

A Four-Part Plan To Drive Enterprise Intelligence Across the Care Continuum





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In the universe of digital transformation, healthcare has some catching up to do.

Compared with retail and finance, the innovation landscape surrounding health services has quickly outpaced the realities of its infrastructure. With legacy systems falling short of today's demands — much less tomorrow's — hospitals are rethinking their digital road maps across operational and clinical workflows.

"Healthcare facilities are taking in data at unprecedented levels," said Gary Lynch, MHA, managing partner, global solutions, healthcare and life sciences vertical at Verizon. "Medical asset tracking, patient monitoring, security, clinician collaboration — these components and more are digitally connected and centralized like they've never been before. And hospitals weren't designed to support those bandwidth needs."

But at the same time, health systems are also stretched by other challenges, from cutting costs and improving patient care to expanding equity and access. As organizations modernize the networks and systems powering everyday care, they'll need to upgrade their infrastructure to service these greater aims while balancing capital and operating expenses.

Leaders are addressing these concurrent demands in this changing environment with a four-part strategy: clinical connectivity, patient experience, data security and virtual care. Inside, we talk with Verizon healthcare experts to learn how hospitals can evolve all four as they navigate what's next in hospital infrastructure, optimize the fuller promise of health technology, and support clinical and operational objectives along the way.

Do You Have a Connectivity Plan?

In 2021, Verizon surveyed HIMSS members about whether they had a comprehensive clinical connectivity plan before COVID-19. Only about a third did.

That was then. By now, "clinical connectivity" has become mission-critical as care moves differently inside and outside the hospital. Lynch sees connectivity planning as an evergreen tool to strategize, prioritize and measure progress throughout healthcare's modernization of care.

"There's overwhelming interest in 5G, but to just change up your entire infrastructure is a daunting task," he said. "Hospitals need a connectivity plan to go from crawling to walking to running."

Looking at 5G, for example, here's how that plan might play out: A hospital could identify a few use cases worth enabling first, such as asset tracking on a specific floor or real-time connectivity in the OR. Once that "crawl" rollout is complete, the

plan lays out a way to evaluate and measure its impact. If successful, the plan describes how leaders can walk and run from there — such as to the next department over, the whole facility and even satellite clinics. These steps help facilities gradually achieve the inherently improved security of private networks.

Modularity powers those transitions. With a phased approach that aligns with available and projected resources, hospitals of any size can take steps toward making infrastructure future-proofed. And partners such as Verizon can help make that plan come to life over time.

"Nobody wants to go at it alone," said Allen Moore, innovation leader for public sector connected health at Verizon. "We can help you formulate the strategy, integrate best practices, and map clinical and operational goals back to innovative solutions. And we can partner with you long-term to assess and reconfigure infrastructure as your business scales and your operation evolves."

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A Four-Part Plan for Enterprise Intelligence



1. Connectivity:

Build your innovation road map.



2. Patient experience:

Reimagine the digital front door.



3. Data protection:

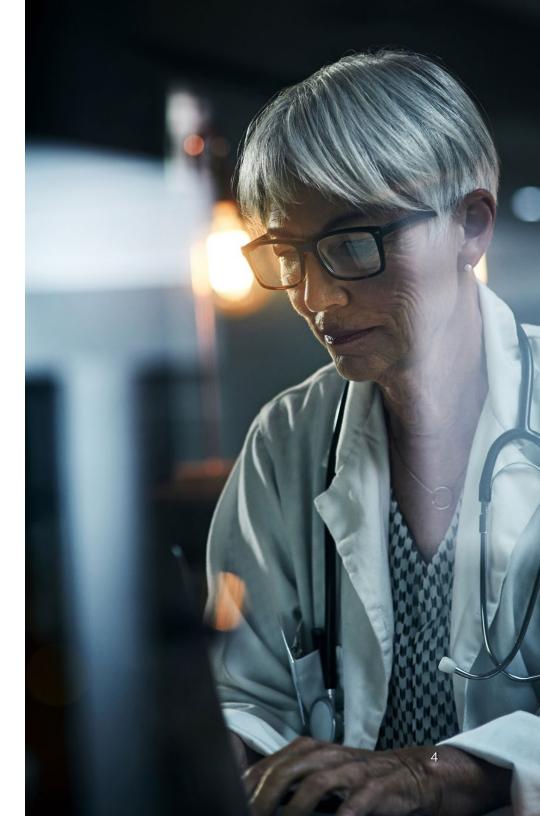
Take security to new levels.



4. Decentralized care:

Streamline virtual care delivery.





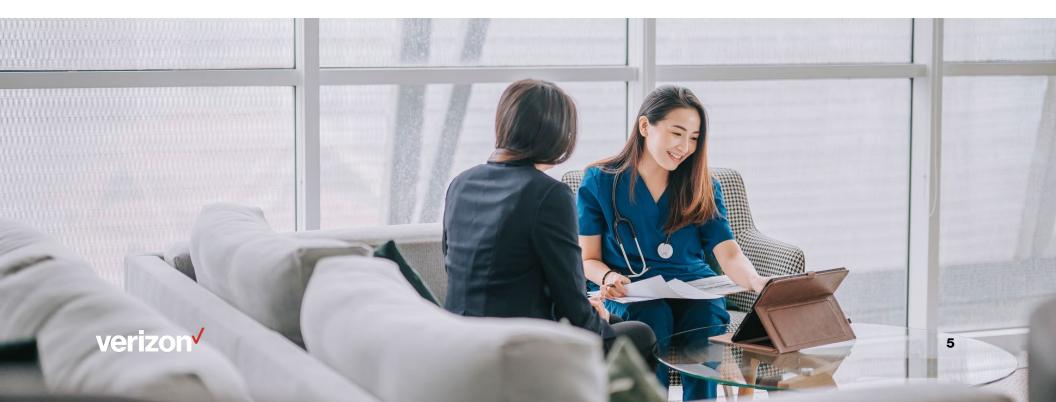
1. Connectivity: Build your innovation road map.

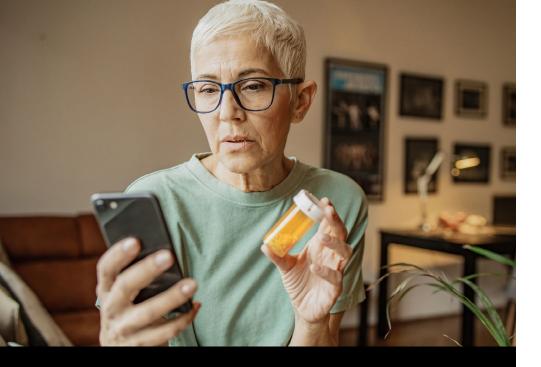
Hospitals are becoming increasingly acute, specialty-focused and interventional-driven — and they exist against a backdrop of medical device portability paired with real-time analytics. At the same time, improved care quality and value are taking center stage as reimbursement models evolve.

These dynamics lend themselves well to the so-called "connected hospital of the future," a place where interactions inside and outside a facility feed into one shared and quality-driven experience.

"It's a term to describe an interconnected ecosystem of where the patient lives, their mode of transportation to get to clinical care, their event at clinical care and then their episode of care after being dismissed or moved," Lynch said. "Ultimately, it's like a next-generation, ultra-resilient infrastructure not just for a hospital campus but also the world around it."

If you zoom into that infrastructure, as if it were a map, you'd see thousands of connection points that plug into the broader ecosystem—points such as medical equipment, clinical collaboration tools, take-home remote monitoring devices and even the EHR. Identifying those points and how they fit into the greater system will be key to achieving a more connected facility while addressing clinical and operational imperatives.





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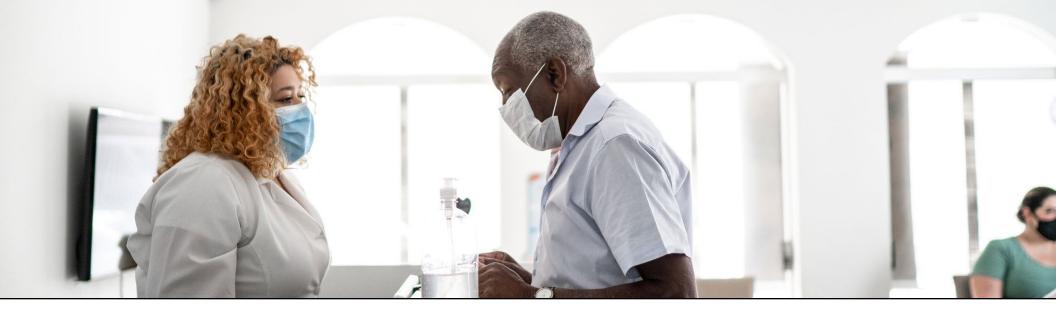
Director of Innovation at UC Davis Health

Making assets more findable with asset tracking, for example, mitigates capital costs while making workflows more efficient. Automating check-in with geofencing and wayfinding might address labor pressures and improve patient experiences. And among other benefits, 5G facilitates real-time clinical decision-making and quality measures, such as pre-surgical planning or training. Combining them all into one connected experience can help healthcare providers and hospitals preempt factors such as readmission, reduce costs and drive better outcomes.

Many organizations are already working toward this, like UC Davis Health:

"We're looking ahead to the kind of innovation that is truly going to reshape our delivery ecosystem—from the infrastructure transformation needed to deliver real-time capabilities in our hospitals to the way we can capture, share, and optimize data across an increasingly decentralized care continuum," said Dr. Keisuke Nakagawa, Director of Innovation at UC Davis Health. "We're working to identify those critical points of secure connection and collaboration to accelerate our transformation, and we're glad to work with Verizon as a partner in this effort."

Whether it's retrofitting current facilities or reimagining new builds from the ground up, all leaders will need to consider how they will support this increasingly wireless world of mobile things, now and in the future. Verizon can help assess which innovation points make the most sense to operationalize first and how to get there.





2. Patient experience: Reimagine the digital front door.

As patients interact with health services beyond the hospital's four walls, the digital front door is more important than ever. Not only are patient satisfaction scores and associated cost savings capturing organizational attention, but patients have been conditioned to expect more, too: Fintech and retail have delighted consumers with leading-edge technology, and very often, that expectation carries into healthcare interactions.

The entry point into those interactions is the digital front door, which exists across websites, mobile apps, portals, platforms and more. At each doorway, hospitals can communicate their value while promoting services to patients. And all the while, fine-tuned and automated experiences can hedge against labor shortages and costs while driving equity.

In consideration of these objectives, organizations should prioritize those digital doorways as they chart their path toward modernized infrastructure. But that doesn't just mean a clean design and high-tech functionality. It also addresses basic things such as access: Not everyone has high-speed internet, so how will patients find the door in the first place?

"You have to reach people where they are," Moore said. "Not everybody has access to an unlimited data plan, so just giving someone a MyChart account doesn't always have the intended effect. So we're also advising leaders to enable the digital front door through voice systems or public kiosks that aren't reliant on privileged and private access. That way, patients can still access their medical information despite disparities."

Other technologies similarly enable that entrance, such as sensor-based remote monitoring to support decentralized care, promoting adherence with virtual agent support, and improving patient engagement with purpose-built tablets and devices.





3. Data protection: Take security to new levels.

Ultimately, the more wireless hospitals become, the more Internet of Things (IoT) devices and equipment get added to the network. This proliferation of endpoints widens the attack surface, making data more vulnerable.

As a result, breaches in healthcare are at an all-time high. Exacerbating those concerns are slow detection speeds, leading to sizeable penalties paid to HHS for reporting outside of the required windows.

With these trends converging, the need for mobile security has never been greater in healthcare and that will only increase. Network detection and response capabilities can give health systems a real-time view of their networks so they can see and respond to intrusions more quickly.

Moreover, ransomware attacks are costing healthcare mightily, making ransomware simulations and table testing critical for security C-suite.

And private networks will come with some of this security baked in.

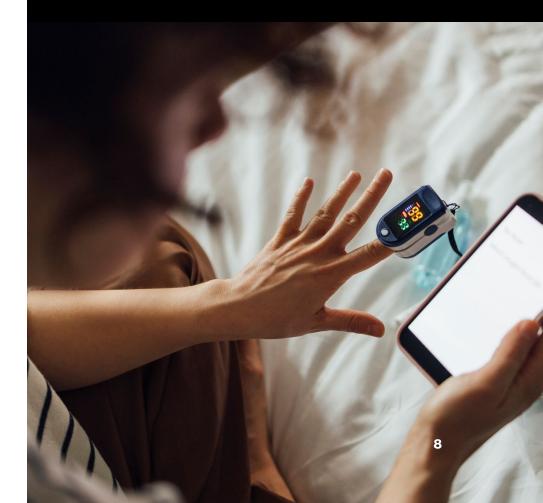
"Hospitals need faster connectivity and more reliable uptime for all their different connected technologies," Lynch said. "That's something that's inherently built into 5G. It allows for more efficient communication between staff with the ability to network slice — essentially, protecting clinician-to-clinician communication on an interference-free highway."

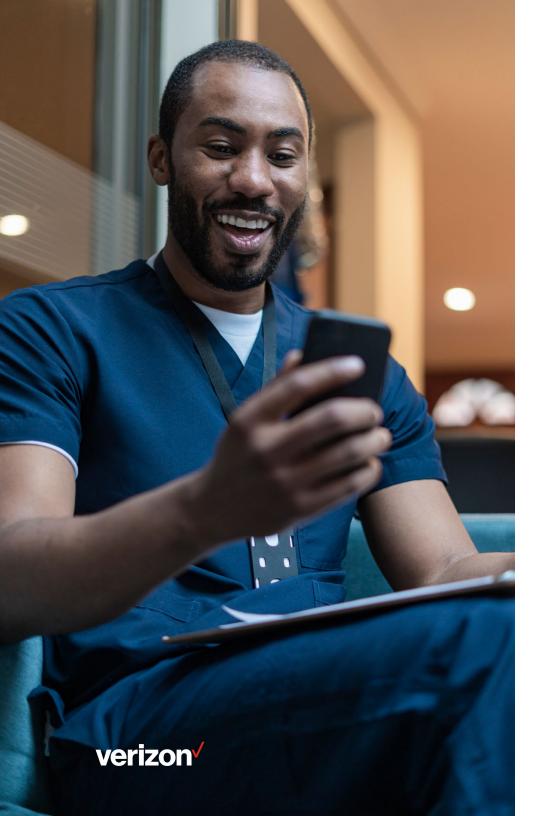


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4. Decentralized care: Streamline virtual care delivery.

As health systems settle from pandemic-era usage spikes, a new form of care delivery has become the long-term reality: decentralized medicine, powered in part by virtual care. It's a blended delivery model that accounts for the clinic, the home and the spaces between.

In this changing environment, health systems are reckoning with several challenges as they work to align hybrid care with existing workflows — from competing with unlikely foes such as health tech startups to overcoming disparities in telehealth access.

Here, too, infrastructure can help.

Telemedicine platforms are increasingly table stakes for health systems today. Solutions that are securely built with patient experience and clinician workflow in mind are in high demand—with user experience, tech literacy, and digital equity being top-of-mind for organizations. Verizon is working with several partners to embed a patient-first telehealth platform (BlueJeans Telehealth) into delivery models that streamline the experience for both patient and clinician.

These integrated experiences involve a broader ecosystem of touchpoints: SMS and secure messaging for unscheduled encounters, remote monitoring and much more. And all these various infrastructural components should fit together for a more seamless care journey.

"The integration of telehealth within a broader suite of capabilities such as out-of-home kiosks is where the future is," Lynch said, alluding to use cases Verizon is exploring with Higi, a consumer health engagement company that puts health stations in retailers. "With a more expansive and connected virtual care experience, care becomes more than a one-time encounter. You can use those elements together to continually engage people, build relationships and involve patients in their healthcare in a much more meaningful way."

Adds Jeff Bennett, CEO of Higi:

"Community screening is an important first step," he said. "Once we can understand what's going on with the health of a consumer, we can use a variety of tools to get them where they need to go. From text-based education programs all the way to clinically-led care that leverages data from home-based connected devices. All of this requires reliable, shareable connectivity as a baseline for equitable access to needed care."

A more connected hybrid model can also help relieve many of the clinical and operational pressures of decentralized care, Lynch added.

"Consider what happens when patients are discharged from the hospital and undergo various transitions of care, such as skilled nursing or home health," he said. "Everyone's on a different EHR, and there's little integration and interoperability in this 'black hole' area. But having an efficient and sufficient virtual care platform can connect these different constituents more fluidly while also addressing resource constraints."



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Yesteryear's hospitals weren't built for today's care continuum. But very often, upgrading infrastructure is thought to be at odds with other priorities, such as critical shortages or health equity, which puts connectivity on the back burner. And yet in reality, these challenges aren't dueling demands. With its automation, efficiency and access potential, infrastructural excellence can address underlying clinical and operational concerns while helping systems optimize new technologies more fully.

For a deeper dive into how Verizon is helping healthcare organizations drive Enterprise Intelligence and accelerate the digital evolution of healthcare, visit our healthcare webpage here.



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