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# TELEMEDICINE HITS ITS STRIDE: HEALTHCARE RESPONDS TO THE DIGITALLY TRAINED CONSUMER

**Last month, Amazon purchased PillPack** for about $1 billion. The company, founded in 2013, sends patients two-week supplies of presorted daily prescription medicines and has sought to take business from traditional brick-and-mortar as well as mail-order pharmacies, offering consumers a digitally enabled level of convenience for both prescription and over-the-counter drugs. When Amazon enters a new market, it immediately rings alarm bells, as everyone wonders what the Seattle company might do to further "disrupt" that industry. However, digitally enabled disruptions to healthcare are already occurring, far beyond this action by Amazon. As a whole, the healthcare industry is looking for ways to align with what we have called the Digitally Trained Consumer to deliver digitally enabled healthcare products and services, and industry players are doing so now in numerous ways. (*CNN*, 6/28/18)

## TAKEAWAYS

- Digital technology has changed consumers' habits, shifted their expectations and taught them new behaviors; now the healthcare industry is catching up with this shift.
- Hospital networks and other providers are offering patients more convenient options through telemedicine platforms.
- The retail drug sales business is also playing catch-up with other forms of retail, to offer fast and convenient omnichannel offerings.
- The law and insurance coverage are expanding in the U.S. to cover more telehealth services, as payers recognize that telemedicine can lower costs and provide more convenient care.

## IMPLICATIONS

- Companies that provide telemedicine platforms could benefit substantially.
- Large and prestigious hospital networks and university-affiliated hospitals could greatly expand their geographic footprint via small satellite centers and telemedicine connections, taking business away from smaller hospitals and health systems.
- Health could improve for certain populations with issues accessing care – including people living at home with chronic medical conditions, prison inmates, people in rural areas far from major medical centers and the like.
- Healthcare providers might be annoyed at having to grapple with another change to healthcare delivery, after the decade-long shift to electronic health records (EHRs).

# Healthcare Is Playing Catch-Up with the Digitally Trained Consumer

Over the past 15 years, we have monitored and detailed the ways that pervasive digital consumer technologies have changed human behaviors and ways of operating. In particular, and as outlined by a 2017 *Briefing*, digital technology and the smartphone have, among other things, helped train the consumer on how to behave with digital technology in the world and to have a new set of expectations when purchasing various goods and services. Among other behavioral traits, digital tech has taught individuals to be impatient, by which is meant they respond to convenience and ease; to have elevated expectations about the speed, accessibility and personalization of services; and to become resourceful in pursuit of what is in their best interests. Retailers, grocery stores, media services, transportation services and more have had to adapt to consumers with this new set of expectations and behaviors (see **IF 3815**, "Digital Technology Is Training Consumers," 7/20/17).


Operating in a highly regulated, high-cost, information-restricted and deeply personal environment, this digital way of operating that transformed retail and other industries has been slower to restructure healthcare. However, in recent months, a variety of providers, ranging from hospital networks to insurers to drug stores, have ramped up ways that their operations can align with the traits of the Digitally Trained Consumer, in part to offer faster, more efficient and more convenient access to healthcare products and services, through a variety of smartphone apps, omnichannel retail systems, online portals and telemedicine/telehealth systems.

As one aspect of this transformation, various healthcare industry players are trying to improve their digital customer-services offerings, as other industries have, and to align with the expectations of the Digitally Trained Consumer. Consider these examples:

• Health tech provider Royal Philips will add telehealth capabilities to its uGrow baby and parenting app. The app will connect to several wireless devices such as a smart baby monitor, ear thermometer and feeding bottle, and will track data such as an infant's temperature and sleep patterns. Meanwhile, Philips' partner American Well will provide a secure video connection through uGrow to healthcare professionals, whom parents can summon on the app at five minutes or less notice. (*IHM*, 1/12/18)

• OhioHealth is now testing a feature to let patients view their electronic health records via the Apple health app. OhioHealth is also introducing a new "skill" for the Amazon Alexa voice assistant that will enable patients to get information about the group's walk-in clinics. OhioHealth has its own app that allows patients to find a doctor, schedule appointments, and look up facilities and wait times, as well as view test results, message their doctor and request prescription refills. (*IHM,* 2/8/18)

• The Department of Veterans Affairs (VA) rolled out a new web feature this spring that allows veterans to see their medical scans online. (*IHM*, 5/14/18)

• Children's Hospital of Pittsburgh is offering an updated app for Google and Apple devices that allows parents to check symptoms, get in touch with experts, get reminders on medications, locate services and find specialists. (*IHM*, 4/8/18)

• Mayo Clinic is deploying 51 kiosks throughout its campus that will allow patients to check in, verify and update their information, electronically sign forms and complete other tasks. (*IHM*, 5/6/18)

Many of these developments – self-check-in kiosks, web logins to a patient's ("customer's") profile, use of

voice-activated assistants and digital support tools – are already pervasive in other arenas, and are now moving more aggressively into both consumer and professional health devices and services.

## Bringing an E-Commerce Model to Prescriptions for Speed and Convenience

Meanwhile, following a period in which most of the traditional retail industry has already been utterly transformed by the shift to digital, the change for retail drug sales is still nascent. At present, digital prescription drug sales in the U.S. total roughly $3.3 billion, or just one percent of the overall prescription drug market – so digitally enabled drug sales remain a largely unaddressed market compared to other products consumers now routinely order online for pickup or delivery. That's why Amazon's entry into the business through its acquisition of PillPack is drawing attention. Beyond that acquisition, Amazon had already been approved for wholesale drug distribution in 13 states, and, in conjunction with Berkshire Hathaway and JPMorgan Chase, Amazon will form a new healthcare-services company aimed at using data, digital and e-commerce technology, though other details of what this firm will do are limited. Furthermore, like PillPack, Capsule is a start-up trying to offer personalized online prescription delivery, offering New York City customers free delivery in about two hours. Last December, CVS introduced free same-day delivery for prescriptions and certain over-the-counter items in Manhattan and is now rolling out this service in Miami, Boston, Philadelphia, Washington, D.C., and San Francisco. Elsewhere, the company will offer next-day deliveries, albeit for a $4.99 charge. (*CNN*, 6/28/18; *IHM*, 2/28/18)

Walgreens is also trying to align with the expectations of the digitally trained consumer. Fifty million consumers have downloaded the Walgreens app, which allows shoppers to submit and refill prescriptions. About 200 million of the one billion prescription orders Walgreens processes each month are completed online. These are some basic changes to the sale and delivery of drugs, which serve to help this sector "catch up" with other areas of retail. But the use of digital tools to enable faster, lower cost and more convenient healthcare is going much deeper than simply retail drug sales. (*IHM*, 2/28/18)

## Telemedicine Visits with Doctors Enable Easy Access and Lower Costs

For instance, another action by Walgreens exemplifies an additional arena in which healthcare is seeking to "digitize." Walgreens is now testing a telemedicine service at one of its New York City locations. In conjunction with NewYork-Presbyterian Hospital network, a kiosk at this test location allows patients to go online and connect with an ER physician who can provide an exam though an HD video-conferencing connection. In a sense, this puts the doctor's office right in the drugstore. A Harris Poll found that 78 percent of consumers say they are willing to have a video visit with a doctor. (*IHM*, 2/28/18)

Other healthcare providers are exploring ways to offer patients quicker, cheaper and remote access to healthcare providers through a telemedicine kiosk or home-based system, at times so that patients can get treatment in their own homes, and at other times so that they can get specialty treatment from big specialty hospitals, even if they are visiting only a small local health facility:

- VERA is the Virtual Exercise Rehabilitation Assistant – an at-home physical therapy telehealth platform that uses the Kinect motion sensor from Microsoft to monitor patients as they have virtual visits with physical therapists in their homes. In a study conducted by the Cleveland Clinic, VERA users adhered to their at-home therapy at an 80 percent rate, compared to rates between 35 and 70 percent for those who received only traditional in-person therapy. (*Modern Healthcare*, 6/25/18)

- NewYork-Presbyterian now offers Express Care at some of its hospitals' ERs. Patients with non-life-threatening conditions can hold a video consultation with a doctor after they arrive, waiting on average just 35 to 40 minutes, rather than the typical 2 to 3 hours to be seen in person at the ER for non-life-threatening conditions. (*Recode*, 6/25/18)

- Prison systems in Texas and California are both using telemedicine to provide mental health services to the states' inmates, at significantly lower cost and more efficiently than trying to deploy psychiatrists across all the states' prison and jails. (*Modern Healthcare*, 1/8/18)

Large hospital networks, in many cases, have started telemedicine programs in individual departments, led by a few forward-thinking doctors in that arena; over time, other programs were introduced in other departments, but all these systems were generally run independently. Now, some of these hospital networks are working to merge their disparate telemedicine programs to offer a full array of telemedicine services to both primary-care and specialty-care patients. In many cases, such systems can connect patients in the networks' more far-flung health centers and rural centers, with specialists at the flagship hospital, providing care faster and sidestepping the need to transport patients hundreds of miles to the flagship specialty hospital.

• Penn Medicine, a University of Pennsylvania-affiliated hospital network in metro Philadelphia, is merging three of its existing telehealth programs into a new initiative called Penn Medicine Center for Connected Care. The program offers telehealth programs for transplant surgeries, dermatology, ophthalmology, radiology, youth medicine, sleep medicine and complex neurological conditions, as well as post-operative surgical visits and veterans' mental health services. The program can also remotely monitor patients in their homes. Penn estimates that remote patient monitoring and telehealth offerings have reduced the readmission rate of chronically ill patients by 35 percent. (*IHM*, 2/19/18)

• Intermountain Healthcare, the largest health system in Utah, is consolidating its 35 existing telehealth programs into Connect Care Pro. This will allow specialists to connect to patients via "virtual care" for critical care, stroke, newborn critical care and other services, particularly those patients in rural communities, where advanced care options might not be readily available. In some cases, these offerings avoid costly transfers to larger specialty hospitals. (*IHM,* 3/5/18)

• The Mayo Clinic now offers a variety of telehealth programs to patients' desktop computers and mobile devices, including video doctor visits for non-emergencies, and an eConsults system that allows doctors from 40 outside practices to interact securely with patients. The Clinic also offers remote patient monitoring with clinical assistants that set up the equipment in a patient's home, enabling the patient to be monitored by hospital staff after discharge. (*IHM*, 5/6/18)

• Vanderbilt University Medical Center is opening a telemedicine clinic in Jackson (TN), two hours away from its main campus, which will offer examination and consultation services to potential kidney transplant patients, allowing them to be evaluated without having to travel to Vanderbilt. (*mHealth Intelligence,* 7/20/18)

• Less than 30 percent of stroke victims receive clot-busting medication within the recommended 60-minute window. A new study conducted in 21 Kaiser emergency rooms used a "telestroke cart" to connect the ER with a staff neurologist and radiologist via videocamera and access to patient's electronic scans and test results. In those cases, patients received anti-blood-clot medicine within 34 minutes on average, with 87 percent getting this medicine within the one-hour window. (*IHM*, 1/5/18)

• Members of Cambia Health Solutions in Oregon and Washington will be able to use a "store and forward" system, a variation on telemedicine also known as asynchronous telemedicine. Rather than live telemedicine, in which patients interact with a doctor in real time via a camera and a video screen, store and forward systems gather information and symptoms from patients. The information is sent via secure email or messaging service to a cloud-based repository, and any available doctor can review that information later and send follow-up questions or a diagnosis, prescriptions and treatment options to patients on a text-messaging platform. (*Digital Commerce 360*, 3/2/18)

As hospital networks merge and beef up their offerings, third-party providers of telemedicine are also beefing up their offerings through a series of recent mergers. American Well announced it was acquiring Avizia, Inc., taking American Well beyond its niche in acute and urgent care via telemedicine, to add telehealth services in a wide range of specialties such as strokes, pediatrics and chronic care. Similarly, last year Teladoc acquired Best Doctors, to offer a broader array of telemedicine services. Meanwhile, InTouch Health acquired rival Reach Health to grow its customer base to 200 health network systems. (*IHM*, 5/4/18)

## Legal Changes Pave the Way to Telehealth

In the aforementioned example of Cambia's store and forward healthcare offering, many states refuse to reimburse for such care, via for instance, their Medicaid services. As a highly regulated industry, one of the big

issues that has hampered the growth of telemedicine is a variety of regulatory and coverage questions: Will the government pay for such care? Will private insurers? Can providers deliver such care over state lines, or must they be in the same state as the patient? Will patients be reimbursed for applicable technology? In recent months, a variety of regulatory and coverage changes are helping to pave the way for more telehealth services, in part because government actors are recognizing it can be effective and cost reducing.

For instance, Medicaid reimbursed for store-and-forward care – the kind being offered by Cambia Health Solutions – in only seven states a few years ago, but the number rose to 15 as of 2017. The VA has been using a store-and-forward system for years to screen veterans with diabetes for retinopathy, and has added radiology and dermatology in recent years. A program introduced in Los Angeles County for diabetic retinopathy eliminated more than 14,000 visits to specialty care in one year and reduced wait times for screening by 90 percent. Such results are helping to convince states to make changes and cover such care, because it can speed up a patients' access to a specialist and make the diagnosis and treatment more efficient. (*IHM*, 3/2/18; *mHealth Intelligence*, 4/18)

Consider a variety of other coverage and regulatory changes favoring telehealth:

• Congress passed the CHRONIC Care act this spring, which expands telemedicine options for Medicare Advantage members starting in 2020. (*Fierce Healthcare,* 2/6/18)

• Meanwhile, 75 percent of larger companies offered insurance plans that cover telemedicine as of 2016, up from 48 percent in 2015. (*IHM*, 4/10/18)

• Congress passed the VETS Act, which gives VA health practitioners the right to practice medicine via telehealth systems anywhere in the United States, sidestepping individual state regulations and licensing requirements. The VA is also contracting with 1Vision, LLC, to provide home-based telehealth systems to veterans. According to the VA, 702,000 veterans, or 12 percent of the total, used telehealth at some point in fiscal year 2016, with 45 percent living in rural communities. Those encounters led to a 31 percent decrease in hospitalizations for veterans over the previous year. (*mHealth Intelligence,* 1/12/18)

• This June, the Centers for Medicare and Medicaid Services (CMS) began enabling Medicare coverage for portable continuous glucose monitors (CGMs) that report results automatically to physicians via the patient's smartphone. Previously, any health device that connected to a consumer's smartphone was considered ineligible for coverage, even though it worked as a professional medical tool. (*mHealth Intelligence*, 6/13/18)

• In 2015, the enhanced Nurse Licensure Compact (eNLC) enabled registered nurses in 29 states to provide care to patients in other states without having to obtain additional licenses, which can help nurses provide care via telehealth platforms. (*mHealth Intelligence*, 4/18)

The laws are starting to shift, and could pave the way for lower-cost, more effective and more convenient forms of treatment. Of course, the community of healthcare professionals will have to catch up too, with many already exasperated about the decade-long and somewhat arduous shift to electronic health records. To help healthcare providers better adjust to a world of telemedicine, the National Academic Center for Telehealth was recently launched at Thomas Jefferson University in Philadelphia. The Center offers a five-week training program accredited by the American Telemedicine Association that helps train caregivers to provide care over telemedicine platforms. Such training can help healthcare providers to be ready for where the healthcare industry overall appears to now be heading – aligning with the Digitally Trained Consumer to provide services using quick, easy, convenient digital means. (*mHealth Intelligence*, 5/3/17)