COVID-19 and Healthcare's Virtual Transformation

What healthcare's pandemic response means for the future of care delivery

amwell® Google | BECKER'S HEALTHCARE

Contents

Introduction

"This is a rare moment in history when technology, policy and urgency to change converge. I call that the 'perfect storm for innovation."
- John Halamka, MD, President of Mayo Clinic Platform

Virtual care has experienced an evolution in recent decades, with the sophistication of digital technology increasing exponentially and consumer demand growing. Along this growth trajectory, 2020 marks a watershed moment for telehealth adoption. Amid COVID-19, providers rapidly integrated and expanded telehealth services to limit the risk of viral transmission and continue delivering the care patients need. Telehealth served as a lifeline to many organizations, who, without this technology, would have faced even steeper revenue loss than incurred. In early 2020, before the widespread transmission of the novel coronavirus in the U.S., telehealth was used to conduct less than 1 percent of patient visits. By early April, more than 51 percent of clinical visits across specialties were being conducted via telehealth, according to The Chartis Group's telehealth adoption tracker. While the use of telehealth technology may have peaked in the spring, adoption remains far higher than before the pandemic, with telehealth visits accounting for 17 percent of all care visits in mid-November 2020.

> *"This is a rare moment in history when technology, policy and urgency to change converge. I call that the 'perfect storm for innovation."*
>
> **John Halamka, MD**
> **President**
> **Mayo Clinic Platform**

The telehealth experience has largely been positive for both providers and consumers, which suggests a willingness to continue using these platforms beyond the pandemic. In a 2020 survey of more than 2,000 healthcare consumers and 600 physicians commissioned by Amwell, 91 percent of patients reported being "very" or "somewhat" satisfied with their virtual visit. Among providers, the percentage of those who have used telehealth nearly quadrupled since 2019 and 84 percent said they were "very" or "somewhat" satisfied with one or more telehealth platforms. Additionally, 96 percent of physicians said they were willing to use telehealth.

Beyond an increase in usage, virtual care has experienced another notable change: its significance in a healthcare organization's overall strategy. At the start of COVID-19, many providers began using telehealth primarily as a stopgap measure to continue seeing patients. At that time, relatively few providers had a holistic virtual care strategy in place. Providers were simply acting fast to get up and running on platforms that could allow for virtual visits. As both patients and providers have become more proficient with the use of telehealth, the conversation at leading healthcare organizations has evolved into a broader discussion of the role of digital technology in the future of care delivery. There is a strong belief that combining virtual and in-person care will provide both patients and physicians with a more engaging care experience and may help address a number of deficiencies in our current system, including issues that contribute to health disparities. Leading healthcare organizations are taking the lessons from the pandemic and planning for the future, while maintaining an acute response to the ongoing challenges from the virus.

Toward the end of 2020, *Becker's Hospital Review* sought the expertise of leading provider executives, health plan innovators and tech industry experts to learn more about healthcare's virtual transformation. Over the course of these correspondences, three themes emerged as the characteristics that will define virtual care strategies in 2021 and beyond:

1. *Marriage of virtual + in-person care care:* The future of care will not involve binary choices between virtual and in-person care but will rather merge these modes of delivery to provide comprehensive, continuous care through a new blended model.

2. *Unified, interoperable, data analytics platforms:* Providers, health plans, and technology innovators will not be able to deploy in-person and virtual care synchronously without seamless data exchange across their organizations.

3. *Technology in support of an improved healthcare experience:* Virtual care is not about replicating the in-person experience. Instead it is an opportunity to reimagine care delivery in a new way. Technology should serve as the vehicle to support new patient focused care models.

This white paper examines these three themes and details actions that health system and health plan leaders can take to further evolve their virtual care strategies.

The rise of virtual mixed with in-person care

As healthcare executives kick off 2021, they are focused on understanding how to blend virtual and in-person care. Rasu Shrestha, MD, Executive Vice President, Chief Strategy and Transformation Officer for Charlotte, N.C.-based Atrium Health, conceptualizes this effort as creating an "interwoven mosaic" of virtual care and in-person care solutions.

"Creating a mosaic of virtual and in-person care that works towards best interests and preferences for individual consumers is what we're focused on," said Dr. Shrestha, who is responsible for the enterprise strategy deployed across Atrium's 40-plus hospitals.

While the rise of the pandemic and the accompanying rapid switch to telehealth was centered on the need to continue providing care, today executives are focused on the steps needed to build a lasting blended care model that works for both patients and providers. When done well, this model can eliminate friction from the potentially fragmented care experience and improve efficiency for providers. Peter Antall, MD, Chief Medical Officer at Amwell, said the goal of these new 'hybrid care' models is to allow providers to combine virtual and in-person experiences across the full continuum of care to create a cohesive and seamless experience for physicians and patients alike.

"Providers don't need every patient coming into the clinic and sitting in the waiting room or occupying an exam room if it's not necessary," Dr. Antall said. "Hybrid models give providers many ways to interact with their patients."

Virtual Care Spotlight

Clinical and technology leaders at Penn Medicine have developed an EHR-integrated platform called Switchboard to help guide patients through their virtual care journeys. The platform is powered by artificial intelligence and has the capacity to text with patients. The texts are sent via a generic phone number, but reply messages come back to Switchboard at the patient encounter level and are documented in the EHR.

"This messaging functionality has become one of the most popular features of Switchboard," Srinath Adusumalli, MD, an assistant professor of clinical medicine with Penn Medicine, told Becker's. "Although text messaging was used in relatively few circumstances by clinical teams prior to the pandemic, teams have now fully adopted this way of communicating with patients across the enterprise. Teams have thought of many of their own use cases, which we have subsequently built into Switchboard, including using text messaging to help promote contactless workflows during in-person visits."

One organization that exemplifies this evolution from telehealth as a necessity during COVID-19 to telehealth as a core part of a long-term strategy is Minneapolis-based M Health Fairview, a 10-hospital, 60-clinic health system with a network of more than 5,000 physicians. Before the pandemic, the organization's telehealth infrastructure was limited. When COVID-19 began spreading across the U.S. in early spring, the organization acted quickly to integrate telehealth solutions to meet demand. Leadership initially perceived this technology as a short-term solution to an acute crisis. That perception quickly shifted, however, according to Susan Pleasants, MD, the Chief Medical Informatics Officer with Fairview Health Services.

"In April, we recognized telehealth was more than a temporary measure for us," Dr. Pleasants said. As the initial COVID-19 surge waned, the health system didn't immediately revert back to in-person care for all services. Instead, leaders assessed care by specialty and determined which services could be conducted virtually. The organization has now established telehealth as a permanent component of its care access model.

"Telehealth has allowed us to be more efficient in some areas, and patients want it," Dr. Pleasants said. "For those reasons, virtual care has staying power for us."

When developing these mixed models, it is important that healthcare organizations closely examine the elements of in-person care that are most valuable to patients and determine whether or not they can be replicated virtually, according to Roy Schoenberg, MD, MPH, President and co-CEO, Amwell.

> "Telehealth has allowed us to be more efficient in some areas, and patients want it. For those reasons, virtual care has staying power for us."
>
> **Susan Pleasants, MD**
> **Chief Medical Informatics Officer**
> **Fairview Health Services**

"[When integrating more virtual care], providers and their technology partners actually have to focus on what people are getting from traditional, physical care that they really appreciate," Dr. Schoenberg told *Becker's*. "Then we can find a way to either recreate those things virtually or utilize virtual care in conjunction with in-person care to meet patients' needs."

Nemours Children's Health System did just that. In 2015, Nemours partnered with Amwell to launch Nemours CareConnect, a direct-to-consumer urgent care telehealth program. The health system has since expanded this program to include primary care, specialty care and inpatient follow-up visits. During COVID-19, Nemours used telehealth for initial patient interactions and then allowed patients and their families to visit pop-up tents to receive necessary immunizations and in-person care as needed. This approach has allowed the health system to mitigate declines in vaccinations amid decreased in-person well-child visits. In 2020, while Nemours experienced a 36 percent decline in well care visits, this strategy enabled them to limit the decline in immunizations to only 18 percent.

Data as the 'invisible bones' of virtual care

In addition to examining how to build new care models, healthcare executives are focused on building out a strong data strategy that supports improved care experiences for both patients and providers. Making healthcare data useful through infrastructure and analytics tools is a critical component of any virtual care strategy.

"All this new data needs the digital infrastructure to support it," said Aashima Gupta, Director of Global Healthcare Strategy and Solutions with Google Cloud. "For these new models to succeed, health systems need to be able to organize this data and make it useful via interoperability, analytics, and storage in the cloud."

Vivian Lee, MD, PhD, President of Health Platforms at Verily Life Sciences, an Alphabet company, believes data captured by virtual technologies will transform care delivery as we know it.

"Virtual care is here to stay," said Dr. Lee, who formerly served as CEO for Salt Lake City-based University of Utah Health System. "I believe that the high-quality data we are generating from digital tools and virtual care will begin to drive a new era of personalized care."

Healthcare executives discussed how data liquidity and analytics will form a foundation for an improved patient experience. From enhancing care via access to medical records to enabling new data-powered communication tools, data will help enable a critical communication link between providers and patients. It will allow this communication to exist both inside and outside of the clinical setting. For example, giving providers access to sophisticated data analytics tools that allow them to easily identify issues, and virtual care solutions that allow for quick, simple interventions, will enable new care models of chronic disease.

> "Technology needs to be an invisible enabler in the care journey, and data can help support that. Data can support all the elements of a consumer journey and can now give insights into specific patterns that help personalize care in much more intimate ways than we've ever been able to do."
>
> **Aashima Gupta**
> **Director, Global Healthcare**
> **Strategy and Solutions**
> **Google Cloud**

One example of a health system using data to help enhance care is [Penn Medicine](#), a six-hospital academic health system. Penn Medicine leverages virtual agents powered by artificial intelligence to gather information prior to care encounters, whether virtual or in-person.

"One specialty where this has been particularly useful is dermatology," said Roy Rosin, Penn Medicine's Chief Innovation Officer. "If a dermatologist doesn't have access to good clear images before an appointment, those appointments can often wind up canceled. These virtual agents can walk patients through this information-sharing process step by step."

Dr. Shrestha, of Atrium Health, believes the convergence of data and virtual care technology will transform the patient and provider experience, as data will serve as the "invisible bones" of virtual care models.

"Technology needs to be an invisible enabler in the care journey, and data can help support that," Dr. Shrestha told *Becker's*. "Data can support all the elements of a consumer journey and can now give insights into specific patterns that help personalize care in much more intimate ways than we've ever been able to do … data and analytics can help create a transformative consumer experience."

Patient centricity is the priority

Lastly, while technology is enabling new models of care and can play a critical role in improving efficiency, health systems, health plans and technology partners must remain focused on the impact of these new care models on the patient. "As leaders, we need to understand exactly what people are trying to do and what is getting in the way," Mr. Rosin said. "Software has to be designed for the reality of the patient and provider experience."

Usability by the patient or the provider is critical to the deployment of any new technology initiative. Leaders at Horizon Blue Cross Blue Shield of New Jersey, a health plan with more than 3.6 million members, understood the importance of usability and accessibility when embarking on its virtual engagement journey years before the pandemic. The organization has taken a single-app approach to ensure convenient use for patients.

"We did not want our members to have to download five apps to their phone – one to chat with a clinician, one for telemedicine visits, one to manage your account (claims and benefits) and so on," said Niren Kochhar, the Director of Digital Product Management with Horizon. "From the beginning, we knew we had to build a single app. Building telemedicine integration into our HorizonBlue app was the key to providing a single digital front door for our members."

> *"[We are] taking every department, taking every clinical condition, taking every use case, and figuring out how to digitize it. Not for the sake of digitization. But to improve the patient experience, improve the provider experience and ensure privacy along the way."*
>
> **John Halamka, MD**
> **President**
> **Mayo Clinic Platform**

As healthcare organizations seek to integrate more virtual care tools into their workflows, they must purposefully design solutions around patients' needs. As Dr. Halamka of Mayo Clinic articulated, "[We are] taking every department, taking every clinical condition, taking every use case, and figuring out how to digitize it. Not for the sake of digitization. But to improve the patient experience, improve the provider experience and ensure privacy along the way."

If done well, these new care models combined with patient-centered self-management tools can truly help transform the way that patients receive care, enabling patients to take an active role in their own care. "We want to empower people to co-produce their own health and to do so in a deeply personalized way," Dr. Lee stated.

Virtual Care: A key driver of health system transformation

While COVID-19 ignited the adoption of telehealth, the transition to new models built on virtual care has the potential to change many components of the healthcare system. Some healthcare leaders see the pandemic not only as a disruption, but also as an unique time to tackle real system change. As Horizon's Mr. Kochhar put it: "It's a harsh reality, nothing ignites the spirit of innovation quite like a pandemic."

One area of particular opportunity is around the use of virtual care as a mechanism for helping to reduce disparities in care and access. Joe Miles, Managing Director of Healthcare and Life Sciences at Google Cloud, points to the work Amwell has done to expand the use of telehealth amid the COVID-19 pandemic as indicative of what the future might hold for virtual care delivery. The widespread expansion of telehealth has the potential to reduce access barriers for those in remote and underserved areas and provide enhanced flexibility for patients. Mr. Miles said. "With telehealth, patients are no longer solely reliant on their local provider. For many patients, getting access to specialists can mean long travel times. With virtual care, patients in underserved parts of the country could have access to oncologists at premier institutions."

Mr. Miles' colleague Esteban López, MD, Americas Market Lead of Healthcare and Life Sciences with Google Cloud, pointed out that the expansion of virtual care could also help mitigate another legacy problem in healthcare that is poised to only worsen in the near future – the physician shortage. By 2030, the U.S. is projected to face a physician shortage between 40,800 and 104,900, according to research from the Association of American Medical Colleges.

"We have a growing population and a growing deficit of healthcare providers," Dr. López told *Becker's*. "We're going to have to rely on technology to help us take care of an even larger number of people with fewer resources."

Finally, the emergence of virtual care will necessitate the continued partnership between organizations inside and

Google Cloud and Amwell partner to transform virtual care

"This is a critical partnership for the healthcare industry and has the potential to dramatically transform the telehealth space through the use of modern cloud technologies," said Thomas Kurian, CEO of Google Cloud. "We are thrilled that together we can bring groundbreaking digital health solutions to so many providers, patients and health plans across the globe. Our joint work will drive innovation in health in a new and powerful way."

"We chose Google Cloud as our strategic partner because of their phenomenal people, superior products and open approach to partnering," said Ido Schoenberg, MD, chairman and CEO of Amwell. "Together, we will be able to offer an incredible array of integrated capabilities and help millions of people around the world access better care. Our collaborative work could literally democratize healthcare."

outside of the traditional healthcare system. The right marriage of telehealth with in-person care requires a strong technology underpinning, built around the needs of patients, providers, caregivers and health plans. This theory, that strong partnerships across healthcare and technology are essential to the future of healthcare delivery, inspired the partnership between Amwell and Google Cloud. As Thomas Kurian, CEO of Google Cloud, said of the partnership, "Together we can bring groundbreaking digital health solutions to so many providers, patients and health plans across the globe. Our joint work will drive innovation in health in a new and powerful way."

And while virtual care will never completely replace in-person care, the new hybrid models, built on a strong technology backbone, hold great promise of improving healthcare as we emerge from the pandemic. "Technology's ability to help us care for our most vulnerable patients by seamlessly stitching together all care interactions, regardless of setting, holds great promise for us all," said Amwell's Dr. Schoenberg.

Take action to improve care now and in the future – 3 virtual care Qs that need answers

1. Virtual care is here to stay, but in-person care is still crucial. This means healthcare leaders need to think critically about the ideal care models and answer this question:

How can you integrate new virtual solutions to both supplement and replace in-person interactions in ways that improve efficiency and the care experience?

2. The new care models will require the robust collection and streamlined distribution of data. To synchronize your data strategy with the new mixed virtual and in-person models, answer this question:

Do you have the right infrastructure to make your data useful and actionable for both patients and providers?

3. Solutions and care models need to be designed with the patient in mind, with patient needs clearly understood by the provider. To ensure patient centricity, answer this question:

Is your strategy more focused on improving patient care, or integrating the latest technology?