



## ***Beyond COVID-19: Improving Resiliency with an Agile Network Infrastructure***

***The healthcare industry was heavily disrupted in 2020 by COVID-19. The resiliency gained by building a more agile network infrastructure will help organizations respond to emerging challenges and opportunities.***

**A**s COVID-19 swept the globe, healthcare organizations (HCOs) found many of their traditional care delivery processes dramatically upended. Hospitals and clinics struggled to acquire personal protective equipment (PPE) as medical supply chains broke down. Provider organizations had to find ways to expand intensive care capacity, as well as quickly construct pop-up field hospitals, triage centers and other types of care facilities, and health systems needed to rapidly deploy COVID-19 testing and vaccination sites.

HCOs of all sizes were pressed to quickly stand up secure, reliable telemedicine and remote work platforms, as the majority of nonclinical staff were sent home to limit potential viral transmission—and they had to do so even as cyberattacks, particularly ransomware threats, increased. HCOs also had to manage all of these incredible disruptions while facing a massive decline in revenue, due to widespread decreases in elective surgeries and office visits. According to the World Health Organization, these disruptions are still affecting access to care around the world today.<sup>1</sup>

“When COVID-19 hit, everything changed for healthcare, and it kept changing as the situation evolved,” said Ryan Benson, Consulting Systems Engineer, Cisco Meraki. “Healthcare organizations needed to quickly pivot to support things like remote work and telemedicine, even as budgets were disappearing. The pandemic forced HCOs to look at things in a different light and accelerate different digital transformation projects they may have just been considering beforehand.”



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ANTHONY FORINA | Account Manager | Cisco

Jesse Estes, Commercial Account Manager, Cisco Meraki, agreed. He added that, in many ways, COVID-19 highlighted issues that were already well-known to healthcare, including the need to leverage technology to support more widespread access to care.

"There have always been disparities that exist inside of healthcare," he explained. "The pandemic exacerbated many of those issues, making it harder for patients to get access to the care they need and for clinicians to provide that care. It allowed us to see the struggle and the real impact of those problems and how they can affect patient outcomes. It's been like a magnifying glass and, hopefully, it will push us to do better in the future."

Indeed, the industry has reached an inflection point, presenting an opportunity for HCOs to apply the lessons learned during the pandemic and embrace and deploy new technologies that will help reduce costs, decrease provider burden, improve patient outcomes, and enhance patient experiences. But those who maintain the status quo will be unable to do so without a resilient, flexible, and scalable infrastructure in place.

## Building a resilient foundation

As Benson noted, even prior to the COVID-19 crisis, many HCOs were considering different digital transformation projects to help facilitate the sharing of vital patient data among different providers, as well as to support the latest medical devices and remote patient monitoring tools. By necessity, the pandemic accelerated many of those projects. Unfortunately, many of those initiatives were severely limited by outdated network infrastructures, a result of HCOs historically viewing information technology as a cost center and not as the backbone for innovation. The existing network infrastructure did not have the resiliency or agility to successfully implement and deploy new technologies with ease.

"For too long, IT has not been leveraged as a business enabler," Estes said. "But, as we saw with the pandemic, it was technology that allowed healthcare organizations to address most of COVID-19's biggest disruptors. Organizations that could connect the dots from a data perspective, driving not only continuity of care but also mapping toward reimbursement guidelines, were the ones that were the most successful."

Certainly, there are all manner of different digital offerings that promise to enhance care delivery. But, as Anthony Forina, Account Manager at Cisco, pointed out, those technologies are only as good as the infrastructure that exists to support them.

"Let's face it: hospitals still continue to invest millions into electronic medical record (EMR) systems without the proper infrastructure to get the most out of them," he said. "Healthcare, as a field, is changing rapidly. It requires increased digitization, even outside of a crisis, and organizations that cannot build more resilience into their infrastructure won't get their money's worth."

Investing in a more flexible and distributed network infrastructure—one that can scale up and down as needed and can manage potential failures more effectively—should be at the center of all digital transformation efforts. Having such a network will provide HCOs with the agility to proactively respond to the next crisis, whatever it may be, without the risk of sacrificing care, and it will enable them to do so in a secure, centralized manner. Such an infrastructure can supply the right foundation for standing up remote clinics, quickly rolling out new technology platforms, supporting devices on the internet of medical things (IoMT) and facilitating more healthcare-in-the-home programs for patients with chronic conditions. Estes said that kind of resilience is not only important in emergency situations, but is also needed to address changing consumer demands about what healthcare can and should look like.



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RYAN BENSON | Consulting Systems Engineer | Cisco Meraki

“When you have that kind of flexibility, you can meet both your care needs and your business needs by expanding and contracting the network quickly. You can ensure that your patients and providers have the access they need,” said Estes. “You don’t have to build some big, unwieldy thing that is expensive and difficult to maintain and manage over time. You can invest in technologies that are really flexible on the back end so you can do what’s required to meet the moment.”

## Preparing for an uncertain future

One likely outcome of the pandemic is that HCOs will recognize the value of both remote work and telemedicine applications. Benson said many HCOs are discovering the benefits of being able to move different services outside the four walls of the hospital as the COVID-19 situation continues to evolve. But it’s important, he added, for organizations to continue to look toward the future and consider whether their current infrastructure could support both today’s care delivery needs, as well as what might be required if another disaster strikes.

“Too many organizations are not looking at realistic failure scenarios when it comes to their network,” he said. “It doesn’t matter if there is a storm, a pandemic, or, if during a construction project, someone’s backhoe cuts the fiber. If you have already planned for more flexible, distributed connectivity, you can help ensure there will be limited impact to your operations. You need multiple failover capabilities, especially when you are supporting different types of technology, so you have a plan to mitigate any potential problem and make sure that your doctors and nurses can keep caring for patients.”

Estes added that, while it might seem easier to go back to the old ways of providing healthcare, organizations that take the time now to build more resiliency and flexibility into their network infrastructure will be better positioned to make the most of their digital transformation investments, both today and into the future.

“You need to ask yourself, if this happens again, how can we do better? How do we scale this out to the point where something like COVID-19 doesn’t nearly cripple the entire healthcare economy?” he said. “Technology is what is going to help us do that. We need to make sure we are in a position to let it.”

For his part, Forina said that with new technologies coming on the market every day, with the potential to reduce costs and improve inefficiencies, it is vital that provider organizations continue following the path of digital transformation. He said healthcare C-suites that adopt a digital-first, people-centric approach to all areas of the organization will find success, no matter what unexpected challenges might come their way.

“The future architect recognizes that business and technology strategies are increasingly indistinguishable,” he said. “This is a kind of sentinel moment: we can make our healthcare delivery system better than it would have been without the pandemic. But that all depends on having the right infrastructure in place to support these incredible new technologies.”

**Healthcare organizations require resilient, flexible network infrastructures more than ever in these uncertain times. [Learn more here.](#)**

### Reference

1. World Health Organization. 2021. Second round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic. April 23, 2021. <https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS-continuity-survey-2021.1>.



### About Cisco Meraki

Enabling HIPAA-compliant networking, guest Wi-Fi, secure BYOD, and a seamless user experience, the Cisco Meraki solution delivers for healthcare IT with a 100% cloud-based architecture that provides centralized visibility and control, offering significant cost savings over traditional networking solutions.