Believing Is Seeing

How Technology Affects Health Equity

By Robert Posner, Chief Technology Officer
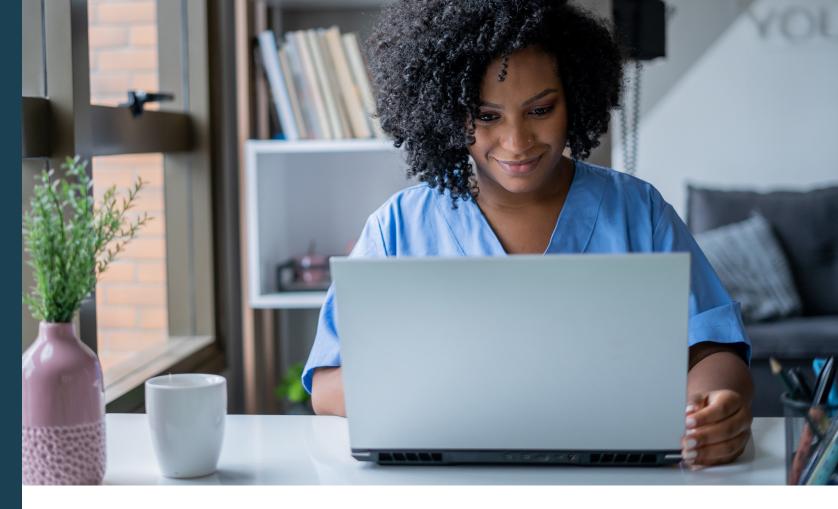
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Access to healthcare is a fundamental human right, yet barriers remain for far too many Americans who face physical, behavioral, and social health hardships. Some healthcare technologies are helping to bridge the inequity gaps.

How Technology Affects Health Equity

Healthcare technology has consistently lagged behind other industries for a few reasons. First, the industry is highly regulated, so new tools and technologies often go through much more rigorous testing, especially when the lives of its users are at stake. Some technologies are costly, too, and while positive results can be experienced almost instantly for providers and patients, health plans see the benefits of their use over a longer period. For instance, while we know the cost of things, we often don't realize the savings—the money we never have to spend. Cost-avoidance savings take longer to be realized by health plans.

Another impediment to implementing costly tools is that technology can sometimes be ahead of the reimbursements approved. Many healthcare services are reimbursable commercially but not through Medicaid, which is often behind the curve in approving reimbursements for new tech.

Of course, those with higher socio-economic status usually have more access to the latest tech, even in healthcare. They can afford phone apps that check their heart rate and blood pressure, laptops that make telehealth visits clear as a bell, wearable fitness trackers, and even concierge doctors who reap financial benefits from offering in-office diagnostic tools. There's economic incentive to serve this market, further contributing to healthcare disparities, as those who are most likely to need technological support to improve their health outcomes simply cannot afford it.

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The Future of Healthcare Technology

Visit your doctor's office for an annual physical, and you're likely to get an EKG, bloodwork, and other tests that once took place only at specialized labs. Urgent care centers, many of which also offer primary care services, are all equipped with centrifuge machines for almost instantaneous blood test results, X-rays and other visual imaging machines, rapid tests for a variety of infections, in-house pharmacies, and more, making care for our most vulnerable populations less of a drain on their own limited resources.

Collocated care—that is, different types of services offered within the same practice or building—is becoming the norm and has dramatically improved healthcare equity.

But the real differentiators are often the technological tools and systems that we can't see. These enhance communication among patient, doctor, and health plan, resulting in greater trust in the patient population, more targeted treatment, and improved collaboration and healthcare access—all of which reduce time, save money, and improve healthcare outcomes for all.

> Machine learning is a subfield of artificial intelligence (AI) that uses algorithms trained on data sets to create self-learning models that are capable of predicting outcomes and classifying information without human intervention. Machine learning is used today for a wide range of commercial purposes, including suggesting products to consumers based on their past purchases, predicting stock market fluctuations, and translating text from one language to another.[2]

Software as a Service and the Internet of Things

Among the invisible technologies that patients benefit from but don't see is software as a service (SaaS). This financial framework for providing subscription services can be used the same way we use streaming services like Netflix or smartphone apps.

Through cloud-based services, members can easily access their own medical records, schedule appointments, and communicate with healthcare providers. They can even monitor health conditions from home using apps that track vital signs, medications, and more. Not so invisible are the fitness trackers and other wearable devices, also known as the Internet of Things, which speak to each other through the cloud-based software, putting health literally at patients' fingertips. The most profound benefit from these tools is an increase in health literacy and engagement, which, according to the CDC, contributes to better health outcomes.[1]

SaaS platforms help providers by streamlining their workflows, simplifying administrative tasks like managing patient records and billing. They also allow providers to access patient information securely from anywhere, to offer more timely care to their patients. And they can communicate with their teams, outside providers and specialists, regardless of their location.

Health plans manage vast amounts of data. SaaS helps them do it more efficiently and with fewer errors. It can also facilitate member engagement, offering members of their plans unique tools for benefits management, wellness programs, and more.

In a nutshell, SaaS is healthcare at everyone's fingertips.
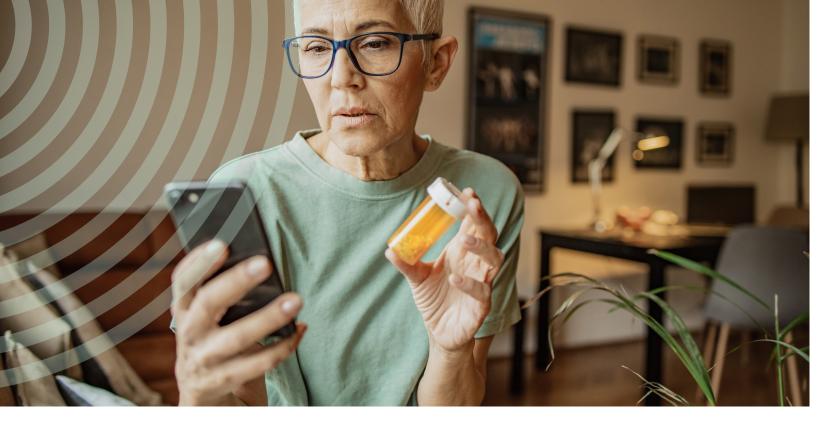
Machine Learning/Artificial Intelligence

One technology gaining traction over the last few years is machine learning, or AI. Simply put, machine learning teaches computers to make decisions by analyzing their own data. This technology offers benefits to all stakeholders—members, providers, and health plans alike.

For members, this means using the data gathered to create individual treatment plans that take into account their unique health conditions, which helps providers make more accurate, effective decisions about treatment. It also allows for early diagnosis of diseases, allowing members to be treated at a stage when such treatment is less costly—a boon for health plans, too.

Machine learning affords providers support on their own clinical decisions—a second opinion, if you will. It enhances the quality and efficiency of patient care. Most important, however, it can help providers allocate resources, forecast conditions, and reduce hospital readmissions.

Finally, health plans can use machine learning to detect fraud, catching unusual billing patterns and claims. But as with any business, the bottom line for insurance companies is healthcare expenditures, which machine learning can help reduce, thereby reducing the overall cost of healthcare.

AbsoluteCare: The Future in the Present

AbsoluteCare, with its seven centers (and growing) in the Eastern U.S., can offer our members what is usually reserved for well-insured Americans and those who can afford concierge care. In centers as well as in the communities we serve, we're able to reach the most vulnerable populations with coordinated, collaborative, collocated care. It's a one-stop primary care shop for IV infusions, imaging, blood labs, and nonjudgmental treatment of substance use and behavioral health issues. We also offer an in-house pharmacy and transportation to and from appointments.

Further breaking down barriers to health equity, AbsoluteCare helps our members with housing, nutrition, social work, and life needs, like mobile phones and home furnishings.

We are dedicated to bringing the most modern technologies and our services to a population that often does not get equitable access to these services. Instead of waiting for these interventions to become mainstream years from now and then eventually trickle down to the general population, we are shortening that window by bringing them directly to our members.

SaaS and machine learning play important roles in the day-to-day care of our members and make the hard work of our dedicated providers much easier. Because we contract with health plans to assume all risk, the implementation of these platforms contributes to our vision: health restored to all our vulnerable and chronically ill neighbors.

Technology is a means to a healthy end with which we're able to make a huge difference in the quality of our members' lives.

Virtual Care/Telehealth/Telemedicine

Though it long predated COVID, telemedicine was underused until the pandemic. Its benefits had been predicted but were largely unknown. Thanks to reduced regulations during that time, studies have determined virtual care to be as good as in-person care and to have "cost-saving implications."[3]

Telehealth can be lifesaving, too—especially for those whose access to providers is limited because of physical location or circumstances. For people who need help managing certain acute and chronic conditions, meds checks, and mental health issues, telehealth is the return of the house call—and a great equalizer when it comes to health equity.

Telehealth:
- Reduces barriers to transportation by eliminating travel needs
- Increases availability for both patients and providers by offering services beyond regular business hours
- Enhances preventive care by allowing for more proactive monitoring
- Improves access to specialists who may not necessarily be available in a patient's area
- Eliminates language barriers through platforms that offer language translations; these can also help with cultural sensitivity by tailoring communications to specific populations
- Reduces stigma by allowing more confidential receipt of services, especially for behavioral health and substance use issues
- Reduces ED admissions, especially in populations that are vulnerable to housing, food, and social insecurity
- Saves money and time by reducing the need for childcare, travel, missed work, and multiple appointments

Often, though, the people who need these services the most face barriers that keep them from getting them in the first place: no high-speed—or any—internet service; lack of computer or smartphone or other device; and a distrust of the healthcare system that has traditionally kept patients from getting the care they need. Fortunately, government programs that provide free access to the internet, inexpensive data plans, free cellphone programs, and trust-based care systems have all contributed to the success of telehealth in creating greater health equity.

Case Study: LumineticsCore

The most recent piece of life-changing equipment in our high-tech arsenal comes from Digital Diagnostics: LumineticsCore. LumineticsCore is an AI diagnostic system that relies on the use of a fundus camera to collect retinal images of our members with diabetes to detect the early stages of diabetic retinopathy (DR), the leading cause of blindness and severe vision loss among Americans of working age.[4]

Diabetes affects about one in ten people in the U.S., but the incidence is higher in ethnic and racial minorities.[5] Nearly 1,400 AbsoluteCare members have been diagnosed with diabetes mellitus. And in the six months since we've begun using LumineticsCore to identify early stages of diabetic retinopathy, we've tested more than 500 of these members. About 38 percent of them were found to have early onset DR. And the tool is accurate: Follow-up appointments with specialist confirmed LumineticsCore's diagnosis.

For Medicaid and Medicare members, many of whom do not have insurance for vision care, the LumineticsCore technology has helped us save the vision of more than 220 people in just a few short months.

Read more here: https://www.digitaldiagnostics.com/resources/papers-and-trials/absolutecare-white-paper/.

About AbsoluteCare

AbsoluteCare offers health services tailored to the most vulnerable members of society using a risk-bearing, PCP-driven care model. We treat the most clinically complex members of the communities we serve—many of whom face behavioral health, substance use, and SDoH challenges. We tend to the needs of the high-risk population who persistently represent a disproportionate amount of unnecessary utilization and cost, regardless of whether they are engaged with other PCPs.

We deliver this care in our Comprehensive Care Centers and in the communities we serve. In over 20 years, AbsoluteCare has achieved unprecedented outcomes by addressing medical and psychosocial issues, and life's hardships that exacerbate chronic health conditions and complicate access to care. AbsoluteCare is headquartered in Columbia, Maryland, and currently operates in seven markets: Baltimore and Prince George's County, MD; New Orleans, LA; Cleveland and Columbus, Ohio; and Philadelphia and Pittsburgh, PA. We have treated tens of thousands of chronically ill individuals, living up to the mission of providing care that goes beyond medicine™.

For more information, visit absolutecare.com.

1 https://www.cdc.gov/healthliteracy/researchevaluate/patient-engage.html, August 2021.

2 https://www.coursera.org/articles/what-is-machine-learning, September 2023.

3 https://ncbi.nim.nih.gov/pmc/articles/PMC9035352/, December 2022.

4 https://www.cdc.gov/visionhealth/determinants/index.html, August, 2023.

4 https://www.cdc.gov/diabetes/library/spotlights/diabetes-facts-stats.html, April 2023.

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