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The Future Of Healthcare: Success In 2030 Hinges On Resilience And Agility In 10 Areas

VISION REPORT

Summary

In the next decade, US healthcare will evolve to be preemptive — fueled by zettabytes of data, analytics that provides actionable insight, and purpose-built technology that is interoperable with the complex back ends of healthcare organizations (HCOs). But this bright future hinges on the decisions of leaders to address the forces pushing the industry to its limits. We conducted more than 50 interviews with health systems, insurers, integrated delivery networks, tech vendors, retail pharmacies, the NIH, and other experts

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to understand the future of healthcare. This report prepares healthcare leaders for the decisions that will redefine their roles and enable them to achieve the Quadruple Aim.

Healthcare Will Face Its Greatest Challenges Over The Next 10 Years

For decades, sick care has been a focal point for many HCOs as they tend to the deterioration of their managed populations. And over these years, US healthcare spending has snowballed to $3.8 trillion annually — an unsustainable number that accounts for almost 20% of the country's GDP. The US healthcare system is broken, and the decisions that healthcare leaders make in the next 10 years will determine the outcomes of the next 50.

Digital tools that rely on analytics are riddled with bias; they're built on paltry data sets, and they don't serve consumer privacy. Predictive algorithms based on inadequate or inappropriate data will result in missed diagnoses, poor care recommendations, and significant racial and/or ethnic bias. Data blocking and selective medical paternalism leave consumers in the dark when they make decisions about their care, and systemic racism creates a culture that shuns at best — and kills patients at worst. And the industry faces further challenges, including the threat of incomplete and discriminatory care, continued clinic closures, worsening provider shortages, and erosion of consumer trust (see Figure 1).

Figure 1

Healthcare Industry Challenges Have Pushed A Broken System To Its Limit

	US life expectancy dropped to **77.3 years.**	Life expectancy for individuals in the US dropped to **77.3 years in 2020**, roughly the same level as in 2003. Furthermore, drug overdose deaths **rose nearly 30%** in 2020, driven by a proliferation of the deadly synthetic opioid fentanyl as well as stress, isolation, and reduced access to treatment during the pandemic.
	$140B of medical debt is held in collection agencies.	A recent study in **JAMA** found that collection agencies held $140 billion in unpaid medical bills in 2020. This amount has nearly doubled from 2016 when another study estimated that Americans held $81 billion in medical debt. The researchers found that between 2009 and 2020, unpaid medical bills became the largest source of debt that Americans owe collection agencies.
	50% of hospitals will have negative margins by the end of 2021.	By the end of 2021, **half of hospitals** could have negative margins. This is significantly higher than pre-pandemic levels of 25% of hospitals. Continued decline in inpatient and ambulatory care services will significantly impact the financial performance of health systems.
	80% of US patients noted that their clinician was burnt out.	A **study by Wheel** found that 80% of US patients reported that their clinician was burnt out during a recent visit. Nearly one in three patients report that the care quality was worse because of clinician burnout.
	16,000 clinics closed in 2020.	A study by **The Physicians Foundation** found that 8% of all physician practices nationally — around 16,000 — have closed under the stress of the pandemic.
	Only **58%** of US adults trust their healthcare provider.	Fifty-eight percent of US online adults trusted their healthcare provider to guide them through the COVID-19 pandemic, according to the Forrester Analytics Consumer Technographics® US Omnibus Recontact Q2 Survey 1, 2020, which stands in stark contrast to the **85% who trusted** their employer.

Evolution In Healthcare Will Impact 10 Major Areas By 2030

The healthcare industry learned what it was capable of amid a pandemic, a time when digital laggards faced a business imperative to transform into early adopters. As a result, healthcare digital transformation accelerated by a decade in a matter of months. However, consumer expectations rose even faster, saddling HCOs with unprecedented demands. The speed of transformation came with a mix of negative and positive changes that both exacerbated health disparities and forever altered the way we receive medical care. With a new precedent set for healthcare, we project that the decisions made over the next decade will most impact the following 10 areas.

1. Pre-emptive And Prescriptive Care Will Create A Much-Needed Paradigm Shift

Clinical decision-making will benefit from structured and real-time data provided by consumers. In the future, robust, diverse data sets must fuel AI-driven decision tools that allow clinicians to intervene for consumers before acute events take place. Future payer models must focus on the prediction and prevention of disease and reward the avoidance of services — keeping patients at home and healthy. This future emphasizes the importance of collecting data with intention and caution to ensure that data sets represent the whole population, not just those who can access and afford healthcare.

According to Dr. Wonki Chae, an ER doctor with FACEP designation, "With the proper focus on preventative medicine, such as vaccines, or basic medical screening of conditions, such as hypertension or diabetes, advanced diseases and other major health complications can be prevented." Recent developments by Mayo Clinic take this further: "The dramatically increased use of remote patient telemetry devices, coupled with the rapidly accelerating development of AI and ML algorithms, has the potential to revolutionize diagnostic medicine," said Mayo Clinic Platform president Dr. John Halamka. This shift in delivery model will have significant ramifications on physical assets, bringing more hospital closures and greater reliance on home as a care setting. On the insurer side, risk prevention will be the future of payer models, according to Rajeev Ronanki, president, digital platforms, at Anthem. "We will require more platforms and systems to leverage data appropriately, create prediction models, and deliver excellent digital experiences for members."

2. Value-Based Care Will Be The Dominant Reimbursement Method

Seismic shifts to pre-emptive care, home-based services, and the transformation of the labour force enable HCOs to embrace fee-for-value or value-based care and take on more downside risk. The continued pressure from consumers for greater cost transparency pushes providers and health insurers to adopt episodic-based care, including capitated arrangements and bundled payments. These models proactively set a budget for how much will be paid for specific diagnoses or surgical events regardless of the services provided, allowing organizations to inform patients and members of their out-of-pocket costs upfront.

For these models to work, François de Brantes, senior vice president, commercial business development, Signify Health, said that we must start to see "automatic accountability baked into the process." The industry needs to adopt metrics that hold all stakeholders accountable, including but not limited to clinicians and patients. All parties must play a role and have a voice in selecting care settings and practice shared decision-making for patient-centricity. For many, healthcare isn't just a health decision; it can also be a financial decision. Consumers must be both informed about and involved in decisions related to their care.

3. Hospital-At-Home Will Become The Principal Care Setting

Patient care will happen at home first and at a clinic second — and only when necessary. The talk track around patient-centricity will finally shift to just that: going to the patient — not the other way around. For consumers who need acute care, providers will primarily deliver care at home. Hospitals will perform invasive procedures, and they'll only care for intensive care patients and individuals who cannot possibly have home healthcare, including those for whom home isn't a safe place for care delivery. As utilization of physical assets decreases, hospital closures will continue at a rapid pace, and health insurers will quickly swoop in to buy up assets to control the cost of care for their members.

Hospital-at-home services gained momentum in 2021, and the expansion of coverage by government and commercial payers ushers in a home-based future for the chronically ill and the elderly. All ecosystem stakeholders have started to reap the benefits of moving care back to the home, which include cost savings, patient satisfaction, and improved outcomes. As Dr. John Halamka described it, "AI-augmented decision-making will provide you the right care at the right time, the right location, and at the right cost, with the human touch."

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4. Consumer Trust Will Need A Reboot As Healthcare Crosses The Chasm To The Digital Era

The trust imperative is front and center — without the trust of consumers, HCOs will fail. Misinformation abounds, even on platforms built for clinicians. Doximity, a LinkedIn for doctors, is inundated with COVID-19 misinformation, and 12 individuals account for 65% of antivaccine misinformation on major social media platforms. Trust in healthcare is synonymous with a degree of confidence. HCOs must deliver experiences that evoke confidence from consumers across every touchpoint — from choosing a health plan to deciding when and where to get care. HCOs must balance dependability, transparency, accountability, and empathy — and be careful not to overwhelm consumers with information.

As digital experiences ramp and scale — and augment and even replace in-person interactions — it's imperative that HCOs design all experiences with trust in mind. As Rajeev Ronanki said, "Healthcare entities must make transparency and trust a cornerstone of healthcare." Newer models, including direct-to-employer players like Transcarent and subscription pricing models such as Hims & Hers Health, have set the tone for transparency-led and consumer-directed care to take hold over the next decade.

5. The Rise Of Consumer-Led Data Sharing Will Push HCOs To Democratize Health Data

In 2030, consumers will have rights to control their own health data. Health data will transform to rely heavily on consumer-generated data, rather than the data collected during the short time patients spend in an exam room and stored in an electronic health record (EHR) system. Consumers will be able to choose who has access to their data, when, and for what purpose — and have the right to revoke access. An unlikely pairing of legislation around data privacy protection and innovation from big tech firms like Apple point to this future.

ONC's Cures Act Final Rule aims to make healthcare data more portable across the entire ecosystem, including via consumer-facing mobile applications. While the new rules initially faced resistance from EHR vendors like Epic, major players now see the writing on the wall. Seema Verma, former administrator of the Centers for Medicare & Medicaid Services, said, "Providers don't own a patient's data and must give it to their patients." The future of healthcare is fuelled by data, and those that push for data blocking will be displaced. To

earn access to this data, HCOs must establish a foundation of trust and share data with an ethical imperative.

6. Digital Biomarkers Will Enable Unbiased Patient Diagnosis

To adopt a pre-emptive model, healthcare must leverage software as a medical device (SaaMD), including digital biomarkers, more consistently. Patient triage and symptom assessment will no longer depend on subjective interpretation and reporting. By using algorithms that analyze device data or past activities, clinicians and caregivers will be able to intervene before medical emergencies occur and prevent health conditions from worsening. Ensuring privacy and autonomy is paramount as digital biomarkers are incorporated into the continuum of care and self-management becomes a part of the connected care ecosystem.

The industry has already demonstrated significant strides in the mental and brain health spaces by relying on digital biomarkers that detect deterioration and enable aid for consumers who may be struggling unknowingly or in silence. Companies like KeyWise AI focus on detecting changes in brain health, facilitating early intervention that can improve outcomes. Proactive intervention also relies on arming consumers with the right tools. As Dr. Olu Ajilore said, "We need to give consumers their data and actionable intelligence." Digital biomarkers can analyze data and turn it into actions that consumers can easily follow, reducing friction around getting timely, necessary care.

7. AI Will Optimize Consumer Health Data Flow

With advances in AI and utility delivered by enterprise health clouds and platform-as-a-service vendors, healthcare no longer struggles to ingest and exchange data easily and seamlessly across the ecosystem. Systems quickly recognize, process, and catalogue both structured and unstructured data. The availability of genomic data accelerates the shift to personalized medicine. The cost of computing power will decline significantly to enable organizations of all sizes to tap into historical and real-time data and curate algorithms that facilitate decision-making and care delivery across all settings.

This future is enabled by greater adoption of interoperability standards — whether Fast Healthcare Interoperability Resources (FHIR) or a new framework that takes its place, a standard must emerge. The healthcare and life sciences industries are challenged by the need to balance data interoperability with privacy. By empowering and enabling consumers

to own their data, control how and when it's used, and revoke unwanted access, the industry can accelerate this effort to make data privacy, security, innovation, and transformation possible. As Dr. Taha Kass-Hout, director of machine learning and chief medical officer, Amazon Web Services, said, "Our customers and patients should always have control of their information."

8. Inclusive Cultures In Healthcare Will Transform Care Delivery

Healthcare will shift away from a culture of medical paternalism, and those who don't embrace an inclusive culture must find a new calling. Healthcare systems will undergo a cultural transformation on both the human resources and operational fronts to reduce clinician burnout and further involve patients in their care plans. This cultural metamorphosis will enable clinicians at all levels to practice at the top of their specialties and emphasize clinical empathy. Greater adoption of automation and AI will augment the workforce, allowing clinicians to improve operational workflows and enhance patient engagement.

Historically, a failure to dismantle the silo mentality and create high-performing teams has kept HCOs from achieving patient-accountable cultures. Much of the disruption in the healthcare industry is rooted in the consumer-driven demand for more truly patient-centric, convenient, transparent, and cost-effective solutions. As Dr. Kevin Ban, chief medical officer of Walgreens, said, "People are not looking to disrupt their providers; they do want to disrupt a system that is overly bureaucratic and where providers are on a treadmill without enough time to spend with their patients." This culture shift makes true patient-centricity possible.

9. Equitable Technological Enablement Will Be Core To Augmenting The Workforce

Clinically trustworthy AI and ML will augment decision-making and help alleviate the rise of clinician burnout. AI is already being used successfully for clinical decision support today. The future of precision medicine depends on the collection of data sets that accurately represent the population, EHR interoperability, and user-centric design. Decision-analytical modeling must be transparent with design and validation methods presented to the clinician. The labour force will also take on new roles and responsibilities. The clinician shortage will only worsen over the next decade, which will require medical students to seek out roles such as a virtualist with excellent webside manner. Today there's a divide.

Innovative startups like Wheel already spend a considerable amount of time training clinicians on webside manner, including how to convey empathy and support patients via telehealth visits. HCOs must invest in training and change management now to enable the workforce to be successful in this new world. Furthermore, the selection of new technologies ranging from telehealth to automation must include users and patients at the table. To gain acceptance and adoption, incorporate key clinical users and a patient experience panel in the process.

10. Health Equity Will Improve As The Distribution Of Best-In-Class Care Vastly Increases

Through increased availability of robust, representative data sets; reliance on analytics; and accountability of value-based care; best-practice care protocols will apply equitably across populations and geographies. Achieving health equity requires attainment of the highest level of health for all people. Dr. Lonny Reisman, CEO of HealthReveal, said that in the future, "HCOs will monitor their performance by shifting to a 'denominator of one' from many at the population level, and the most germane measurement is the one that is attributed to you as an individual." Care for consumers must take a holistic approach with respect to physical needs and the social determinants of health.

In the next decade, the industry must course-correct and break down the inequities that exist for marginalized populations. HCOs are experiencing a reckoning when it comes to the lack of equity that persists today. While healthcare is an assumed right for some, others are left behind. HCOs must rely on their values and mission statements, not hard ROI, to guide decision-making on investment in healthcare equity. Design experiences that remove friction and ensure that the communities you serve have a fair opportunity to achieve optimal health and wellness. In turn, improved experiences will benefit all, leading to reduced costs and improved health outcomes.

Prepare Your Organization For Success In 2030

Healthcare experienced a decade of transformation in a matter of months. The acceleration of both digital experiences and consumer expectations demonstrated what the industry is capable of when put to the test. HCOs must continue their transformative efforts across multiple fronts to set themselves up for success. We asked healthcare leaders across the

industry for their advice and inquired about the "one thing" they'd recommend that HCOs do in the next one to two years. Heed their advice, and take the following into consideration for your strategic planning and operations:

1. **Embed cybersecurity into all decisions.** A more connected healthcare ecosystem will only raise the threat level for cyberattacks. HCOs must adopt a Zero Trust eXtended architecture now to thwart these attacks. This requires moving security from a network-oriented, perimeter-based model to one based on continuous verification of trust. Conversely, hospital assets, such as medical devices and employee endpoints, that require access to patient data must be appropriately segmented and continuously authenticated based on identity, clinical need, and risk. Quantum computers are gearing up to break today's encryption.

2. **Evolve your operating model to embrace an inclusive culture.** HCOs must embrace a culture that moves away from medical paternalism and checks itself for bias. Many operational and analytical processes have bias baked in — from measuring pain in Black patients to leveraging analytics models to determine cognitive function recovery after a concussion. Systemic change must occur at cultural and operational levels, including but not limited to medical education and training, care protocols, and clinical decision support tools that break this cycle. When asked about the future of healthcare in his area of orthopedic surgery, Dr. Paul Kim highlighted the need for training earlier on, as "minimally invasive procedures (a trend moving forward) weren't taught in residency."

3. **Uphold a culture that truly puts the patient first.** The rise of the patient-centered medical home still forced patients to go to their clinicians. The models emerging today are disruptors that bring care to the patient wherever they are — in the comfort of their own home, in the office, or any other virtual setting. This shift is just the beginning of the transformation of care. Embrace new care settings, experiment, and refine your operating model and pricing to win over customers with competitive differentiators. Collect the data you need to understand your customer's journey and meet them where they are. Dr. Adrienne Boissy, former chief patient experience officer at Cleveland Clinic, recommends including patients on all your committees. Make the experience easy: Remove barriers and jargon and ensure equitable access to care.

4. **Understand the shifting value of data and protect it at all costs.** This starts with earning the trust of your customers. The value of the data you have today — and will continue to collect in the future — will grow exponentially over the next decade. Your business cannot compete without protecting security and data privacy. Be prudent about what data you collect — think less is more. This will lead to greater consumer trust and lower strategic execution costs. Ask yourself key questions: How will we use the data? Who will use the data? How will we protect the data? How will we deliver value to the consumers who provided the data in the first place? This will enable your organization to establish a data economy that will improve patient outcomes.

5. **Drive patient outcomes with your interoperability strategy**. Develop an interoperability strategy that optimizes how EHRs, consumer apps, devices, and all other systems exchange, process, and interpret data. Don't sit back and allow enforcement of policies on interoperability and access to consumer data to dictate the pace of transformation. Develop standardized technical and semantic frameworks that exchange pertinent data at the right time across internal and external entities. This will drive informed decisions, enhance provider performance, reduce clinician burnout, and ensure the delivery of high-quality care.

6. **Establish new revenue streams that embrace low-acuity care settings.** Get comfortable with new care settings, establish revenue streams, and remove barriers to consumer adoption of new technology. The use of remote patient monitoring enables improved financial performance in both fee-for-service and value-based care models. However, as Steven Zacks, MD, MPH, said: "Despite advances in remote health monitoring, my opinion, based on decades of experience in practicing medicine, is that it will not have a significant impact on health outcomes or compliance. Those who need these devices the most — the economically underprivileged with poor health outcomes — will be the least able to afford these devices." To tackle the $3.8 trillion cost conundrum that is healthcare, we must make these devices affordable to all. Offset the cost of devices by embedding capabilities into care plans for chronic care and post-acute monitoring with aligned incentives — either driving service utilization (fee-for- service) or reduction of services (fee-for-value).

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7. **Get comfortable with more risk and new definitions of success.** Value-based care will dominate the future of healthcare. Organizations that proactively tackle inefficiencies in care delivery, reduce costs, and improve outcomes now will be well prepared for the future that will be thrust upon them. Redefine success based on outcomes and preventing services from happening in the first place. In a continuous monitoring model, HCOs must demonstrate their ability to keep patients healthy, not render more services. Health insurers that push for more risk now will be better served with high-quality networks that benefit their members in the long run and be better enabled to embrace their new role in the future.

Supplemental Material

Companies And Experts We Interviewed For This Report

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