



PRESCRIPTION FOR CHANGE

PROTECTING THE NEW HEALTH ECONOMY
IN AN AGE OF TRANSFORMATION

INTRODUCTION: #SHIFTHAPPENS

Welcome to the New Health Economy.

The phrase, coined by consulting firm PWC, describes a healthcare industry that's knee-deep in a digital transformation that's upending everything about care provision.

This transformation is remapping competitive boundaries with unconventional market entrants and unexpected alliances. It's giving consumers new choices and technology to make healthcare more personal. And for providers, patients and insurers alike, it's also creating new cybersecurity and compliance risks.

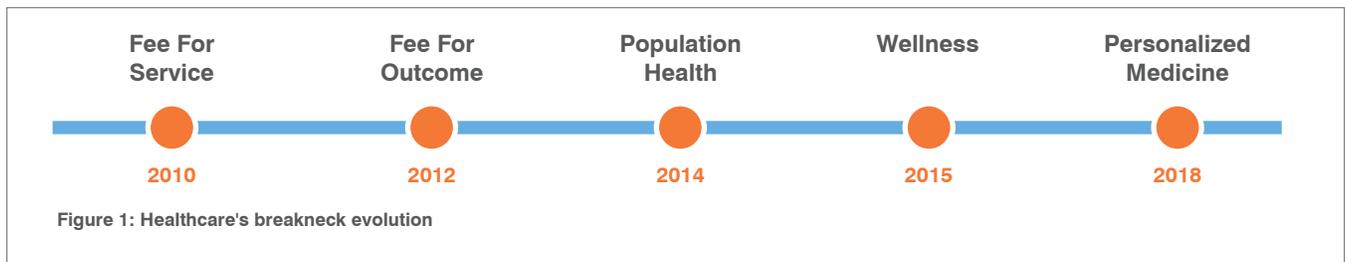
Digital technology is spurring medical advances that would have seemed unimaginable just a few years ago. Genome-personalized treatment, AI-assisted diagnostics, robotic surgery, mass-market wearables—to name just a few examples—are now routine.

But when it comes to IT and business practices, much of the industry remains rooted in centuries-old practices. Paper-based recordkeeping, manual appointment scheduling, and large, centralized care facilities can make basic services like flu shots more cumbersome than booking a vacation or refinancing a mortgage.

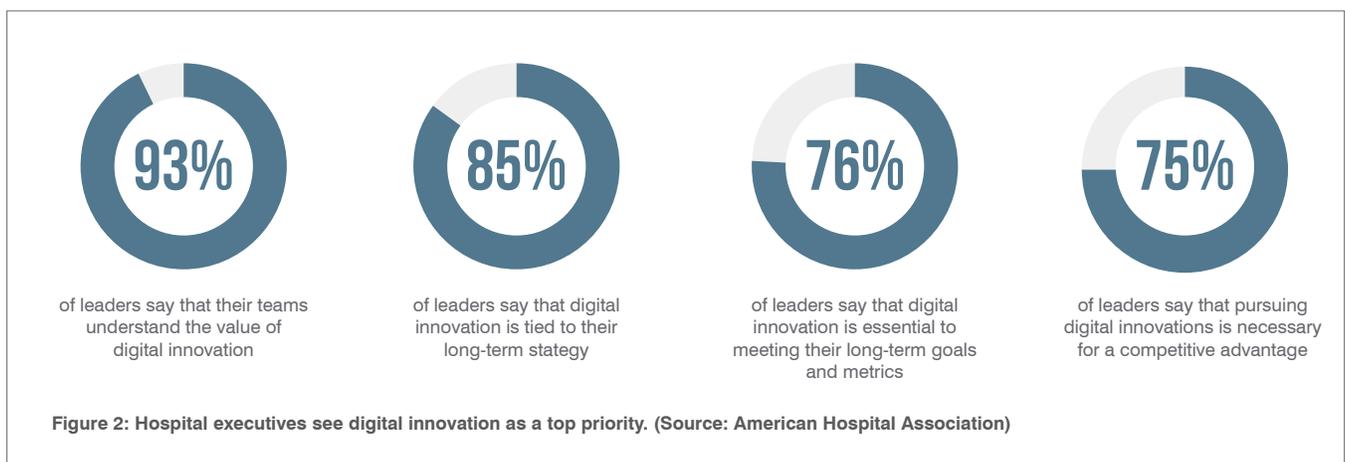
Ready or not, healthcare's future has arrived.

DIGITAL TRANSFORMATION AND THE NEED FOR SPEED

Healthcare is transforming at breakneck speed—yes, healthcare, where nothing occurs at anything like breakneck speed (see Figure 1). And unlike other healthcare shifts—which historically have come at prodding, payments and punishment from the government—this one is being driven within the industry itself.



In a recent poll of healthcare executives, 75% said digital innovation is a competitive advantage.¹ Many hospital execs recognize that this is the only way they will remain relevant in the New Health Economy.



¹ American Hospital Association and AVIA. "AHA & AVIA Digital Innovation Survey," September 2017.

Many more well-known healthcare industry providers will take a page from Blockbuster's playbook and assume that they're immune to the effects of a technological shift.

Like the now-bankrupt video-rental chain, they won't be.

DISRUPTION EVERYWHERE YOU LOOK

Everyone agrees that digital innovation has become a business imperative. The question is why. Are healthcare organizations suddenly hugely ambitious? Or has the need for survival kicked in?

The answer: it's both.

Interlopers have woken up to the notion that healthcare is "disruptable," and they're doing exactly that. At the same time, legacy healthcare players have begrudgingly acknowledged that they can no longer survive under old business models.

Patients have begun to accept care from non-traditional sources. And that has many of them reevaluating the role of their primary care provider.

If a patient can get a flu shot in a grocery store or get strep throat diagnosed at CVS, what other services can be delivered outside of the doctor's office, hospital or emergency room? For that matter, what services can be delivered at home from a PC, phone or wearable?

Today, innovation is the name of the game.

Interlopers abound

Patients have options and they know it. Healthcare providers know it too. That's why many are petrified of the disrupters lurking around the edges of the industry—or perhaps more accurately, eroding the edges of their industry.

The healthcare industry may have enjoyed a smug certainty that their patients would never trust health services from those outside the industry. But that confidence has faded fast. We've seen this movie in other industries, and it rarely ends well.

Walmart, which has already disrupted grocery, toys, and other retail niches, is arguably now a care provider. The retail giant reports more than \$50 billion in sales of healthcare products and services per year. That's \$50 billion that used to go somewhere else in the care ecosystem. Given that the healthcare revenue pie is not substantially larger than it was before Walmart entered, someone's losing out.

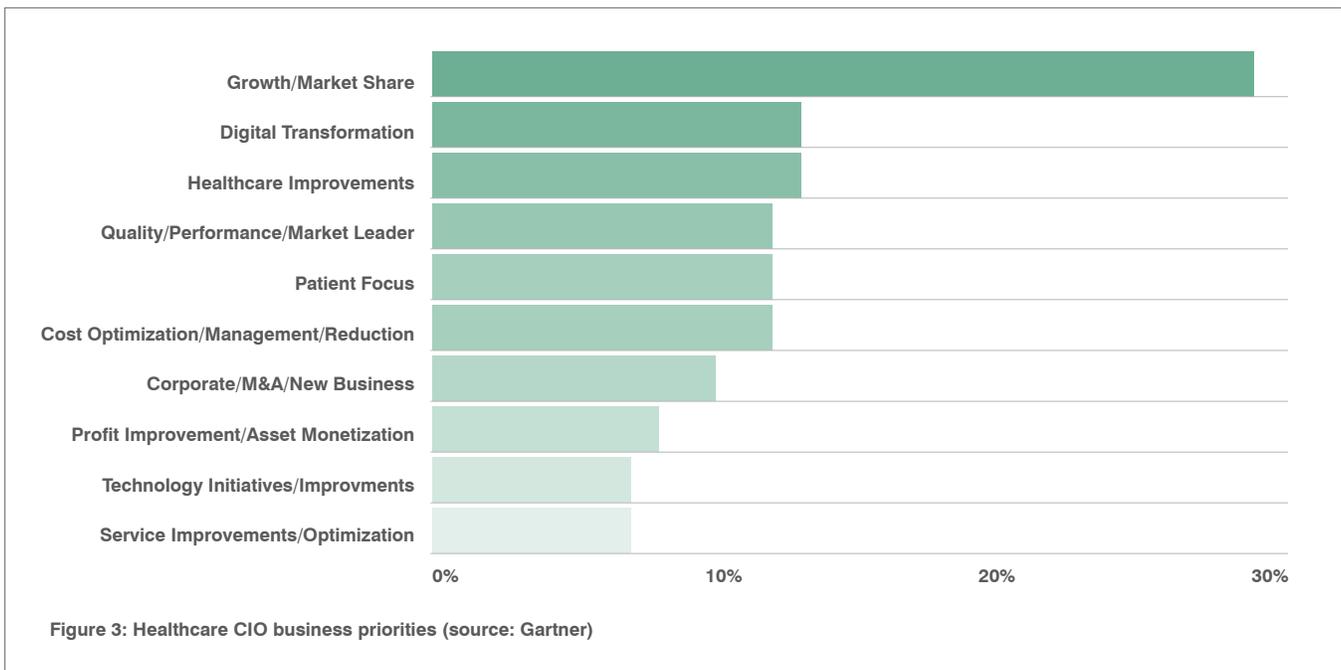
A similar story is happening at CVS. The drugstore chain now has 1,100 Minute Clinics serving more than 37 million patient visits per year. That's 37 million engagements that used to go somewhere else in the care delivery system. And Minute Clinic's list of services is growing. The in-store clinic now handles minor illnesses, minor injuries, skin conditions, travel health, vaccinations, injections, wellness, screenings, women's services, and more.

What will Apple and Google's health play be? No one's sure, but they are clearly tooling up. If the healthcare market were a war and healthcare sent their satellites for reconnaissance, they would see the equivalence of troop buildup all around healthcare's borders.

And then there's the Amazon question. The online behemoth announced in October that it's teaming up with financial giant JPMorgan Chase and investment firm Berkshire Hathaway to lower healthcare cost for workers. The companies have revealed few details, but the announcement has already created ripples in the healthcare market.

Every healthcare company is a tech company

CIOs, though still not normally part of hospitals' executive team, nonetheless see the role of digital transformation in growing and gaining market share (see Figure 3). (Yes, despite their staid reputation, hospitals are now focused on growth and market share.)



ONLY THE MOST ADAPTABLE SURVIVE

While patients have begun to welcome the convenience and affordability of a new primary care delivery options, legacy providers are asking themselves how the shift could affect them:

- How many revenue opportunities are they missing?
- How are they evolving to win back some of this business?
- How are they staying relevant in a changing market landscape?

As Charles Darwin—and countless business leaders since—observed, it’s not the strongest nor the most intelligent that survive, but those that can best manage change. It’s also a lesson healthcare would be well served to embrace.

Healthcare is facing an existential challenge, one many of them are ill-equipped to handle.

Consider the hassle of getting a flu vaccine one of the top clinics in Silicon Valley. Patients are still required to fill out patient forms to get the shot—a paper form, in Silicon Valley, at one of those most prestigious clinics in the country.

That clinic is owned by one of the largest health system in the county, which has spent more than \$800 million to deploy an electronic medical record system (EMR) to digitize patient record.

No wonder healthcare leaders are so focused on digital innovation. Not all current health providers will survive in this New Health Economy. No health system too big to fail.

Some Old Dogs Are Learning New Tricks

Healthcare has always been in a state of transition. But today, the industry is embarking on a period of truly remarkable transformation.

Established industry players are keenly aware of how disruption has shaken up other industries. That’s why former adversaries are banding together. And it’s why others are bracing for threats posed by interlopers.

There are many. Amazon is eyeing the pharmacy business, for example. And other tech companies are touting virtual medical care via a computer or cellphone.

But while some old parts of the industry are learning new tricks, providers have been slower to adapt. That’s a concern—providers are the segment that’s getting disrupted in real time.



Figure 4: Recent healthcare alliances and mergers

The clock is ticking

The National Rural Health Association has predicted that up to 700 hospitals could go out of business over the next decade.² The group blamed a changing economy and evolving health care systems. Becker's Hospital Review reported that 22 healthcare organizations (many associated with some of the nation's largest health systems) closed in 2016.³ It blamed dwindling patient volumes as the main reason.

A Blockbuster scenario—a company that once employed 84,000 vanishing almost overnight—is a real possibility for leading health systems. No wonder digital innovation and business transformation are at the top of a hospital's CEOs agenda. After all, 52% of companies in the Fortune 500 fifteen years ago no longer exist.

² Lauren Weber and Andy Miller (Georgia Health news and the Huffington Post). "A Hospital Crisis Is Killing Rural Communities. This State Is 'Ground Zero.'" September 2017.

³ Ayla Ellison (Becker's Healthcare). "22 healthcare bankruptcies so far in 2017." September 2017.

PREPARING FOR THE NEW HEALTH ECONOMY

So what do patients want from their provider in the New Health Economy? Clues are everywhere. Just look at where disruptors are attacking and where innovation is starting to make an impact.



WELLNESS

People want a health provision they can engage with on their entire health journey, not just a sick-care partner.

CONVENIENCE

Health consumers are a lot more savvy. They do almost everything in a virtual or online setting. So why not their healthcare?



PERSONALIZED HEALTH

For too long, healthcare has been a "one size fits all" business model. But now patients demand a more tailored experience and a treatment recommendations made just for them.

DATA-DRIVEN CARE

Patients have embraced analytics, wearable device, home health monitoring equipment, and so on. They want this insight factored into their care experience.



HEALTH CHOICE

Everyone's first doctor is "Dr. Google." Savvy consumers have a far better understanding of what ails them, so they want care options and choices.

HOW TRADITIONAL PROVIDERS CAN WIN

CVS and Walmart understand the desire for a better consumer health experience. And they're adept at delivering better access, more cost effective primary care, more affordable medications, turnkey health solutions, and more convenience.

Quality counts

One clear advantage that traditional healthcare providers still have over the disruptors is a powerful one: the quality of care provision still matters. And for older health consumers, it matters a lot.

Health consumers care about the clinical experience, specialty care, patient-centered service, and experience of the physicians. In these areas, consumers trust traditional healthcare providers.

An old joke makes this point more pithily. "Q: What do you call the person with the worse grades in med school? A: Doctor." You don't hear the same kind of reverence for retail workers or even those in the tech industry.

Health consumers care about these qualities, so traditional providers need to focus on how they can maximize the value of these attributes within the new health economy.

Nurture relationships—and patients' privacy

The doctor-patient relationship is the cornerstone of quality care.

The sanctity of this relationship has been enshrined by a physician oath since the early days of healthcare—from the Hippocratic Oath in the 17th century to the modern version required by the American Medical Association.

Consider one aspect of today's pledge: "I will respect the privacy of my patients, for their problems are not disclosed to me that the world may know."

Now think about the importance of the oath in relation to the New Health Economy.

How difficult will it be for healthcare providers to establish a trusted relationship when more and more of these encounters take place online? How often will a doctor get the advantage of a face-to-face meeting to form a bond with the patient?

Healthcare, an industry with a checkered history (at best) of safeguarding patient data, will have to rely on the strength of their digital relationships to adhere to the basic tenants of the physician oath.

Safeguard your patients' data

Demonstrating a strong ability to safeguard patient data is not just essential. It's a key way for healthcare providers to gain a competitive advantage.

A strong security posture is not just about meeting regulatory requirements. It's necessary because hospitals must be seen as good stewards of patient data. And it preserves hospitals' trusted status in the new health economy.

Information security is a critical component of patient safety. And it's a business fundamental for any health institution. Your patients, community and clinicians deserve a clinical experience free from fears that their most personal information be exposed in yet another patient data breach.

Protecting patient data is a moral obligation. And it's a business imperative. But it can also become a true competitive advantage.

PROTECT OR PERISH

Organizations that demonstrate a thoroughly secure environment will be the winners in a market economy as others wither.

Meeting some antiquated compliancy requirement may have been table stakes a long time ago. If this is still your security focal point, don't be surprised if your patients demand a lot more.

This will be a huge challenge for a many healthcare providers. But poor data security infrastructure has been a problem far too long. In today's changing healthcare market, health institutions have no other choice but to solve it now.

HOW PROOFPOINT CAN HELP

Proofpoint can help you gain a competitive edge with security solutions that protect the aspects of healthcare that are most important and most vulnerable: people.

Based the data they have access to and how they use technology, every person represents a different level of security or compliance risk. For example, a nurse might have more access and exposure to patient information than the receptionist does. But the receptionist might be more prone to click on links in email and might access email on a mobile phone.

Traditional security architectures focus on the network and the endpoint rather than people. So these legacy tools can't see—let alone stop—advanced threats that put your data at risk.

New infrastructure, new risks

At the same time threats are changing. As the healthcare industry moves beyond the network perimeter to the cloud and mobile devices, so do attackers. But threats don't just move—they take on new forms and targets.

Suddenly, credential phishing unlocks access to far more than an email account. It gives attackers access a wealth of data stored in the cloud, beyond the reach of traditional security tools.

A new, people-centered approach

Our cloud-based, agile strategy centers on protecting people. We help stop threats before they reach your clinical and support staff. And we equip your security teams to respond quickly when a threat gets through.

Our approach is uniquely positioned to help you prevent, detect, and respond to advanced threats before they cause lasting harm. Instead of myopically focusing on infrastructure, we protect people—whether they're targeted through email, mobile devices, social media, cloud apps or the web.

Our healthcare solution is aligned to where healthcare needs the most protection in the New Health Economy. It includes:

- The industry's most effective protection for email—the most visible and targeted cloud app for healthcare firms
- A leading cloud access security broker (CASB) solution for Office 365 and G Suite.

This combination, unparalleled in the security market, helps healthcare institutions:

- Secure all forms of patient communication—at rest and in motion
- Protect against ransomware, general phishing, credential-phishing attacks
- Safeguard against email and other forms of digital fraud (including business email compromise, or BEC)
- Allow consultant physicians to safely use unsanctioned platforms and messaging tools
- Prevent data loss to keep PHI safe

To learn more about how Proofpoint can help you
protect what matters most in healthcare, visit
proofpoint.com/us/solutions/healthcare-information-security

ABOUT PROOFPOINT

Proofpoint, Inc. (NASDAQ:PFPT), a next-generation cybersecurity company, enables organizations to protect the way their people work today from advanced threats and compliance risks. Proofpoint helps cybersecurity professionals protect their users from the advanced attacks that target them (via email, mobile apps, and social media), protect the critical information people create, and equip their teams with the right intelligence and tools to respond quickly when things go wrong. Leading organizations of all sizes, including over 50 percent of the Fortune 100, rely on Proofpoint solutions, which are built for today's mobile and social-enabled IT environments and leverage both the power of the cloud and a big-data-driven analytics platform to combat modern advanced threats.

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