



Attending the session were leaders from CHIME, NTT DATA, and a variety of diverse healthcare organizations, including:

Deborah Muro
CIO
El Camino Health

Chuck Christian
VP of Technology and CTO
Franciscan Alliance

Linda Stevenson
CIO
Fisher-Titus Medical Center

Geoffrey Patterson
VP and CIO
Henry Ford Health

A CIO at an academic health system in the Mid-Atlantic region

INTRODUCTION

In the post-pandemic environment, digital innovation is once again taking center stage, but with a twist. On one hand, healthcare organizations (HCO) have more applications than ever as virtual care, artificial intelligence, and consumerism bring a host of new clinical and operational requirements into the care environment.

Yet in a time of extreme economic stresses, and with lessons learned from the chaos of the COVID years, HCO leaders are sharply focused on ensuring that their efforts are as coordinated, efficient, and cost-effective as possible.

As a result, many organizations are finding themselves at a crossroads: how can they build on the foundations of their technical infrastructure while preparing themselves for a future that will require more complexity, more agility, and more interoperability than they have ever needed before?

The answer lies in the cloud.

While the movement away from on-premise data centers isn't new, it's going to have to accelerate if HCOs are to keep up with the rising demands of the digitally enabled care environment. That was the assertion of a panel of experienced Chief Information Officers and Chief Technology Officers at a recent CHIME Thought Leadership Roundtable hosted by NTT DATA and moderated by Russ Branzell, President and CEO of CHIME.

With enhanced scalability, fewer direct management needs, less latency, and reliable uptime, HCOs can benefit significantly from shifting many of their applications into the cloud. However, potential roadblocks may arise in the form of budget constraints, service agreements, and developing workable strategies that prepare organizations for long-term growth.

How are CIOs balancing the challenges and opportunities ahead of them as they migrate traditional workloads to the cloud and prepare for the next phase of digital maturity?

DEVELOPING AN EFFECTIVE CLOUD STRATEGY IN THE FACE OF ORGANIZATIONAL CONSTRAINTS

The cloud is now a familiar concept to HCOs, with 84% of organizations in [CHIME's 2022 Digital Health Most Wired survey](#) subscribing to at least some sort of cloud-based services for clinical applications and 91% using the cloud for non-clinical tasks.

However, while the uptake may be broad, it isn't always deep enough for HCOs to truly benefit. Security concerns are top of mind as organizations look for ways to insulate themselves from cybersecurity threats, and financial pressures are playing an outsized role in leaders' reluctance to consider moving away from traditional on-premise hosting.

"A lot of organizations are not yet ready to capitalize on the long-term advantages of moving to the cloud," acknowledged Geoffrey Patterson, VP and CIO at Henry Ford Health in Southeast Michigan. "The biggest benefit of the cloud is that your potential for growth is theoretically unlimited."

"The major constraint is cost – and while I'm not minimizing that by any means, you're going to be spending similar or greater amounts if you keep the majority of your applications on-premise, plus you'll have to account for the staff resources, the space, the physical security and cybersecurity, the extensive planning...there's a much bigger list of challenges. Flexibility and scalability should not be underrated, especially as artificial intelligence comes in with its intensive demands."

To reap the benefits in the near future, organizations have to be willing to invest in themselves and in new cloud partners. These relationships should be developed strategically – but they don't need to happen all at once.

"For us, moving to the cloud is really a workload placement strategy," said Chuck Christian, VP of Technology and CTO at Indiana's Franciscan Alliance. "We engaged a consultant firm to contact our application vendors and then walk through the questions of what we need to retain, what we could eliminate, and where we should be hosting specific applications to get the most bang for our buck."

"At the same time, we've had to educate finance about the change from capital to operational expense and what it really costs to move things into the cloud and caution them that they're going to see the expense side of the budget go up in the short term before it levels off long-term."

At El Camino Health in California, CIO Deborah Muro is also taking a measured approach to deciding what should be moved to the cloud and what can stay closer to home.

"Budget has definitely affected our strategy and led us to assess every situation very carefully," she noted. "I worry, for example, that if we work exclusively with a single cloud provider, then we're going to be at the mercy of their pricing increases and have few other options. We have tried to diversify and retain some more visibility and control over those costs."

"Remote work has also influenced how we approach cloud deployments. For example, we have radiologists that are now working from all over the country, and they were experiencing latency and performance issues when connecting to on-premise technology solutions. It made sense to move some of those applications to the cloud for the speed and reliability as part of our solution to enable remote work."

The rise of remote work is an important motivator for exploring cloud-based applications, agreed a CIO at an academic health system in the Mid-Atlantic region. "Acquisitions have also impacted our decision-making," she added.

DEVELOPING AN EFFECTIVE CLOUD STRATEGY IN THE FACE OF ORGANIZATIONAL CONSTRAINTS

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“When we started to acquire hospitals, a lot of our solutions simply wouldn’t scale without being in the cloud. I wouldn’t say we have a cloud-first strategy, but there are definitely some things that have to be there in order to work over diverse geographies and in multiple facilities. These are issues that are here to stay, and we have to think accordingly.”

DEVELOPING STRONG RELATIONSHIPS WITH CLOUD VENDORS

In healthcare, where privacy and security are paramount, moving to the cloud can seem like it comes with the risk of relinquishing necessary control over crucial datasets and operational factors, such as the timing of upgrades. To combat those feelings, HCOs need to start off their cloud vendor relationships with transparency and trust – and continuously evaluate their partnerships as they evolve over time.

“Digital infrastructure management is never going to get any easier on health systems,” said Muro. “We will always be ultimately responsible for what happens with our data and how our systems work on a day-to-day basis. But a cloud partner can be an asset instead of a hindrance if we approach the relationship in the right way.”

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CIO

El Camino Health

“For example, cost pressures are always going to influence our decisions as an organization. And yes, there are costs to moving to the cloud. But on the positive side, it’s nice to be on a system that’s automatically upgraded when the costs are built into the service agreement. I don’t have to be put in a situation where I’m justifying an expense related to life cycle management and budget challenges create a roadblock to keeping technology up to date, safe and secure.”

A clear and detailed service agreement is vital for making the right decisions about which cloud partner to trust, Patterson concurred. HCOs need to carefully evaluate their vendors’ initial offerings, but also have to think about how those agreements might evolve in the future.

“We might get a low price from a cloud partner right now, but what happens in five years when they tell us there’s going to be a major increase?” he said. “I’ve met with a couple of very interesting vendors who seem to be writing themselves out of the running because when we’re struggling for a 2% margin, they’re angling for a 20% increase without planning

new features to justify the price. That’s an important question to ask when exploring a new partner.”

Vendors should be willing to have these discussions and be able to provide satisfactory answers before HCOs sign on the dotted line, advised Linda Stevenson, CIO at Fisher-Titus Medical Center in Norwalk, Ohio.

A THOUGHT LEADERSHIP ROUNDTABLE

Benefits and challenges of migrating traditional workloads to the cloud

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“It’s all about trusting your partners and communicating with them so you know exactly what’s going to happen and how it’s going to affect your operations,” she said. “Don’t be afraid to ask questions and push for answers. You’re putting your faith in them to keep your health system running, so you deserve to have whatever level of clarity you need so you can make informed decisions.”

Will Conaway, Vice President of Consulting and Provider Leaders for NTT DATA, said, “Having the right partners to assist with your healthcare technology requirements has always significantly impacted attaining objectives. As healthcare systems continue toward cloud-based solutions, your partners play a different and more prominent role. Transitioning to the new model will require a synergetic approach with an organization and its outside partners, including examining the healthcare system’s mission and vision. Your partners must lucidly understand your business capabilities, operations, and culture to ensure you are well-positioned for future success.”

PLANNING FOR THE FUTURE OF CLOUD-BASED HEALTHCARE

The attendees unanimously agreed that cloud will change the way HCOs operate sooner rather than later. Most are taking a multi-cloud approach depending on their specific blend of needs, but all are leaning into the possibilities and finding creative ways to address lingering challenges.

“Healthcare is always going to be a multi-hybrid-cloud industry because every organization has such varied needs in terms of latency, security, and access,” predicted Conaway. “Different cloud providers have different strengths and weaknesses. It’s going to be an ongoing challenge for healthcare organizations to choose the right partner for each of their needs, but it’s also a huge opportunity to make sure each piece of the puzzle is optimized and maximizing its value. Don’t be afraid of multicloud – there are so many benefits to diversifying your cloud strategy and staying agile when everything is changing so fast.”

CIOs will need to assess their readiness across every aspect of the organizational landscape to prepare for heavier cloud investment with multiple partners, said Christian.

“For example, I know my team is going to look different than it does today,” he said. “Server teams that deal with on-premise hardware have a much different skillset than those that deal with the cloud. You can’t manage the cloud effectively unless you can script/automate portions of environment deployment. So, we either have to upskill our existing staff or hire team members with those experiences. We’re actively working on that so we can keep pursuing our digital strategy.”

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Franciscan Alliance

For the CIO at an academic health system in the Mid-Atlantic region, there are even bigger changes on the horizon. “Right now, we’re at a point where we either have to build a new data center or look for other solutions,” she said. “We’ve got a prime piece of real estate sitting adjacent to the hospital, and we could build our new data center there. But why would we want to spend all that time and money to move and just look the same as we do today? It’s a question we’re going to have to answer very quickly.”

Speed is going to be of the essence for HCOs across the board, especially as artificial intelligence becomes an increasingly potent force in healthcare and beyond.

“It’s all about skating to where the puck is going to be,” said Christian. “We can’t be short-sighted about our decisions, especially when everything in technology and AI is changing so quickly. That’s one reason why we’re containerizing everything we put in the cloud, because in the future, I fully believe that is going to be an asset for us. It will allow us to have a little more flexibility and leverage when choosing our compute partners.”

Overall, leaders will need to develop innovative, adaptable cloud strategies that account for the rapidly changing challenges of cost, the threats of cybersecurity, and the growing complexity of the modern healthcare ecosystem.

“I don’t think we’ll ever be completely without a data center, but we know the cloud is here to stay,” concluded Stevenson. “The question is how we’re going to take advantage of it. Strategic thinking is going to be important, but we have to be agile enough to allow our strategies to evolve with our current needs, with the available technology, and with the future of healthcare.”



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