

**HEALTHCARE AND BIOMEDICAL SERVICES** 





Incumbent players are more likely to support the status quo with data siloed in disparate systems. For them, healthcare is a business that benefits by keeping patients captive to their services by making their data available only within their business ecosystem/network.

A new class of healthcare innovators is emerging that is ready to shake up how care is delivered. They are eager to offer patient-centric services that tap into and make big pools of data usable from interoperable systems. The goal is to provide solutions that enable people to focus on their overall wellness and improve treatment outcomes.

What happens next is largely dependent on the willingness of government regulators and companies to move forward with mandated data interoperability initiatives. We know from past efforts that the pace of advancement is slow.

Ultimately, consumers who have gotten used to the way digital transformation has changed how they shop, bank, find housing and access a variety of other services will push disruption in how healthcare is provided.

So, where do healthcare innovators begin?



# TRENDS Driving Change in Healthcare

Five trends have surfaced that healthcare innovators can tap into now to help meet consumers' growing demand for solutions centered around their needs.

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The healthcare ecosystem is shifting toward patient-centric care

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A pain point for any member of an ecosystem has the potential to elevate or derail its partner members. In the U.S. healthcare ecosystem, dependencies abound among countless factors and processes, where a fault in any one can unsettle the others. Risks are everywhere, making them hard to quantify or even see clearly.

Similarly, a patient's health is the sum of many dependent factors the patient's own ecosystem. Considering all the associated risks is challenging at best. Treating symptoms or illnesses may work in the short term, but it's too narrow an approach to lead to better patient health.

Instead, successful value-based healthcare requires looking beyond a person's particular condition or diagnosis. A broader, whole-person understanding is critical to patient health and lays the foundation for human-centric healthcare.



### Meet the Healthcare Ecosystem

Challenges or failures in any one sector of the U.S. healthcare system can improve or impede the function of healthcare anywhere, at any level. The system's complexity is partly because of the number of players, which include:

- Payers
- Clinicians
- Outpatient Providers
- Hospital Systems
- Diagnostic Centers
- Specialty Providers
- Service Vendors
- Technology Vendors

### Laying the groundwork to be patient-centric

Many organizations incorporate social determinants of health \* (SDoH) into care management strategies. SDoH are the cumulative experiences and environments that affect patients' health, risks and outcomes. They are a good starting point for organizations that aim to consider the whole person when providing care. Analyzed collectively, SDoH can help the healthcare ecosystem shift toward a framework that can support patients' overall health in all aspects of their lives.

For example, when healthcare organizations prioritize SDoH, they pay more attention to mental health. They partner with trusted community groups. Their services aim for wellness by combining knowledge, focus, treatments, diagnostics and therapies. The patient moves to the center of their strategies, long-term planning and delivery of care.



#### Social Determinants of Health = The Whole Person

#### What are social determinants of health?

SDoH are the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality-of-life outcomes and risks.

#### **SDOH CAN BE GROUPED INTO 5 DOMAINS:**



Stability

**Education Access** and Quality



**Healthcare Access** and Quality



Neighborhood and **Built Environment** 



Social and **Community Context** 



Source: https://health.gov/healthypeople/objectives-and-data/social-determinants-health



# Traditionally, the scientific and medical communities have approached care, and even public health, from a distance

A person has been a "subject" instead of a consumer of treatments, diagnostics and therapies. In the scope of patient-centric healthcare, we need to have the focus of care delivery be on the consumer/patient and not just on the scientific study of care or medical outcomes.

People don't see themselves as "subjects" of studies. When they think about who they are, it's not as a collection of comorbidities, symptoms, diagnoses or SDoH. Instead, they may see themselves as a parent, a child, a friend, an employee or a community member as well as a patient. They don't see their efforts toward regaining health, fitness or well-being as "care gap closure."

To understand the whole patient, a provider must gather information personally, through an existing relationship or an objective data source.

The art of engaging the human in healing and well-being must be patient-centric to be effective. This doesn't mean that scientific studies, scientists and teaching hospitals focused on the study and practice of medicine are not critical. Advancements in medicine and science are important to improving treatment, cures and diagnostic capabilities. However, in care delivery environments, the study and practice of medicine can no longer be the primary focus; the individual must be at the center of care design and delivery.

The design of the healthcare ecosystem doesn't always support such interaction, as it can separate payers, providers and other members of the ecosystem from their consumer populations with a tangle of regulations, opaque processes and hierarchy. Changing those longtime conditions isn't easy for established companies or new ones. The barriers that keep the wheels turning on the ecosystem also keep newcomers from entering the industry.

# Culture and barriers to entry keep innovation at bay

Any new organization entering the U.S. healthcare ecosystem must overcome significant obstacles simply to get started:

- The increasingly complex regulatory environment affects every aspect of operations.
- Advisors with healthcare and medical expertise are critical to every function, from driving compliance to knowing which supplies to order based on quality, outcomes and safety.
- Staying on top of the latest information is challenging in every sector of the ecosystem, even for longtime players. For newcomers, it's a mountain to climb.
- Healthcare professionals learn about ongoing advances, regulatory changes and best practices through specialty and subspecialty medical and research associations — affiliations new organizations may not have.
- Privacy, security and liability risks are massive for organizations of every size, in every region.
- Nuanced legacy culture can be discouraging and unwelcoming.

Perhaps the most difficult issue for innovators to tackle is healthcare culture. The hierarchical nature of the ecosystem, from companies and business leaders to staff members, is pervasive.

More tangibly, healthcare's pace is different from all other industries because of the importance of quality standards. The focus on quality helps health organizations gain certifications, achieve compliance and prevent mistakes — all in support of doing no harm and avoiding dangers to clinicians and patients.



# Healthcare Ecosystem's Culture Keeps Out Innovators

Big business is unwelcoming to disruptors — faster, sharper, more accessible, even friendlier — who are more focused on consumer needs.



# Existing system supports longtime players, discourages new care delivery models

Established organizations in healthcare subsectors — like hospitals, payers, providers, life sciences companies, pharmacies and subacute care and diagnostic outpatient centers — rely on those barriers to entry to minimize disruption in the industry. The complexities keep innovators from competing with organizations already entrenched in the ecosystem.

Unfortunately, the barriers to entry are also obstacles to progress at a time when the ecosystem truly needs the strength and disruption of innovators.

It's common knowledge among healthcare leaders that new companies and innovators trying to instigate change often fail. Those failures can prompt a mocking "they should have known better" attitude from leaders in the ecosystem — symbolic of a culture that has yet to fully embrace a transparent, large-scale shift toward reducing costs and promoting patient-centric care.

Examples of failing healthcare companies litter the last two decades. In the case of pharmacy and retail companies that attempted to provide primary care, they assumed that convenience would drive consumer choices.

Instead, they discovered that the existing ecosystem is necessary for consumers to perceive value in the care they receive. For example, a patient who has a health checkup may need follow-up bloodwork and a scan. A retail primary care provider might not have relationships to referral labs or diagnostic outpatient centers — and instantly, that provider is less valuable to the patient.

Those disruptors and other new entrants into healthcare learned that their programs must connect to the ecosystem to deliver value to the patient, drive transformation and promote new care delivery models in traditional healthcare settings. It was a costly lesson about trying to change the status quo independently.

# Disruption can bring patient-centric care and improve outcomes

Sectors throughout the ecosystem are competing for the same consumers and revenue. Historically, the organizations with the best predictive models, information accessibility and stable, secure operations have claimed more of the available dollars.

At the same time, consolidation among payers, providers, service vendors, pharmacies and more is increasing.

Technology giants entering the frame are a new wild card in the competitive landscape.

As the Centers for Medicare & Medicaid Services (CMS) and consumers are pressuring the entire ecosystem to reduce costs and deliver care in new ways, innovative healthcare organizations are figuring out that transformation is the way to compete on cost and pricing.

Innovation could disrupt the healthcare ecosystem by shifting the focus to the patient. Such changes could introduce a new level of technology and convenience that consumers already make full use of in fields like banking, retail and education—and those tools would dovetail with new regulations related to electronic health information.





New regulations are shifting healthcare strategies

The federal government is pushing healthcare organizations with new regulations that give patients more control over their data and disrupt strategies throughout the ecosystem. Consistent with the goal of patient-centric healthcare, patients will be in charge of their health information — an ability that consumers have come to expect after managing their personal records in other sectors for decades.

Electronic health information (EHI) has long been a conundrum in the industry, with patients navigating opaque processes that limit information sharing and affect their care. Similarly, the lack of clarity and transparency related to pricing has left consumers unable to make informed decisions. These new regulations will help untangle the complexity of health information sharing in ways that will empower consumers and improve services, quality and costs.

In addition, they will make data more accessible in broader ways. It's common for healthcare organizations to block payers and hospital systems - even in their own regions - from seeing data about market share or pricing because, for example, competitors could use that information as a differentiator. New rules will increase transparency and prevent organizations from interfering with the free flow of data.



### Whole-person healthcare and science: friends or foes?

As the nation moves toward centering the human being in the strategy, planning and delivery of healthcare, we ask:

How can science and whole-person care fit together?



#### Here's what that could look like.

Improving health is a core value with which we all can align. We know the science and study of medicine is critical to the advancement of new innovative treatments and therapies. At the same time, science and studies shouldn't overshadow a consumer's ease of engaging in treatments and therapies.

Instead, the pursuit of improved health requires a shift in focus. Rather than the study of medicine dominating the delivery of healthcare, we could separate the rigor of science from how we approach patient health. Furthermore, we'd acknowledge and appreciate the roles of scientists and researchers — while understanding that they are different and separate from the art of engaging the human being in healing.

Even though this is a different approach, it wouldn't mean detaching science from care and therapeutic delivery services. One potential guideline is Healthy People 2030, a multidimensional program from the U.S. government's Office of Disease Prevention and Health Promotion. The program focuses on measuring 355 core, developmental and research objectives, including leading health indicators, health and well-being and social determinants of health.

This new viewpoint would treat the whole person with knowledge and focus, applying the right available treatments, diagnostics and therapies. When the science and art of medicine unite in support of whole-person healthcare, improving health grows closer to becoming an attainable, accessible, equitable goal.

# New regulations give patients more control over their health data

#### 1. 21st Century Cures Act 🔭

When: Mar. 9, 2020

What it does: The 21st Century Cures Act is from the Office of the National Coordinator for Health Information Technology (ONC) promotes innovation, interoperability and the free flow of data. It empowers patients with secure, straightforward access to their complete EHI in real time.

#### 2. Interoperability and Information Blocking

When: Apr. 5, 2021

What it does: As a practice, information blocking obstructs the free flow of electronic health information. The Cures Act's interoperability and **information blocking provisions** \* support transparency in technology and give consumers access to information about healthcare services, quality and cost. The rules prevent service vendors, hospitals and payers from blocking patient data at the expense of public health and patient convenience.

#### 3. Hospital Price Transparency

When: Jan. 1, 2021

What it does: The CMS hospital price transparency rule \* mandates that hospitals post standard charges online for all items and services, including negotiated rates with each payer, so that patients know the cost of a service before receiving it.

This new level of transparency will enable consumers to make more informed choices. With consumers able to estimate the cost of care, hospitals may begin to compete on the basis of price — which would drive down the overall cost of healthcare.

#### 4. FHIR API Readiness

When: Dec. 31, 2021

What it does: The FHIR API Readiness \*\* regulation enables secure access to data for those who need it or have a right to it. The rule requires service vendors, payers and providers to be equipped to communicate on consent using HL7® FHIR, a standard for healthcare data exchange that defines how healthcare information can be exchanged between systems. Service vendors, payers and providers must present data through a consent-orchestrated, available API on their websites, for patients and their designees to download.

#### 5. Transparency in Coverage

When: Dec. 31, 2023

What it does: Whereas the Hospital Price Transparency rule applies to hospitals, the **Transparency in Coverage** \* rule applies to group health plans and health insurance issuers. The two regulations are similar in that they share the same spirit: empowering patients to compare costs as they would for any other service, so they can make informed choices before committing to a provider or scheduling care.

According to this rule, group health plans and health insurance issuers must disclose pricing and cost-sharing information to participants, beneficiaries and enrollees. They must provide real-time, personalized access to cost-sharing information, including an estimate of a patient's cost-sharing liability, through a payer's web-based self-service tool.



Beyond these regulations, ONC and the U.S. Department of Health and Human Services Office for Civil Rights (OCR) are considering easing and changing HIPAA laws. Other mandates related to transparency in pricing, contract negotiations, drug prices and data blocking are in development.

These additional requirements will undermine corporations that misuse their data to avoid paying for treatment. They also will target predatory companies that form new payers or models of care.

All these measures ensure that organizations use data to support patient health, moving social determinants of health — and the entire patient — to the forefront of healthcare.



# ▶ Only about 44%

of providers and health plan executives have identified a leader to drive their data interoperability efforts.

# It's prime time for healthcare disruptors

Requiring organizations to empower consumers by enabling the sharing of patient data could be a springboard to a more patient-centric healthcare system.

Meanwhile, a **2021 PwC's Health Research Institute survey** of providers and health plan executives showed that less than a quarter (24%) believe their organizations see the new regulations as a strategic opportunity. Instead, the expense and enormity of compliance seems more daunting, so much so that only about 44% had identified a leader to drive their data interoperability efforts.

In addition to compliance risks, the new regulations will generate stronger public opinion as time passes. Every sector in the healthcare ecosystem must be mindful of the risk of negative media attention or research that spotlights their shortcomings. Communication strategies are more important than ever as payers and providers fight for consumer trust. It's only a matter of time before empowered consumers begin to feel that regulators are more on their side than health organizations are.

For forward-thinking organizations that embrace innovation and healthcare technology, the development of regulations, and even the related risks, are cause for optimism. Americans have demanded a more transparent healthcare ecosystem for decades — and the regulations create the right environment for the kind of fresh thinking that can win people over.

Regulations present a unique strategic opportunity for innovative organizations that can transform their businesses from the inside out while achieving compliance. The time is right for strategic, tactical and technology disruption that moves the patient to the center of healthcare.



An avalanche of consumer data is shaping care plans

Even 10 years ago it was hard to imagine the volume of data Americans now generate every day. Whether through consumer- or clinician-driven devices, we've opened the floodgates to endless streams of different types of health-related data.

This sparks the "sky's-the-limit" possibilities in terms of what we can learn about people's health — but it's useful only if we know what to do with it. Regulations, interoperability and data analysis are all critical to managing the data.

# Consumers share data constantly and voluntarily

Chances are good that you're sharing data about yourself as you're reading this. People attach smartphones, wearables and other devices to themselves and their homes every day. Perhaps they intend to track their number of steps, sleep, breathing patterns or oxygen levels, but they record nearly everything about their health and daily activity.





▶ 88% of consumers

who used telehealth for the first time during COVID-19 would use it again.

The pandemic dramatically increased data sharing. People added new devices to their lives in record numbers, especially those who needed to manage their health during times of minimal in-person interaction.

Now, many U.S. consumers use digital tools to track their health — and they aren't too concerned about privacy. Wearables, hearables and other devices generate data constantly, as do smart-home devices. Simply by using these devices, consumers give their data away freely, sharing it with all kinds of companies that store or sell it.

### Data sharing increases patient compliance

Virtual healthcare skyrocketed during the pandemic, even among people who hadn't engaged with their providers remotely in the past. Among consumers who used telehealth for the first time during COVID-19, 88% would use it again, according to the PwC's Health Research Institute's COVID-19 consumer survey 🔭 .

Digitally delivered care, through virtual appointments, patient portals and electronic communication, enabled patients to stay connected to their providers — maybe even more closely than when in-person interactions were the norm. It also generated an enormous amount of new kinds of data.

With support from their providers, patients use equipment that can track their health remotely and share data with payers and providers at any time, during any point in treatment. Patients routinely connect to devices like under-mattress monitors for COPD breathing, sleep monitors, thermometers, pulse oximeters, children's otoscopes and more. Whether the data reaches the cloud automatically or manually, it serves to connect health organizations more closely to patients and paint a clearer, wider picture of their health.

### Capitalizing on data can enable prevention

The result: The cloud contains loads of new information that can teach us more about a patient's times of prime health. The healthcare ecosystem can use that new perspective to look beyond episodic care toward whole-life patient-centric care that aims for prevention. In the meantime, patients are moving further into virtual healthcare and contributing data through wearables and other devices.

One example is how **Stanford Medicine scientists** \* are using data from wearables to train algorithms that can alert a patient to increased immune system activity. This innovation could enable scientists and clinicians to detect viral infection, including COVID-19, earlier.

Even with so much revealing data and studies, however, interoperability and transparency have never been the healthcare ecosystem's strong suits. New regulations designed to protect and empower consumers will compel health organizations to ensure the interoperability and appropriate use of health data. As the health ecosystem gets its arms around the data and begins to make sense of it, patient-centric healthcare can take shape, leading the ecosystem toward prevention.

For example, data may come together to indicate a patient's impending acute care event. Instead of treating the event after it happened, such data analysis would enable its prevention. The patient, caregivers and providers could take proactive steps that would reduce the likelihood of the event and improve the patient's overall health - the kind of better outcome and better experience value-based care strives to achieve.

More broadly, payers and providers will be able to analyze personality traits that are critical to patient compliance and care gap closure. Organizations will be better positioned for health coaching and caregiver training and services. Prevention would come into greater focus because both clinicians and patients would have access to information and encouraging results that support it.





COVID-19 has accelerated digital delivery of care

As the COVID-19 crisis pummeled every industry around the globe, health organizations transformed their services to reach others in the ecosystem remotely. Their efforts created the ideal conditions for patient-centric innovation, which inspired enthusiasm for digital engagement among consumers.

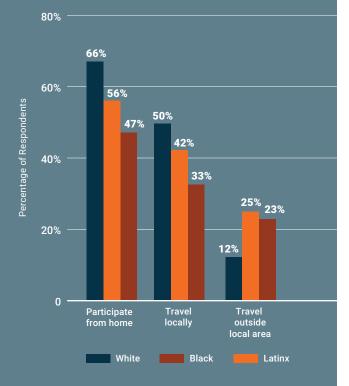
### Virtual healthcare boomed during the pandemic

While providers offered virtual healthcare before the pandemic, it was the exception rather than the rule. In-person visits were standard, with both patients and providers believing that face-to-face interaction was required for care to be effective and efficient.

As guarantine and the risk of COVID-19 exposure kept people separated from each other, consumers took advantage of virtual care in new ways. In a recent Healthcare Information and Management Systems Society survey 77% of respondents said they would use telehealth after the pandemic. The survey also showed that 41% would prefer virtual healthcare.



As clinical trials move closer to home, consumers (across races) are more willing to say they would participate if they could.



**SOURCE:** PwC's Health Research Institute consumer survey, September 2020. Based on a sample of 2,511 consumers. Not shown: "Other race."

Q: "Would you be more or less likely to participate in pharmaceutical research for COVID-19 treatment if you could?"

Even among seniors, a group that is often less likely to choose digital communication over other methods, telehealth use soared. During COVID-19, providers saw a **300%** increase in seniors who used telemedicine services. **Sixty-one percent** of seniors embraced technology to a greater degree.

That inclination goes beyond patients: Telehealth won over providers during the pandemic, too. When the COVID-19 Healthcare Coalition surveyed physicians in late 2020, 60% % said that telehealth had improved their patients' health. More than 80% % believed that telehealth improved the timeliness of their patients' care.

The crisis has increased the appetite for change as COVID-19 required more decentralization and services that organizations could deliver remotely or less frequently. For instance, companies conducting clinical trials needed to find ways to continue their efforts with few in-person interactions. Sponsors and contract research organizations also see the benefits in a more decentralized model, for patients and for each other.

Payers and providers have access to a huge amount of data about their populations, including SDoH metrics. In one potential application, pharmaceutical and life sciences companies could use it to develop trial protocols that serve more diverse populations and decrease the burden on trial participants. Participation in a trial would be more feasible and more attractive if companies could reduce the number of trips patients would need to make to a hospital or physician's office. Trial investigators would appreciate a decentralized approach with more virtual elements, which makes participating in a trial more appealing to them, too.

 Source: https://www.pwc.com/us/en/industries/health-industries/library/hri-insight-consumer-health-behaviorand-covid-19-pandemic.html

### Patients demand convenience and self-service technology

COVID-19 has increased consumer demand for technologically advanced payers and providers. Having managed their health remotely for at least a year, even the most apprehensive patients have learned to work with their payers' and providers' technology. The pandemic increased the number of consumers who seek digital tools by 25% \*.

Many people did their daily work, shopping, banking and communication using online tools, mobile apps and other technology before the pandemic. COVID-19 has taught consumers that they can do almost everything without ever having to talk to anyone, much less in person. For example, the CVS Path to Better Health Study 2020 \* found that 48% of consumers use digital messaging to communicate with their providers — up from 7% in 2019.

Consumers aren't interested in how organizations connect their systems or if their data is interoperable. They don't tolerate manual processes. Instead, they want convenience, independence and speed. For years they have chosen online shops, financial services and more according to those criteria. As patients, now they're choosing their healthcare partners that way.

When it comes to their healthcare, patients want to schedule appointments, review test results and communicate with their providers without having to go to an office or make a phone call. They're comfortable using chat bots and patient portals. They expect to be able to see and understand information about their costs, determinations and health plan on their own.

Organizations that can't or don't transform their businesses to enable consumers' convenience and autonomy will lose consumers' business and their trust. Considering the fast-changing healthcare ecosystem and the amount of money at stake, it's a dangerous time to take that risk. ▶ 48% of consumers use digital messaging to communicate with their providers up from 7% in 2019.



**Business transformation is** redirecting consumer spending



Business transformation is redirecting consumer spending

Considering the expense of healthcare in the U.S., it's no wonder some areas of the ecosystem thrive financially. Consumer spending accounted for 70% of the country's gross domestic product (GDP) in 2019. Healthcare spending comprised more than 17% \* of GDP.

However, employers' cost of healthcare is not included in that statistic, and it's hard to accurately quantify employer and consumer portions of healthcare spending. If we could, though, we would see why hospital systems can afford to spend billions on electronic health records systems that are neither interoperable nor patientor clinician-centric.

Consumers have long complained about incomprehensible, unjustifiable costs in healthcare. As employers have absorbed significant cost increases in recent years, they've joined consumers in demanding lower healthcare costs. In addition, a higher number of low-margin or nonpay cases generated by COVID-19 admissions will increase the demand for greater transparency and value.



U.S. Healthcare Expenditures as a Share of GDP, 1960-2018



SOURCE: Centers for Medicare & Medicaid Services (CMS), 1960-2018.

The amount of waste and opacity in the healthcare system isn't a secret. Everyone has a story about the unreasonably high cost of health insurance, treatment or a hospital stay, plus the difficulty in understanding prices before and after services. Consumers, employers and governments have long carried the cost of healthcare while calling for accountability and change in how and where organizations spend money.

### Improve care by shifting to a new revenue model

If the traditional healthcare sector were to begin doing business like firms that focus on consumer health, healthcare and biomedical companies could capture an additional share of the market, reduce the need for acute care, improve productivity and quality of life and reduce wasteful healthcare spending overall.

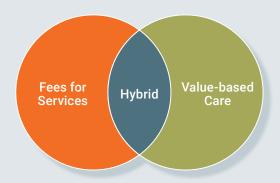
By freeing healthcare data and adding transparency to contracts and costs, many innovators believe that the newfound visibility will lead to additional cost savings and the promotion of healthier lifestyles. It will also enable participants in the free market to contemplate other creative ways of delivering convenient, high-quality and much-needed services.

Healthcare billing is very complex and represents another area where innovative ideas are emerging. Reimbursement models enabled by healthcare technology services are billing systems by which healthcare organizations get paid for the services they provide, whether it is the health insurance company (payer), the patient/consumer or the large employer.

There are essentially two types of models with variations and some hybrids that tap both models.

#### **Guide to Reimbursement Models**

These popular reimbursement models demonstrate why normalized, clean, interoperable data and transparent contracts, fees and drug costs are critical to enabling emergent innovation and non-healthcare-specific efforts to bud.



### **Fee for Services**

- Managed care organization (MCO)
- Preferred provider organization (PPO)
- Health maintenance organization (HMO)
- · Clinical pathway treatment and care plan

# Hybrid

- · Bundled payments
- · Patient-centered care
- The Medicare Access and CHIP Reauthorization Act (MACRA)

# Value-based Care

Accountable care organization (ACO)

# Market changes impact supply chain visibility

With consolidation and greater visibility into the supply chain — especially considering supply-related changes during the pandemic — the healthcare ecosystem is better positioned to evaluate it. Like other consumer-facing companies, health systems will begin learning as much as they can about their suppliers' suppliers to triangulate supply chain risks. Organizations will establish new relationships to diversify materials, sources and geographies.

In the short term, healthcare organizations are likely to make incremental investments in their supply chain capabilities. The marginally higher direct costs wouldn't be wasteful spending. These efforts and expenses could lay the foundation for a more flexible, increasingly responsive supply chain that could rapidly scale up or down to meet consumer needs.

In a situation like the pandemic, the results of supply chain issues in the healthcare ecosystem are both acute and chronic. Problems range from the inability to order medical devices to shortages in supplies of personal protective equipment.

While supply chain challenges affect providers first, the difficulties hit consumers harder. Gaps in critical supplies could lead to delays in treatment or preventive care, increased severity of chronic conditions or other factors that negatively affect outcomes and quality.





Besides ensuring continuous delivery and quality of care, a more resilient supply chain could serve to build credibility and trust with consumers.

Consider what's happened during COVID-19:

Everything from toilet paper to furniture to computer chips has been difficult to procure because of hindered supplies.

Now, imagine if a few health organizations were able to continue meeting consumer demand almost seamlessly while others struggled.

Consumers' impressions would certainly improve, making it worth the investment in strengthening supplier strategies and relationships.

Business transformation helps organizations optimize their operations and processes to prevent problems like supply chain difficulties. COVID-19 has proven that the healthcare ecosystem can't afford to wait to change.

# SenecaGlobal can help with your transition

SenecaGlobal understands how the rapidly evolving healthcare ecosystem is transforming go-to-market strategies. We accelerate the path from concept to solution for healthcare innovators that strive to make people's lives better.

#### Why SenecaGlobal?

With our full suite of services, hard-to-find technical expertise and stable team with experience in every area of the healthcare ecosystem, we can help you tackle the most complicated of transformation challenges.

We understand traditional healthcare and biomedical sectors, and we stay at the forefront of emerging healthcare. Our big-firm full value stream capability, balanced with cost-effective services, enables us to support you for the long term. We prioritize startups, small and midsized businesses and innovation programs in any size company.

Our healthcare and biomedical services can help you innovate faster and more effectively.

#### **Consumer Usability Research and Testing**

Consumers expect 24/7 convenience and instant gratification, which healthcare is not known for. We research what your customers want and help you understand and improve product usability. Meet their needs and exceed their expectations with SenecaGlobal omnichannel physical, digital and IoT services. We help you align your clinical business objectives with a clear vision, strategy and product road map.

#### **Product Management**

We help translate your strategic vision into functional and nonfunctional product requirements. Using repeatable and continually improving Agile processes, we guide you through prioritizing features and capabilities while helping you coordinate dependencies and sprints.

#### High Velocity/Low Defect Engineering

Be first to market and get there faster. We help you accelerate launching more features and functionality using our expertise in well-tuned Agile methodologies.

#### **Managed Services**

Our experienced cloud-managed services team can run and maintain your product from the start or jump in where you need us. We partner with you to identify the right cloud solution and choose the right tools for a secure-by-design, user-friendly, easy-to-maintain product.

Whatever stage you're in and however you'll bring your project to life, we're here to advise and staff your ongoing product road map.



Mandates may change; this information is correct at the time of publication. SenecaGlobal does not provide regulatory or legal services. Please review legislation, rules, mandates and other content at the Office of the National Coordinator (ONC), the Centers for Medicare & Medicaid Services (CMS) and the Federal Register | govinfo

For more information about how SenecaGlobal can accelerate the path of healthcare innovators from concept to solution, contact:

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