The resiliency of small and rural hospital IT teams

A look at how IT has remained agile and innovative throughout the pandemic
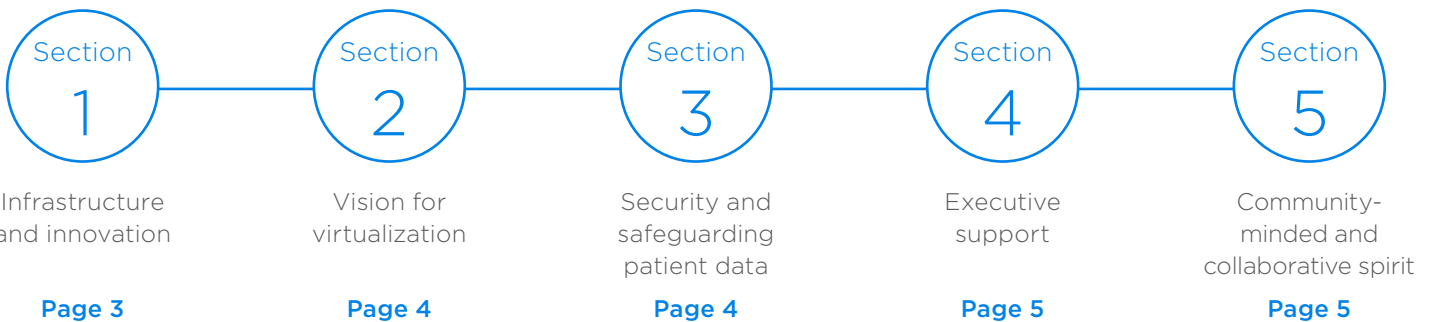
Spectrum ▶
ENTERPRISE

Many small and rural hospitals have worked hard to transform care and resources to meet the challenges of the pandemic. In speaking with several IT leaders, we've learned that while these facilities might be small and often on limited budgets, they often have greater agility and executive support, and a more powerful sense of community and team spirit than do some of their larger counterparts. These attributes have allowed them to not only meet the current challenges of the pandemic with competence and speed, but also to innovate when and where necessary to improve the quality of patient care while keeping staff safe.

This e-book documents these stories of agility and innovation. It also provides a path forward for other small and rural hospitals looking to modernize. It provides insights into how IT can work with executive teams, clinical staff, vendors and their community to innovate and invest in the digital future of healthcare, which COVID-19 has ushered in with greater speed than anyone previously imagined possible.

"We're big enough to have the budget and the need to do all those really, advanced technologies, but we're small enough that we can actually make things happen."

— CIO at a rural health system in Nebraska

Section 1	Section 2	Section 3	Section 4	Section 5
Infrastructure and innovation	Vision for virtualization	Security and safeguarding patient data	Executive support	Community-minded and collaborative spirit
Page 3	Page 4	Page 4	Page 5	Page 5

Spectrum ENTERPRISE

Section 1: Investments in infrastructure and innovation pay off

Rural and community hospitals may not be known for being innovators, but from speaking with IT leaders at smaller facilities, it's clear that many of them have, in fact, been visionaries. This has enabled them to be ready for the disruption of a pandemic and have the flexibility and agility to respond as needed.

One rural health system in Nebraska, with facilities ranging from 25 to 130 beds, had already been making strides toward embracing telehealth before the COVID-19 pandemic. They had invested in a virtual urgent care app as well as a video conferencing platform, so when the pandemic hit and telehealth went from a nice-to-have to an urgent necessity, they were able to manage and adapt to the demand.

"We didn't have to go buy or vet anything quickly," recalls the Nebraska health system CIO. "It was more about how we use the app and operationalize it for the different use cases. For example, when we have an outreach clinic, that is handled a little differently than the way that the appointments are done in one of our own clinics. It was more about getting those things figured out than the technology, which was a huge advantage for us."

Even at an independent hospital in Maryland, where the adoption of digital services like telehealth lagged behind, center leaders still had foreseen the need to invest in modernizing the facility's infrastructure overall. In the years leading up to the pandemic, the medical center had upgraded its infrastructure.

This allowed it to transition from having no one working from home to a remote workforce overnight. It was still challenging, but it was possible. "We needed about 50 people to work from home. We weren't able to do it overnight, but in less than a week we were able to do it," says the CIO/VP of Information at the Maryland hospital. "We implemented telemedicine within 72 hours." "For us, it was about making sure that we're providing care that the community needs to get through the pandemic, but let's not pull the trigger on committing to multiyear large investments before we know where all this settles out."

Seeing that telehealth is here to stay, the facility is now in the process of transitioning to a different platform. But without the vision and foresight to upgrade and modernize its infrastructure before the pandemic, the center wouldn't have been able to meet its community's needs as quickly or efficiently.

"Maintaining and increasing flexibility in our infrastructure has been the key, because you can only meet uncertainty with flexibility. If you meet uncertainty with rigidity, you're going to fail," says the CIO/VP of Information at an independent hospital in Maryland. "I think that's one of the things I'm most proud of. We built a flexible system. I didn't know COVID was coming, but I knew that we needed to be agile if we were going to stay a community health system."

"I'm proud to say we made some investments and some choices years ago that gave us the flexibility we needed. Had we stayed on the classic community health system motto of let's do it the tried, true and cheapest way, and let's not be innovative because innovation costs money – had we followed that path, we would have been in real trouble."

— CIO/VP of Information at an independent hospital in Maryland

Spectrum▶
ENTERPRISE

Section 2: The vision for virtualization

Another area where many rural and small community hospitals have prepared themselves for a digital future, as the pandemic has required, is investing in modernizing their infrastructure through virtualization.

The Nebraska-based rural health system already had a virtual desktop infrastructure and the associated technology, such as Office 365, in place. This made adapting to working from home easy.

A 25-bed critical access hospital in Colorado had also foreseen the need to move to a more virtual environment. "Virtualization was important to me and the organization," says its CIO. "We had started building on cloud initiatives and virtualizing our servers and desktops way before COVID even struck, so we had really advanced technology and a strong infrastructure backbone."

When COVID-19 hit, the hospital was able to adapt immediately. "We were able to start sending individuals home because we already had specific virtual profiles in place. We had a strong, secure VPN that allowed employees to log in, get into their virtual desktop and access their applications," says the Colorado hospital CIO.

"This crisis has fully displayed the value of buying into digital transformation; it's such a critical component."

— **CIO at Colorado critical access hospital**

But virtualization has helped in other ways too. "Just by adding a lot of virtualization and cloud initiatives, I've been able to reduce costs 56 percent and really improve uptime, from 59 percent to 99 percent, which increased business productivity and operating efficiencies and really enhances services while reducing operating expenses," he added.

Section 3: Security and safeguarding patient data a key priority

Given the number of cyberattacks on healthcare systems since the pandemic began, having a modernized infrastructure in place that can support the appropriate security solutions is critical. Even for smaller hospitals.

Spectrum▸
ENTERPRISE

The Colorado hospital CIO has focused on network and device security, noting that medical devices are a critical component of delivering care. To that end, they've invested in real-time location services (RTLS) using radio frequency identification (RFID) to protect medical assets and have the appropriate security measures in place to ensure their medical devices aren't breached.

For the CIO at the rural health system in Nebraska, another important security aspect that required quick action was how to make patient information and hospital data secure in a remote work environment. "It certainly creates a number of security issues, the fact that you have somebody at home accessing that information," he says. "And our ability to protect that data is another example of organizational support and how that's allowed us to move fast."

His team was able to quickly put in place emergency policies that had certain requirements for users working from home. One of the big issues was making sure that employees' voice assistants, like Alexa and Google Home, were shut off in the area of the home they were working in.

"We made sure that these devices were turned off in the work environment, that we had multifactor authentication turned on and that we had a number of other measures in place that allow us to feel as safe as we do in our in-person environment," says the CIO of the rural health system in Nebraska. "Also, because of the way employees access our virtual infrastructure, nothing gets left behind. So as soon as they close out that session, it's gone. It's always a security risk anytime you introduce more end points like that, but our environment was designed in a way that reduces risk."

Section 4: Executive support is essential

While the investments in a flexible and modernized infrastructure have been critical, so has been having a seat at the decision-making table and executive support.

The Colorado hospital CIO describes his own executive team as being very pro-technology. "They understand the importance of why we're driving some of these initiatives, the reasoning behind the investments in what we're doing, the importance of what cybersecurity brings to the organization and the importance of what digital transformation brings to the organization."

The CIO of the rural health system in Nebraska also believes that the executive team's support has been critical to the health system being not only prepared in many ways for the pandemic, but also able to pivot where needed.

"Between our CEO and through our senior management team, if there is something we need to do and it's a priority, you can tap in very quickly. I sat on that senior executive team, so I think it's a huge advantage for us to have somebody representing IT who knows what's going on and what needs to happen. Because if you think about this day and age, there's not a decision made that doesn't have some component of technology in it. IT has to have a seat at the table."

He also points out that executive support doesn't always mean more funding, but there are other ways they can help make IT innovation possible. "Many of these initiatives don't necessarily involve money; they involve support from the organization to put in place the processes to keep our networks safe and secure. I feel blessed that IT is considered a trusted advisor, and trusted enough to be able to do the things we need to do to keep our organization safe — especially from a security perspective."

Section 5: Community-minded and collaborative spirit results in greater agility

One recurring theme from all the IT leaders we spoke to is the collaborative and community-minded spirit of not just their own IT teams, but also clinicians, vendors and the community as a whole. This community-mindedness has been a critical component of making things happen during a crisis.

Spectrum ▶
ENTERPRISE

"I have never seen better teamwork — from clinicians, from IT and from the executive level. Everyone coming together for the greater good was such a critical component creating overall success," says the Colorado hospital CIO.

"There were different locations within the organization where we had to set up COVID wards. We had to put in telecommunications. We had to put in internet connectivity. We had to put in wireless access points and virtual clients. There were a lot of different initiatives that we needed to do. And with everyone coming together and getting everything in place, it literally took only a single day to get everything actively going and rocking and rolling."

He also notes how even vendors were there to help. "You know, I think our vendors were very understanding. It was pretty impressive to see even high-end vendors really extend a hand and give upgraded versions of their software to healthcare organizations."

The CIO at the rural health system in Nebraska also attributed the willingness of his team to help as being instrumental in allowing the entire organization to cope with the impacts of COVID-19.

"They've responded to every requirement. They've risen above — and I could not be prouder of the people who work here in the IT department," says the Maryland hospital CIO. "I have six nurses in my department. I require them to maintain their licensing so that they can do application support and do it well. Four of those nurses are working in the hospital right now providing direct patient care because we've got COVID going through the nursing staff and we've got staffing shortages — and they're smiling and they're loving it, but they're also still checking in and try to help with IT too."

The future of healthcare is digital

Small and rural hospitals, even on limited budgets and stretched resources, have tapped visionary leaders, executive support and a collaborative team to advance their infrastructure modernization agenda and ensure that they have the flexibility and agility to meet unpredictable situations. Is your organization ready to follow suit? Let Spectrum Enterprise help you modernize your hospital's IT infrastructure.

About Spectrum Enterprise
Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes networking and managed services solutions: Internet access, Ethernet access and networks, Voice and TV solutions. Spectrum Enterprise's industry-leading team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. More information about Spectrum Enterprise can be found at enterprise.spectrum.com.

Spectrum►
ENTERPRISE