



SUPPORTING PATIENTS, PRACTITIONERS WHEREVER THEY ARE

University of Michigan Health-West sets sights on health-care's quadruple aim

When the COVID-19 pandemic struck, University of Michigan Health-West was poised and ready to deliver the clinical experience without interruption as its workforce adapted to remote work. Today the organization's powerful and secure virtual desktop solution facilitates positive experiences for both patients and providers.

Healthcare professionals in the IT space

Health systems typically aspire to achieve the quadruple aim, which includes four essential healthcare initiatives. According to the United States Department of Health and Human Services' Agency for Healthcare Research and Quality, the "goal of the quadruple aim is to enhance patient experience, improve population health, reduce costs, and improve the work-life of healthcare providers, including clinicians and staff".¹

University of Michigan Health-West has a nearly 80-year legacy of progressive, innovative, patient-centered care. For example, it offers a home monitoring option so patients who are recovering after a hospitalization or managing chronic conditions can receive around-the-clock care in the comfort of their own homes. University of Michigan Health-West is one of the nation's leading healthcare organizations and the state's number one ranked health system.

Joshua Wilda, CIO of University of Michigan Health-West, is an outspoken advocate of attaining the quadruple aim. He and his IT department have proven themselves to be healthcare professionals in the IT space. According to Wilda, "Our focus is providing great service and great technology at a lower manageable cost so we can provide the clinical areas with the dollars they need." In short, the end goal is to drive costs out of IT so there are more resources available for healthcare.

¹ [Achieve Evidence-based Care Transformation via an Improved Digital Knowledge Ecosystem](#)



INDUSTRY: HEALTHCARE
COUNTRY: UNITED STATES

VISION

Treat patients when and where they want to be treated by enabling a remote workforce

STRATEGY

Equip clinicians with the capability to provide care anywhere, anytime, and on any device with no latency

OUTCOMES

- Offers just-in-time capabilities without adding infrastructure
- Supports provider work life, clinicians use BYOD option
- Improves population outcomes, patients receive "anywhere care"

A foundation for anywhere care

University of Michigan Health-West had long embraced a virtual desktop infrastructure (VDI) strategy, which enabled clinicians to provide uninterrupted care to patients when and where they needed to be seen—in the lab, office, hospital, or during a telehealth appointment. Historically, the clinician was still at one of the healthcare organization's bricks-and-mortar sites, regardless of where the patient was.

"University of Michigan Health-West was doing mobility before there was mobility," says Wilda.

However, when the COVID-19 pandemic struck, it was the first time University of Michigan Health-West had to consider enabling a remote workforce. Taking advantage of voice, video, and healthcare Big Data is much easier when you're close to your data center.

"With our newly remote, diversified workforce, we had to make sure that our IT infrastructure could meet the needs of a patient connecting to a provider during a video visit, for example, when both parties were remote," notes Wilda. "Wherever the provider is, wherever the workforce is, our focus is on keeping the patient experience as a top priority while improving the provider experience."

Ready-to-go remote

To meet new regulations related to remote work, University of Michigan Health-West needed a technology that could keep up with the rapid change in where its workforce was going, and as Wilda says, "Having the infrastructure already in place allowed University of Michigan Health-West to enable the just-in-time remote access capabilities required to support a remote patient care delivery system."



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Because 80% to 85% of the workforce was on VDI, the organization didn't have to worry about sending people home with devices. Remote workers, using the device of their choosing, simply needed to access the staff portal and download the VDI client. Of course, more activity off-premises increased the potential threat vectors. Two-factor authentication allows secure access and since confidential information doesn't need to be stored on the devices themselves, it remains safeguarded in the data center.

"With the VDI implementation we had, it was an easy switchover for folks who were able to implement and start delivering telehealth services immediately," says Wilda.

Now the healthcare provider is working toward all its workforce using VDI because it fully meets the organization's needs.

The bedrock for success

University of Michigan Health-West established VDI use to enable its clinicians and staff to support any type of device when and where they care for patients. "VDI is an underpinning of how to effect a very successful clinical experience," says Wilda.

University of Michigan Health-West needed a solution with complete disaster recovery for site failover. At the same time, it needed to integrate the new client desktop requirements from one of its software vendors. Lastly, as increased demands were placed on virtual desktops, the organization needed to upgrade its VDI platform so it could continue to support fast application response time.

"Less time waiting for an application to load means more time a clinician can spend with a patient," Wilda points out.



Though the organization initially considered options from several providers, it ultimately chose a VDI solution from Hewlett Packard Enterprise and VMware® delivered by HPE partner, Open Systems Technologies (OST), which was configured as a dual data center active/active solution.

The installed system comprises a factory-integrated HPE Apollo 2000 Gen10 Plus server built with 3rd Gen AMD EPYC processors; HPE Primera A650 storage managed by HPE InfoSight; and two HPE ProLiant DL325 servers built with 3rd Gen AMD EPYC processors, one at each of two locations that serve as management nodes for the VDI implementation. VMware Horizon® with Microsoft Remote Desktop Session Host (RDSH) handles the virtualization component of the solution. The HPE hardware supports more clients per server, which reduces IT costs significantly, thus freeing resources that can be redirected to patient care.

“Our vendors need to understand our end game. We are all part of delivering care. Healthcare is an open market and we don’t want to limit anyone from getting care. We need the compute power to deliver the care,” notes Wilda. “The impact that HPE and VMware bring to the table with interoperable solutions is the ability to provide anywhere care.”

A shared vision

University of Michigan Health-West considers HPE and VMware to be trusted technology partners and is a decades-long HPE customer. The organization is confident in the strength of the working relationship among the technology providers and OST. Additionally, the health system considers OST a strategic partner due to its ability to provide staff augmentation and expertise as needed.

“My department’s goal is to support the provider-patient relationship. Our vendors have stood by us with our vision of delivering clinical services on the go,” says Wilda.



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Because of the ability to provide anywhere care, throughout the COVID-19 pandemic, University of Michigan Health-West had the option to discharge patients early with a remote monitoring device.

“It was inspiring to hear from some of the providers that the most impact they’ve ever had in delivering care was to be able to provide remote care and monitor their patients when they were comfortable at home around loved ones,” says Wilda.

If the healthcare system didn’t have the performance or the operational output already solved, there’s no way patients could have gone home—instead, they would have been all alone in a hospital without any visitors.

No more data center business

Wilda’s vision for the future includes getting out of the data center business so he can continue to focus on healthcare requirements rather than technology.

As a means to this end, he and his organization have looked into HPE GreenLake cloud services.

“HPE GreenLake can support hyper growth or application modernization if we have to make a lot of changes at a rapid pace. For example, our main EHR vendor has changed the frequency and delivery method of upgrades: the traditional capital model won’t work and may hinder how we deliver the clinical experience,” Wilda points out.

HPE GreenLake fulfills the promise of the cloud—scalability and usage-based pricing, while residing in the data center to meet healthcare regulations. “As our workforce expands—they might be across the country or across the world—HPE GreenLake would support our ability to meet patients where they need to be met and enable providers to access the information they need to provide high-quality patient care,” maintains Wilda.

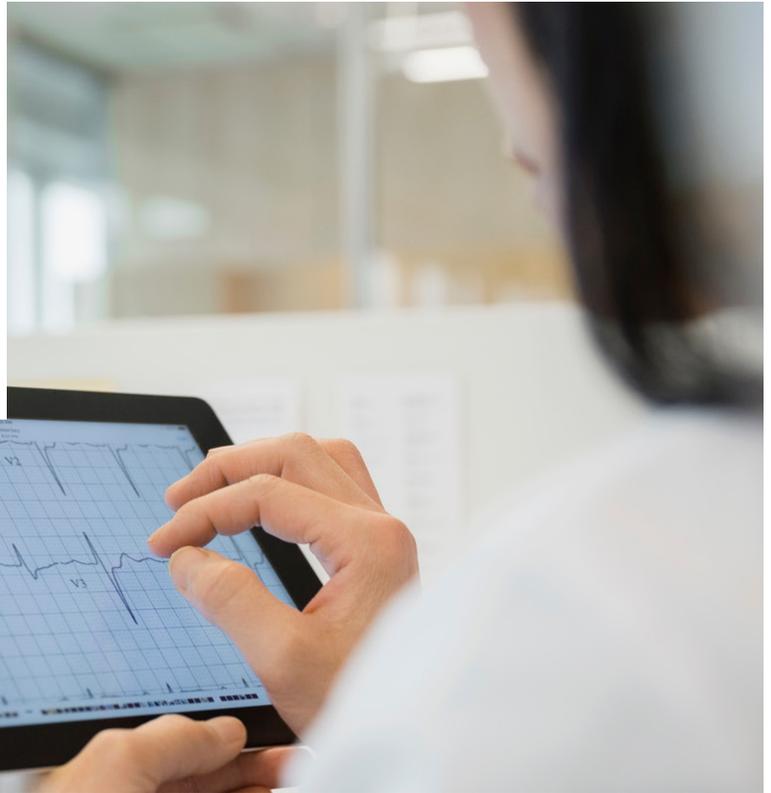
Furthermore, from an IT perspective, while University of Michigan Health-West needs a system that’s always available for anyone who is accessing it, it doesn’t need to meet the same capacity requirements around the clock. Wilda notes, “that flexibility is the ultimate goal for us, but because we don’t need to support our entire workforce at once, HPE GreenLake’s dynamic capacity capabilities will help us control costs.”

“The elasticity of our technology will be the key to providing the high quality, low cost, best patient, best provider experience—and meeting the quadruple aim,” concludes Wilda.



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SOLUTION

HARDWARE

- HPE Apollo 2000 Gen10 Plus
- HPE Primera A650
- HPE ProLiant DL325

SOFTWARE

- HPE InfoSight
- VMware Horizon and Microsoft RDSH

SERVICES

- Factory integration
- On-site implementation services
- HPE GreenLake

KEY PARTNERS

- Open Systems Technologies



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