How Hospitals Are Transforming Telehealth in 2021

COVID-19 forever changed the doctor-patient visit with the overnight growth of telehealth. Now, as the pandemic starts to move to the rearview mirror, healthcare organizations are unpacking critical lessons learned and looking at their telehealth programs through new lenses. Here, four hospital leaders explore the next phase of telehealth, including new programs, technologies, and integration strategies.

Lehigh Valley Health Network (LVHN)
Robert X. Murphy, Jr., MD, EVP and Chief Physician Executive

Before COVID-19, LVHN operated 40 telehealth programs that touched 5,500 hospitalized patients per month, including an advanced ICU (AICU), which provided overnight telehealth video consults across nine counties. When LVHN's ambulatory telehealth volumes spiked from less than 1% to 67% of patient visits during the pandemic, the eight-hospital system in Allentown, Pennsylvania, was ready. "We had the advantage of nearly 20 years' experience and a fairly robust infrastructure in place that we just had to bring to scale to meet the demands of the pandemic," says Murphy.

Indeed, during the pandemic, LVHN made key changes to its telehealth program, expanding its AICU to include daytime hours, which ultimately reduced clinician exposure and saved the time and expense of having to don and doff PPE. The AICU enables clinicians to monitor patients from a command center that uses AI to filter real-time patient data and stream it across five large screens. "The workflow efficiency is tremendous, and it reduces the need to have an individual nurse at each bedside 24/7," says Murphy. LVHN also rapidly accelerated programs that use handheld mobile devices and scaled video technology to lower patient wait times for synchronous video visits.

Big-picture plans include creating a digitally driven system on one platform that is capable of marrying data across all components of care. "In the next year, we want to take our Epic EHR platform, which is built out, and extend our ability to take data and interactions across the continuum of care," says Murphy. "Whether you're in the hospital or at home, all data will flow through that platform." LVHN will also expand its remote patient monitoring platform, which currently provides telehealth services for patients with chronic conditions, including COPD, asthma, heart failure, and diabetes. "We're taking that to the next level and will take care of an even sicker population," he says. "It's a hospital at home–like experience for patients who do not necessarily have chronic conditions. We've invested heavily in technology over the last 10 years. We're one of the most wired hospitals in the country, and that has allowed us to provide much better service and outcomes for the communities we serve."

Houston Methodist
Sarah Pletcher, MD, VP and Executive Medical Director of Virtual Care

In 2020, Houston Methodist conducted nearly 300,000 patient virtual visits across its eight hospitals and 180 clinic locations. "Houston Methodist was well prepared for the pandemic crisis," says Pletcher. "We had a toolkit of platforms and processes, and we have been early adopters of digital and communication tools, which were on the shelf, installed, and ready to be expanded." The organization also had an IT foundation ready to support telehealth service growth. For example, Pletcher says most of the hardware and technology planning was already complete for Houston Methodist's virtual ICU (vICU), which now covers 360 beds, allowing rapid implementation when support was needed.

The vICU utilizes a variety of technologies, including patient monitoring software through the EHR, algorithm-based monitoring software, and video-audio technologies. The system also has a 24/7 virtual urgent care service in place. Houston Methodist did make one significant technology change by upgrading the EHR's virtual visit tool. "We swapped out the underlying video infrastructure within Epic midway into the year, and that really gave us more scale and reach," says Pletcher.

The organization's successful telehealth response goes beyond having the right technology and technical readiness, she says. "A key differentiator—a secret sauce, if you will—is the team culture. We execute quickly, and there's a unique agility and resourcefulness in the way we approach a problem." Pletcher also says leaders worked closely with vendor partners to build rapid workarounds and integration solutions so that telehealth platforms and services such as virtual urgent care were able to operate on a broader scale and integrate with all parts of the system.

In 2021, top goals include creating a more connected virtual experience by continuing to standardize and streamline down to fewer tools and platforms. "There really isn't a single killer platform that you can just install and you're set," says Pletcher. Trying to achieve a connected and coordinated experience still involves some non-tech manual processes, she adds. "We are always looking at the provider and patient experience and the steps along the way, including workflows and checklists. In order to streamline the experiences for our patients and our care teams, we will continue to push our medical record vendor and our other technology vendors to automate, integrate, and innovate wherever we can."

VCU Health
Vimal Mishra, MD, Medical Director of Telemedicine

In the first few months of the pandemic, Richmond, Virginia–based VCU Health had more than 100,000 telehealth visits. "Our leadership has been very progressive about expanding telehealth, and this created an amazing baseline for us," says Mishra. He notes that VCU Health, which includes an academic medical center and more than 800 physicians across 200 specialties, already had a strong infrastructure that included a direct-to-consumer telehealth platform, scheduled virtual visits, remote patient monitoring, and inpatient telehealth services.

As the pandemic unfolded and telehealth visits increased dramatically, leaders made a strategic move to expand and integrate telehealth across the care continuum. The system rolled out several virtual urgent care clinics aimed at triaging and treating specific patient populations, including adults, pediatrics, and those with COVID-19. VCU Health also launched a telehealth triage model for EMS. On the inpatient side, 250 hospital rooms were equipped to conduct inpatient virtual visits. The organization also developed a transitional care remote patient monitoring program to improve hospital throughput for patients with COVID-19 and expanded scheduled outpatient virtual care to almost all adult and pediatric specialty care available at VCU Health.

With this rapid growth, VCU Health's telehealth platform went through multiple iterations. "In the end, one platform was not robust enough to capture all team members and patient needs, so we expanded to three platforms to enable different workflows across our clinics," says Mishra. "While the results have been incredible, there's still a lot of work ahead to ensure these telehealth programs are sustainable and scalable. Integration continues to be a challenge due to different systems that don't talk to each other." Mishra says VCU Health is in the midst of implementing a new EMR, which will go live in December. It will be critical to integrate telehealth technologies into the EMR in a way that is seamless for patients and providers, he adds. As telehealth strategies advance in 2021, VCU Health is looking at how technologies can better support physicians and team-based care as well as a hybrid care experience that allows patients to seamlessly transition between in-person and virtual visits. Future plans include enhancing e-consults and e-visits as well as adding newer modalities such as AI chat boxes.

Inspira Health
Tom Pacek, VP of Information Systems and CIO

Although Inspira Health had a wide range of telehealth programs at the start of the pandemic—including tele-stroke and behavioral health assessments via the emergency room as well as on-demand virtual care—the sheer volume of patient visits hit hard, says Pacek. Like most healthcare organizations, the Southern New Jersey health system, with three hospitals, 1,200 physicians, and more than 35 primary and specialty care physician practices, had moved fast to add virtual urgent care, implement online visits, and expand telehealth across primary care.

"The existing platforms, including the one we were using, choked as vendors tried to get everyone on board," says Pacek. "It took us a week to get primary care doctors set up on our telehealth solution because the vendor couldn't turn it around fast enough." The organization responded by deploying multiple telehealth platforms and convenient solutions that enabled physicians to connect quickly with patients via video. But the solutions weren't fully integrated, something Pacek says the organization will address in 2021. "There was no time to integrate, so physicians documented in the EMR while using the telehealth product to make a video connection with their patients," he says.

Looking ahead, it will be critical to have a robust platform that integrates with the EMR and is able to handle the system's growing telehealth services, including the expansion of remote patient monitoring services, which started during the pandemic, says Pacek. He notes that the organization successfully discharged COVID-19 patients home early to finish their recovery with remote monitoring equipment, including a pulse oximeter, thermometer, and blood pressure cuff. "It will be a major staple in our telehealth strategy going forward," he adds. Inspira Health is also testing AI chatbots and plans to use more push technologies. "Rather than having to go back to the patient portal to look for something, we want to push it out to patients." He says as telehealth evolves and demand increases, the organization will also explore cloud solutions. "You can add memory and the processing power is so much faster, which can help meet unforeseen demands that pop up." ∎