



Is There an Avatar in the House? Changing the DNA of Healthcare from COVID to Consumerism

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Little Change over the Past 40 Years

The banking industry introduced the automated teller machine in the late 1970s, over 40 years ago. Yet healthcare seems incapable of introducing meaningful changes, even today. Just as in the late 1970s, healthcare still needs to convince physicians to embrace change, reduce health inequities, and create a consumer-friendly system that allows patients to schedule and access care quickly and easily. Consumers are not satisfied with this situation, as evidenced by the following Harris poll numbers,¹ taken before the onset of COVID-19:

- 81 percent of respondents believe that shopping for healthcare services should be as easy as shopping for other types of services.
- 67 percent feel that every step of the healthcare process is a chore.
- 62 percent believe that the healthcare experience is intentionally set up to be confusing.
- 56 percent know people who will do anything to avoid seeking care because their healthcare experience has been so poor.

Not surprisingly, the healthcare system has proven ill-equipped to handle the COVID-19 global pandemic, which has created a financial tsunami for the provider industry, a financial windfall for insurers, and a real awakening among the public about racial inequities and disparities within healthcare. The American Hospital

¹ Change Healthcare, "Harris Poll Research: Half of Consumers Avoid Seeking Care because It's Too Hard," July 13, 2020. Available at <https://ir.changehealthcare.com/news-releases/news-release-details/change-healthcare-harris-poll-research-half-consumers-avoid>.

Association predicts that hospitals will lose over \$320 billion due to the pandemic. Storied institutions such as Mayo Clinic have announced furloughs and reduced hours for employees to help offset \$3 billion in projected pandemic losses. At the same time, insurer profits have skyrocketed by 50 to 100 percent as companies continue to collect premiums while hospitals canceled elective procedures and consumers put off care due to fears about being infected with coronavirus in healthcare settings.

Clearly, something must be done to improve this situation. The healthcare system can and must be transformed to better handle the next pandemic. If the industry does not do it itself, outsiders will come in and do it instead, a process that is already well underway.

Imagining A Different (Better) Future

By 2030, the goal should be to look back at the COVID-19 pandemic as the “dark days” when everything changed for the better. It should be thought of as the time when healthcare finally evolved from a broken, fragmented, expensive, inequitable “sick-care” system to a “health assurance” model where most care happens at home. It should be remembered as healthcare’s “Amazon moment,” a time when the industry finally realized that it had to compete not with the hospital across the street, but with disruptive innovators. In this new era of healthcare, the industry will have smashed the cost, access, quality, and patient experience curves through a series of disruptive events and creative partnerships. In this era, moreover, a new strain of a mutant virus would not cause a pandemic. Rather, it would be immediately identified through the continuous streaming of healthcare data to the cloud. The whole scare would be over in a month or so, thanks to seamless education and the ability to develop new vaccines quickly. While this future may seem like science fiction, all the technology exists to get there today.

Jefferson’s Role in Creating This Future

Steve Jobs once set the ambitious goal of changing the world through Apple, something he considered a fairly simple proposition. It began with Apple changing itself in year one. By year two, Apple would change its industry, and by year three Apple would change the world. The blueprint for doing so was also straightforward; it involved moving from the “old math” of selling computers and operating systems to the “new math” of selling a digital lifestyle, a lifestyle that has largely come to pass since this time, and clearly has changed the world.

For healthcare, the old math remains firmly in place for most of the industry. Health systems for the most part continue to receive FFS payments based on the provision of clinical and academic services, while insurers prosper by collecting premiums for the entire spectrum of services and paying them out on a piecemeal basis to providers.

Changing Jefferson Health

Jefferson Health has embarked on a plan to create a “new math” for healthcare, one that moves away from the B2B wholesale “sick-care” model of selling services on an FFS basis to insurers toward a B2C retail model that sells directly to consumers who make their own healthcare decisions.

Unlike the traditional approach, which views quality, access, and costs as trade-offs (i.e., where improving one necessarily has a negative impact somewhere else), the B2C model seeks to improve all three metrics at the same time. The goal is to replace the “iron triangle” of cost, access, and quality with a health assurance model in which consumers understand what needs to be done and can navigate on their own terms without healthcare services getting in the way. Under this model, the patient is the boss and there are no longer provider companies, but rather hospitals and doctors as part of consumer health entities.

Implementing the B2C model at Jefferson centers around two of its four organizational pillars—innovation and strategic partnerships. Added to the traditional academic and

UnHealthcare Delivery: From Sick Care



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clinical pillars, these two pillars represent the key to making Jefferson, a 195-year-old academic medical center, operate more like a start-up company. Key assumptions underlying this transformation include the following:

- Jefferson will be paid based on quality, costs, patient experience, and outcomes (not volumes); hospital stays will be commoditized.
- Physicians and nurses will cooperate and engage in deep learning, and consequently Jefferson will need to select and educate individuals to foster creativity and allow them to be better humans.
- Population health, predictive analytics, and social determinants of health will move to the mainstream of clinical care, payment models, and medical education.

Jefferson's goal is to offer "healthcare with no address." To that end, Jefferson changed its vision statement to set the following goals:

- To meet the needs of patients to access healthcare in the same flexible manner in which they consume every other good.
- To redefine Jefferson Health based on care and caring rather than location.

Innovation is the key to executing Jefferson's transformation, particularly through strategic partnerships focused on digital platforms. Examples include the following:

- **Virtual visits:** JeffConnect offers access to a virtual physician visit using a smartphone, tablet, laptop, or desktop computer. It also provides triage services for patients with immediate health needs, directing them to urgent care, immediate telehealth, or next-day office visits as an alternative to emergency department (ED) care. Jefferson encourages its employees to use the service by waiving the regular \$500 deductible for any ED visit that occurs after going through JeffConnect. Roughly 60 percent of such calls end up not requiring ED care. JeffConnect has seen skyrocketing demand since the pandemic began. The service handled 100,000 virtual visits during the first three months of the pandemic (February to April 2020), roughly the same number that had taken place over the *previous five years*. To prevent innovation "regression," Jefferson sets a minimum number of virtual patient visits to be completed in each department.
- **Virtual inpatient rounds:** Jefferson allows family members to participate in inpatient rounds virtually, letting them interact directly with physicians, nurses, and discharge planners. This service is available to all inpatients.
- **Teleneuroscience:** Jefferson uses robots and telehealth visits to monitor neurology patients when they come home after surgery.

- **Physician matching:** Jefferson offers a physician matching service that helps connect patients to physicians that meet their preferences in a doctor. The service first launched with obstetrics care.
- **Service and appointment reminders:** Jefferson offers regular text reminders for upcoming appointments and about the need to schedule a service, such as a screening test. Reminders go directly to a person's smart phone or watch. People in need of a service (such as a colonoscopy) can book an appointment through one click. This approach reduces missed appointments and significantly improves compliance with needed screenings.

"The biggest risk you can take after this pandemic is to not try anything new. If you think your organization will look the same 10 years from now, you are taking a huge gamble." —*Stephen K. Klasko, M.D., M.B.A.*

Changing the Industry

AI has the potential to be the biggest disrupter in healthcare. It can do wonderful things, as evidenced by an AI-enabled stuffed teddy bear that can assess the mood of young cancer patients through verbal cues and then customize its response to these children. It can also cause harm when used incorrectly, such as the recent finding that millions of black people have been affected by racial bias in healthcare algorithms.

Recognizing that AI can cause both good and harm, Jefferson created the Center for Responsible Innovation. Center leaders and staff consider the ethics of AI from the beginning, with the goal of preventing significant negative impacts. In hindsight, this type of work should have occurred with the advent of other major inventions such as the internal combustible engine (to reduce its impact on climate change) and social media (to minimize disinformation and the spewing of hate).

Jefferson's efforts to change the industry have focused on several areas:

Area #1: Medical Education and Training

Perhaps the biggest potential impact of AI is to take on tasks previously completed by a physician, such as reading radiology images. Computers tend to be better than humans at memorizing things and recognizing patterns. Unlike humans, computers do

not forget, get tired, or become distracted. Consequently, tasks that can be performed better by a computer should be done by one. That said, AI will never replace the human aspects of being a physician. As a result, the industry needs a makeover in the way it chooses and trains people to be doctors. To that end, Jefferson created a different type of medical school, one that admits students based on empathy, communication skills, and creativity in addition to science grades and test scores. Jefferson teaches them with an emphasis not on memorization, but rather on the ability to see things and think through second-order impacts. The goal is to create physicians who are self-aware, culturally competent, and humane, and then arm them with the amazing memorization and pattern-recognition skills of drones and robots. This approach leads to a more diverse physician and healthcare workforce; in fact, Jefferson's student body is much more diverse than that of a more traditional medical school.

The hope is that teaching physicians this way will prepare them to be good physicians both today and a decade from now. Unfortunately, medical education often does not meet this goal. In fact, a survey found that 70 percent of physicians in practice for three years or less feel that medical school did not teach them what they need most to practice medicine, including skills like managing change, negotiating and communicating effectively, working in a large organization, being a good leader, and running effective meetings.

In addition to redefining medical education, Jefferson is pioneering a new way to teach specialists how to do complicated procedures. Rather than the traditional "see-one, do-one, teach-one" approach, Jefferson has built procedure rehearsal studios that allow for ample practice in a simulated setting before touching a real patient. Just as pilots spend hundreds of hours in a simulator before they take responsibility for safely flying passengers, these studios allow surgeons and other specialists to perfect their craft before trying it out on a patient.

"I should have to prove that I can intubate a one-pound baby safely before trying to do it on a live newborn. Don't just assume that I'm qualified. Make me prove it, just like a pilot does in a flight simulator."

—Stephen K. Klasko, M.D., M.B.A.

Area #2: Organizational Culture

Leaders often spend too much time trying to influence the attitudes of people who will never change. As with most organizations, about 20 percent of Jefferson physicians understand the need for dramatic change and hence follow the directives of senior leaders. Roughly 15 percent will never “get it,” while 65 percent will get it eventually with enough prodding and explanation. Most leaders, however, spend about 40 percent of their time with those who already get it and 45 percent of their time with those who never will, leaving only 15 percent for the “silent majority” that needs convincing. Jefferson’s leaders have reallocated where they spend their time, with the focus now being on the silent majority and virtually no time being allocated to the “lost causes.” This change allowed Jefferson to bring many of the silent majority into the “get-it” camp.

In addition to this shift in focus, Jefferson created leadership development programs that play a critical role in spearheading culture change throughout the organization. For example, through Jefferson’s Onboarding and Leadership Transformation (JOLT) Institute, 40 emerging leaders complete a nine-month program each year that integrates classroom instruction, a project/sketch assignment, and executive coaching. Selected candidates go through an application process and must be sponsored and receive executive approval to participate. The program clearly works. JOLT graduates have improved their ability to handle difficult issues and situations by 325 percent. Other improvements attributed to JOLT include a 133 percent increase in commitment to and engagement in ensuring Jefferson’s success; a 200 percent improvement in the ability to work effectively in teams; a 167 percent jump in the ability to communicate effectively and influence others; a 250 percent increase in loyalty to the organization; and an 80 percent increase in willingness to serve in a leadership capacity.

“We spend trillions of dollars each year on healthcare services that determine only 10 percent of overall health.”

—Stephen K. Klasko, M.D., M.B.A.

Area #3: A Manifesto for Health Assurance

Jefferson created a design laboratory dedicated to using imagination to solve today’s challenges in healthcare. The goal is to move the industry to a new model known

as “un-healthcare” that focuses on health assurance rather than the provision of sick care. Developed at Jefferson in partnership with outside experts, this model recognizes that the 20th century principles of mass production and economies of scale are giving way to mass personalization and rentable scale. Un-healthcare recognizes that costly sick care is giving way to affordable, personalized, and preemptive care based on genomics, sensors, and AI-based digital therapies. Un-healthcare focuses on health assurance, home-based care directed by patients, continuous data through monitoring rather than point-in-time visits, and humans acting as humans rather than robots.

Changing the World

Like Apple, Jefferson is seeking to do more than just change itself and the industry in which it operates. Rather, it is truly trying to change the world by going beyond healthcare services. The COVID-19 pandemic has highlighted a long-known fact—that health status is determined largely by factors that have nothing to do with healthcare. For example, the chances of getting and/or dying from COVID-19 are determined more by where someone lives (i.e., zip code) than by genetics or personal behaviors such as mask wearing and social distancing. Similarly, life expectancy in general has more to do with where one lives than other factors. Within Jefferson’s service area in Philadelphia, neighborhoods separated by five miles have a 21-year difference in average life expectancy. To address this issue, in 2019 the Jefferson board tied 25 percent of the CEO’s personal incentive to reducing health disparities in Philadelphia. Part of the solution is to invest in non-healthcare services related to food, education, and housing, using technology to reduce inequities (e.g., Amazon’s drone delivery of grocery services).

Jefferson’s Center for Responsible Innovation is calling for large-scale transformations in healthcare that will allow existing organizations to survive as ongoing entities and promote positive societal outcomes. Success will require disruptive thinking and creative partnerships to create new ecosystems. The transition will be painful for those who refuse to think differently as these new ecosystems are built. This “fourth industrial revolution” will be based on tools and data, but also requires proactive attention to their human and ethical consequences. Finally, addressing the social determinants of health and health inequities will have to become more than just “academic ponderings,” but rather a mainstream part of clinical care and health policy.

As noted, technology will be a major part of this future. By 2030, humans will routinely be working in partnership with robots to produce better health for everyone. Through

“smart” clothing and other technologies, clinicians will have access to continuous data along with analytical techniques that provide constant monitoring of key medical information and proactive alerts when something goes awry, such as an elderly patient going into atrial fibrillation or a woman experiencing a problem with her pregnancy. Patients will for the most part no longer need to come in for routine care, but rather will be monitored on a continuous basis, allowing real-time identification and addressing of problems. The result will be much better health and much less inconvenience and hassle for everyone involved. Similarly, physicians will have access to real-time, genomic-based decision support to guide prescribing decisions and virtual assistants that can work with patients on chronic disease management. Health systems will be paid in an entirely new way, with payments based on the provision of health assurance rather than sick care, including rewards for promoting healthy behaviors and home environments. Most healthcare interactions will be virtual or remote, with a majority of those involving AI or machine-cognition applications.

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