tools are reimbursed in the first place, and, for those that enhance decision-making quality, there's no explicit reimbursement. With a weak and indirect payment pathway, clinical applications of AI will remain confined to efficiency applications.

How adoption happens and whether the experience enhances healthcare for consumers and HCPs depends largely on solution design. There's just as much risk of introducing harmful bias or additional friction if healthcare companies don't bring AI into clinical pathways in a way that delivers better experiences.

Embrace of AI varies by specialty area

HCPs aren't a monolithic group, and their future AI use is likely to vary significantly across practice areas. In the U.S., only 38% of PCPs trust AI in general, while roughly half of all specialists do. Meanwhile, PCPs are more likely than specialists to use AI for disease prediction and risk assessment—possibly because they see a broader spectrum of diseases and therefore anticipate greater benefit from AI-assisted diagnosis tools.

Cardiologists, meanwhile, are the most enthusiastic about AI, with more than two-thirds of U.S. cardiologists saying they're open to using it to improve disease diagnosis, disease treatment and disease prediction. (In fact, 70% expect to use it for disease diagnosis, compared with just 57% of PCPs, 51% of oncologists and 42% of neurologists.) This likely reflects the value clinical AI already offers cardiologists in the form of tools for disease diagnosis, patient stratification, patient outcome prediction, optimized treatment plans and more. It also reflects the degree to which cardiologists view AI as a salve against data overwhelm; while tracking each of a patient's approximately 39 million annual heartbeats is technically possible, making use of this many data points isn't feasible without help. Doctors won't blindly trust AI, but they will embrace it when tools are designed around their needs and demonstrate clinical value.

Top 3 reasons why doctors distrust AI

While large numbers of doctors across all regions are prepared to embrace AI, at least for some uses, many remain cautious about specific aspects of its implementation. According to our survey, three concerns predominate among HCPs. They worry that:

- Increased adoption of AI in healthcare may raise questions about the privacy and ethical use of patient data.
- Increased reliance on AI in healthcare may lead to mistakes that place patients at higher risk during diagnosis, treatment and ongoing management.
- Bias in AI algorithms may result in differential treatment and care across patient groups.

Interestingly, given all the talk about AI replacing jobs, HCPs across all seven geographies put AI-related job loss at or near the bottom of their list of concerns.

Bridging the gap between data science and clinical practice

Despite some doctor distrust, especially in more mature healthcare markets, clinical-decision algorithms have been shown to work well. The problem? Too little effort has been made to bridge the gap between researchers developing algorithms and healthcare systems that need to incorporate them into clinical practice. Those developing clinical algorithms must bear this in mind for AI's promise to translate into improved adoption and outcomes.

Let's build the future now: Data, AI and technology can improve healthcare, but first we must align around critical goals

Our vision for healthcare in 2030 is one where companies use data, AI and technology to deliver personalized and enriching experiences across the care continuum. Reaching this nirvana state means abandoning business as usual today and enlisting every stakeholder to rally around the patient to deliver more of what they want and need. No single entity has the data, capabilities and relationships to do it alone.

Creating a better future of health requires collective solutions

Take the example of metastatic breast cancer. When taken in combination with hormonal therapy, first-line treatments have shown significant improvement over the previous standard of care. Unfortunately, they also come with a common side effect called neutropenia, a condition that weakens a patient's immune system and is a frequent source of medication nonadherence. Developing an algorithm to help oncologists understand which patients are most likely to develop neutropenia is in the interest of all parties, but doing so in the real world is tricky. Here's why:

HCPs are incentivized to know in advance which patients will respond negatively to treatment, but they lack the data and capabilities to build a predictive model. The pharma company that makes these drugs has the data, capability and incentive to build the algorithm, but they lack the power to embed their tool into health system EHRs or install care management programs with specialty pharmacies. So, while it's in the interest of the pharma company (to build share), the HCP (to improve patient outcomes), the payer (to avoid costly hospitalizations) and the patient (to get on the best therapy based on their genetics, without trial and error), none of this is likely to happen without a third-party integrator to align all stakeholders around a common goal.

Building a sustainable healthcare system that delivers what consumers and HCPs want and need from healthcare requires each stakeholder to bring in the elements that are their strengths. For **medtech**, this means genomic sequencing, virtual diagnosis and care management, and on-device data to train algorithms and trigger interventions. For **pharma**, it's translating deep disease knowledge into algorithms and equipping HCPs with the knowledge, tools and context to make the most-informed decisions for patients. For **providers**, it's implementing vigorous processes to incorporate last-mile tools safely and efficiently that improve patient outcomes and experience. And for **health plans**, it's validating that AI-driven care management programs are being done in the interest of patients and producing good outcomes at a reasonable cost. (This list is just a start.)

An action plan for every healthcare stakeholder

The industry faces a golden opportunity today to come together to use data, technology and AI to deploy new forms of care that align with consumer preferences, relieve strained healthcare systems and build toward a healthier future for all. But inertia, mistrust and misaligned incentives threaten progress. Here's one step each major healthcare stakeholder can take in the short term to kick-start progress toward the healthcare system we envision for 2030:

For **medtech,** continue the shift away from the traditional hospital-centric care model. Healthcare is moving outside the hospital for sick patients and well ones alike, yet our models are focused on providers in the hospital at the time of intervention. In 2025, be prepared to embrace the ethos of delivering care when, where and how it makes sense for manufacturers and healthcare consumers.

For **payers** and healthcare **providers**, lean into using data, technology and AI to enhance care quality and improve outcomes. The payer agenda should include personalization of care through genetic testing for members and analytics to improve the impact of care management programs, to reduce administrative hurdles and to provide better risk identification. The provider agenda, meanwhile, should include analytics for earlier disease diagnosis, more effective care management programs and more. Providers, especially those outside the U.S., should also be ready to embrace increased levels of care outside traditional settings, including by enabling additional prescribing rights to nurse practitioners and pharmacists as well as increasing use of telehealth.

And for **pharma and biotech**, it's time to deepen health system collaboration with the aim of demonstrating greater value, both for the drug and beyond it. This means partnering to develop sustainable solutions—such as risk sharing and outcomes-based agreements—that enable access to innovation, especially for high-unmet-need and high-prevalence categories. Pharma should also embrace the further use of data, tech and AI to create more efficient care pathways and improve patient experiences in service of addressing the 80% of healthcare spend that isn't for medication. And finally, be prepared to advocate for business models that reward long-term cost savings through improved outcomes tied to prevention and wellness.

It's been said so many times, but this statement still rings true: The flip side of every challenge is opportunity. Rarely is it so true as it is today for a healthcare industry staring down the twin challenges of overburdened health systems and growing consumer desire for a different kind of healthcare experience.

About ZS

ZS is a management consulting and technology firm that partners with companies to improve life and how we live it. We transform ideas into impact by bringing together data, science, technology and human ingenuity to deliver better outcomes for all. Founded in 1983, ZS has more than 13,000 employees in more than 35 offices worldwide. To learn more, visit www.zs.com or follow us on LinkedIn.

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