![AMD Global Telemedicine logo]

Learning From the COVID Era:
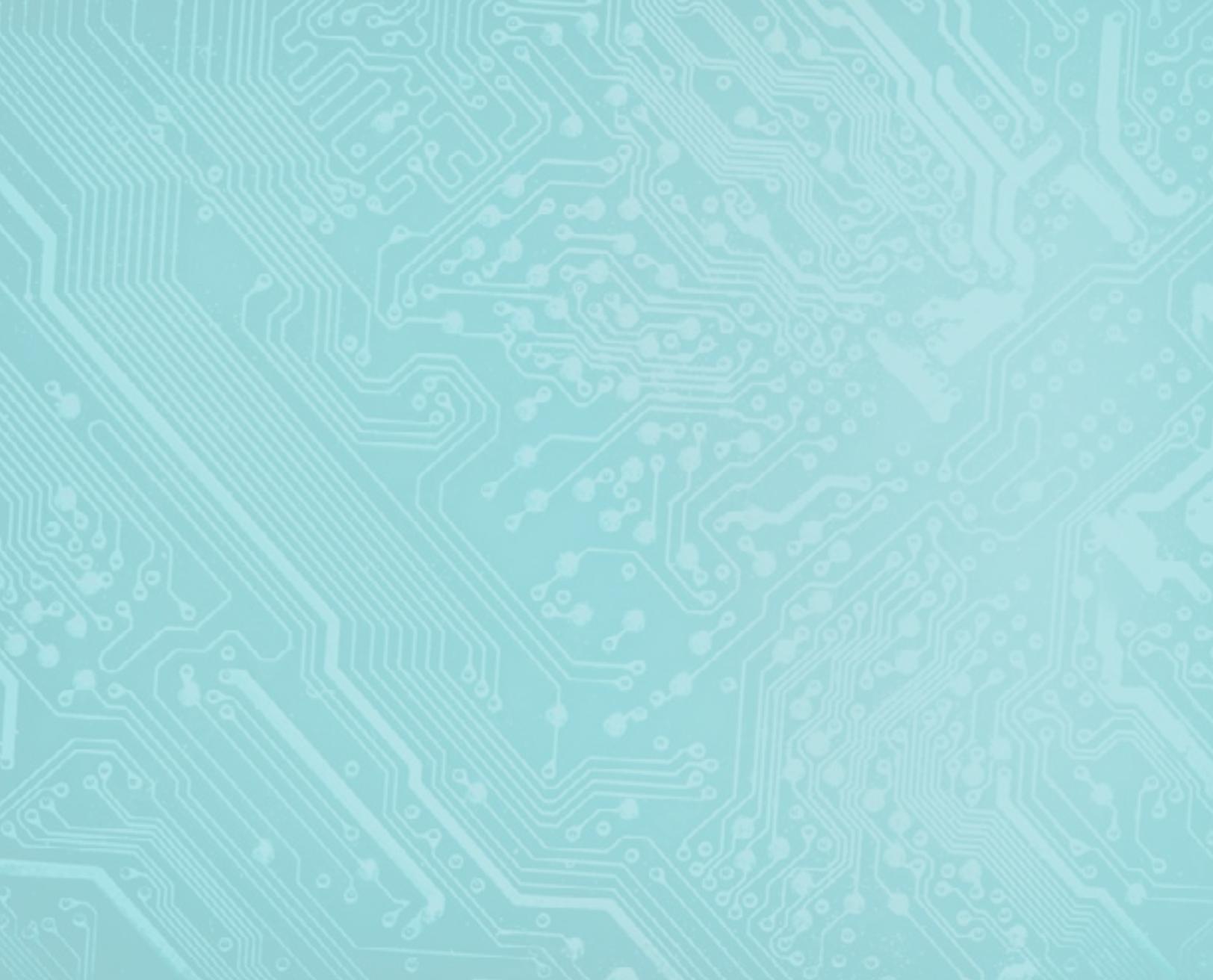## Technology Trends
in Clinical Telehealth

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Change. Few like it, but it can be a necessary and important response to a sudden force — like a global pandemic.

Before March 2020, most healthcare venues did not have formal relationships with telehealth vendors. Instead, they used off-the-shelf video platforms meant for business, not medicine, to try to satisfy patients who wanted telehealth visits. The limitations and shortcomings of those platforms became more apparent as the pandemic grew the need for telemedicine. These same venues began looking to work with systems, portals, and providers built with the realities of clinical practices. Telemedicine wasn't just an alternate to in-person visits but a growing necessity.

By mid-2021, providers were holding 38 times more telehealth in visits than 2019.

2019   2021
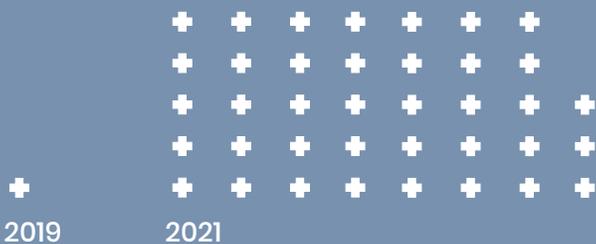
By July 2021, there was a 38-fold increase in telehealth sessions compared with figures from 2019. Even Medicare jumped into the fray, opting for telehealth 63 times more often than it had before. The implementation of telemedicine was rampant: Healthcare IT News determined telehealth adoption had likely jumped ahead by years.

The great migration to telehealth has been neither simple nor easy, and exponential growth has come with its fair share of growing pains. Practitioners using video-only platforms couldn't physically evaluate a patient or use a stethoscope or otoscope to make diagnoses. Plus, many systems and providers that moved to telehealth found the experience clunky when trying to adopt a variety of tools and applications that were never meant to integrate. Consequently, they had to navigate different portals and screens to jump from electronic medical records to PACS viewers or symptom checkers.

Challenges using telehealth arose for patients, too. Many discovered that the portals healthcare providers were using weren't intuitive for medical applications. They also felt the same barriers when it came to being able to get a confident diagnosis.

The overwhelming benefits of telehealth have prevailed in spite of those early difficulties, and technology has adapted to meet the challenges of a maturing user base. New connected-care models are addressing an ever-increasing range of services. They're enabling longitudinal telecare, integration of telehealth with other online health solutions, and hybrid care models. They're elevating the consumer experience and lowering costs across the board. To top it all off, telemedicine models are offering up exceptional patient outcomes.

Telehealth is poised to mature even more as time continues, so it's important for organizations investing in healthcare technology to understand the current trends coming out of the pandemic rather than fall behind other healthcare providers.

Accessibility BYO-Everything

The vast majority of healthcare organizations already have their own devices, personal computers, hardware, equipment, carts, videoconferencing software, communications platforms, and more. Why waste money investing in replacements that aren't necessary? Instead, they want to be able to practice as much bring-your-own (BYO) everything as they can. Understandably so.

As such, technology choices related to telehealth need to be able to accommodate all or most of a system's existing IT infrastructure and other solutions. Attempting to force Mac users to make the 180-degree shift to PCs — or vice versa — is a high-friction proposition in the best of times. With the proliferation of cross-platform programming languages, clinical staff and patients have become justifiably accustomed to using any service on any device in an array of settings. They are uninterested in tossing away what's working.

> **Telehealth solutions are a nexus for numerous video systems and devices.**

Knowing the sensitivity regarding this subject, it's essential that your telehealth solutions are a nexus for numerous video systems and devices. You deserve to work with engineers willing to make integration happen for your team's benefit. The same holds true for electronic medical records. Even with the existing API, it's essential that data can be moved accurately and reliably from one endpoint to another.
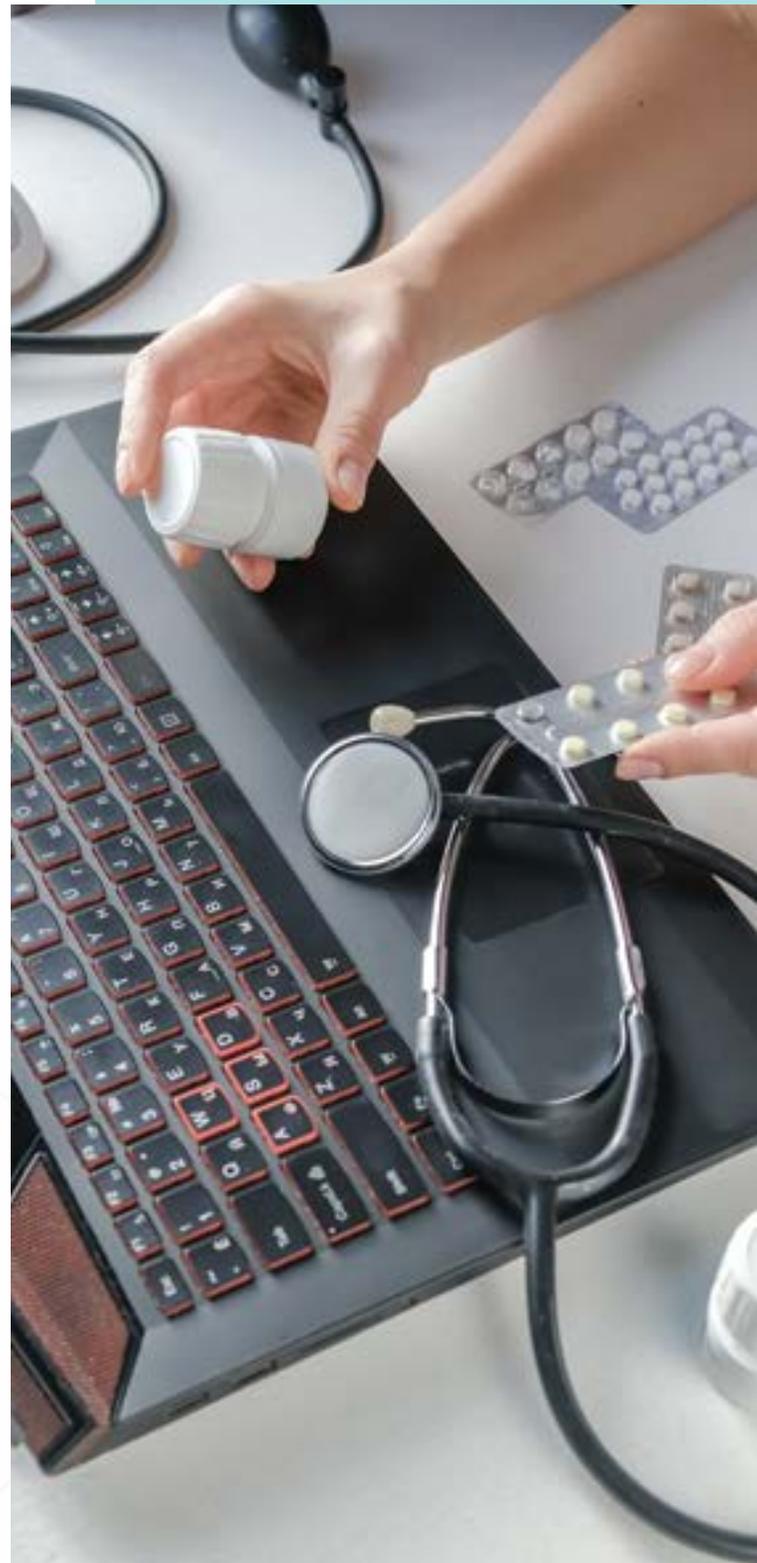
Trend 2:
An Open Systems Approach to Modularity

Healthcare providers have invested untold millions building technology ecosystems with a focus on openness, interoperability, and collaboration. A telehealth solution will only thrive in that environment if it seamlessly integrates with incumbent technology in a way that improves workflows, rather than impairing them. Taking an open systems approach will eliminate barriers before they arise and bolster mutual success for your solution.

A great example of a (mostly) open system is your smartphone. Your phone is a "single pane of glass" through which you can make phone calls (of course), take pictures, browse the web, read a book, listen to music, play games, check your email, and install any app or connect to any device you like, so long as it complies with a set of equitable standards established for that platform. Apple and Google author tons of apps, but they also provide app stores from which you can install apps made by anyone. Open systems foster inclusion and flexibility by providing a

standards-based framework to which other technology vendors may adapt their products and services.

Mozilla Firefox is the epitome of openness from the perspective of application designers who wish to be an integral part of that system. The browser runs on nearly every computer, operating system, and mobile device in existence and can, in turn, load any web content that adheres to current standards.

> **Ultimately, the goal of this trend is to make it uncomplicated for healthcare systems to bump up their telemedicine presence on their terms.**

For most integrated delivery networks, primary care practitioners, and skilled nursing facilities, that "single pane of glass" is the electronic health records system interface. Every workflow that reasonably can begin and end there does. If a healthcare organization is looking at purpose-built applications for their telemedicine programs, they will want to make sure it can be incorporated into that EHR interface. Conversely, if the telehealth technology solution is best operated from the vendor's own portal, then there needs to be support for hosting incumbent applications as modules within it.

Avoid the trap of closed proprietary systems. Don't buy one, don't build one, don't be one. Every CIO should be aware that the rigidity of a platform whose portal is compatible with only its own apps or medical devices will inherently limit functionality and rack up costs over scale, and so they will want to avoid such technologies whenever possible.

Examples of an Open Systems Approach

Smartphones
You can install any app or connect to any device you like, so long as it complies with a set of equitable standards established for that platform.

Mozilla Firefox
The browser runs on nearly every computer, operating system, and mobile device in existence and can, in turn, load any web content that adheres to current standards.

Trend 3:
Integrated User Management Practices That Offer Identity Federation

User management is a major point of friction when it comes to adding telehealth choices to a provider's services. Why? For one, health systems and primary care physician groups tend to experience high turnover.

From an IT and infrastructure engineering perspective, this can turn into a headache quickly. It takes a lot of time and resources to activate someone's access to a wide array of platforms or systems, only to have to reverse the process 90 days later. Yet all end users need to have secure ways to access platforms or third-party apps like Epic MyChart or Mobile Heartbeat.

The answer to this conundrum is by introducing support for identity federation within user management to streamline deployment and registration, as well as develop URL schemes that enable context-specific launching.

Identity Federation in Action: A Healthcare Example

The hospital system hires a nurse.

The nurse is added to the system under the role of "new nurse."

The system administrative team checks the appropriate boxes giving the "new nurse" access to a variety of areas.

Every time the nurse logs in, the system automatically credentials the nurse in all accessible areas.

When the nurse leaves, the system administrator deactivates the user from the role of "new nurse," which disconnects the nurse from accessing all the systems.

At the end of the day, identity federation doesn't just clear up confusion and make life operationally easier. It adds a level of security because it helps bypass human error. For example, what would happen if a system administrator had to manually turn off access to every platform when a staff member resigned? The result might be that the staff member's ability to log into Outlook was deactivated but not the ability to log into the company's pool of electronic medical records.

Identity federation extends beyond simplification of user management and into the realm of app config. App config is a standard that allows mobile device management software such as AirWatch. Most health systems, some skilled nursing facility groups, and larger primary care groups rely on mobile device management software to deploy and manage all endpoints. Consequently, when a Windows update or mobile application update or registration occurs, it initiates within the mobile device management software. Everything happens behind the scenes and without intervention from the end user, which gives clinical staff a seamless experience.

The advantages of app config and identity federation can be valuable for systems using application launching platforms like MyChart, which launches apps as if they were webpages. Identity federation provides a MyChart URL scheme support that allows the app to launch right away with the patient ID already pre-populated into the configuration.

From all aspects, identity federation makes life less stressful and hectic for clinical staff while also protecting healthcare systems from security vulnerabilities. Though many people are already familiar with single sign-on from their personal browsing lives, healthcare workers frequently are surprised by how much of a difference this trend improves their workflows. This ease of use allows them to concentrate on perfecting the skills they need to elevate the telehealth patient experience.

> **Single–sign on improves clinical workflow and organizational security.**

A Realization That Value Is a Product of Time

The tremendous upswing in the usage of telehealth has led to an interesting phenomenon: Medical professionals can increase the volumes of patients they see each day, and with less time spent documenting, they're able to focus on quality patient care. As a result, those professionals are seeing time as a more precious resource than ever before. And they want to ensure that any applications they use don't just work better than others but optimize their efficiencies without obstructing effectiveness.

Research from the American Medication Association shows that clinicians are ready to appreciate anything that improves their output.

Nearly 7 in 10 want to increase their telemedicine offerings.

Three-quarters of poll participants agreed that telehealth fostered more quality interactions with patients.

It's hardly a stretch to say that these respondents and those they speak for would be pleased to consider any telemedicine solutions that brought them real or perceived value.

> **The right technology can save time AND drive quality critical interactions.**

All vendors supporting telehealth should weigh their offerings against this trend. Do their products or services allow providers to see more patients than they used to in the same amount? Do they require less documentation time and support a bump-up in direct patient care intervals? Anything that drives clinical outcomes, quality of experience, and diagnostic improvements while cutting time will be valuable to all stakeholders, including patients.

It's worth mentioning that time-saving telehealth solutions may have other unexpected and positive outcomes. Consider the need for expanded access to specialty care in rural communities, which McKinsey indicates is a significant barrier to a healthier nation. With telemedicine options, patients can negate problems posed by time and distance to get the care they need from specialists like cardiologists, nephrologists, or oncologists.

Similarly, telehealth can streamline niche aspects of the patient journey such as post-acute care. Approaching rehabilitation or palliative services with hybrid or online-facilitated settings can open doors for both providers and patients. Yet adding more services doesn't need to add more time to the clock or clutter schedules. The right telehealth technologies like services, software, and hardware can streamline workflow and documentation time.

Making Life Better:
Telemedicine at the Forefront of Healthcare

BYO everything. Modularity. Identity federation. The value of time.

When looking at the aforementioned telehealth trends from a 35,000-foot viewpoint, it's apparent that they're aimed at making life better, easier, and healthier. Certainly, their application will require some change. However, major changes have taken place already. Now is the perfect opportunity to smooth out the rough spots and weave telemedicine for clinical-quality care into the traditional fibers of healthcare.

AMD Global Telemedicine is excited to be a leader and trendsetter in this dynamic market. Our vision involves acknowledging that every healthcare system is different and honoring those differences. We never offer a one-size-fits-most solution. We see each customer partnership as a unique arrangement that deserves a concierge touch rather than a classic client-vendor approach.

If you're part of a healthcare system that wants to save time, maintain your quality standard of in-person care, and leverage the latest technologies to meet your vision and purpose, <u>contact our team</u>. We can help you gain mastery over the telehealth ecosystem through a mutually beneficial relationship with our company designed 100% around your needs.

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