# What Healthcare Leaders Are Saying About Neutral Host Networks (and Why It Matters)

## A HIMSS Market Insights study shows that healthcare organizations must modernize connectivity to improve their security, efficiency and scalability

Healthcare networks are under unprecedented strain as outdated infrastructure buckles under the weight of sophisticated cybersecurity threats, persistent connectivity gaps and surging IoT device demands. Recent HIMSS Market Insights research reveals the scope of this issue; only 36% of healthcare leaders feel confident that their infrastructure can handle future connectivity requirements. The problem is especially severe in urban healthcare settings, where connectivity dead zones disrupt patient care at 60% of organizations — a rate three times higher than their suburban and rural counterparts.[1]

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**ROBIN GOLDSMITH** | Practice Leader, Healthcare, Insurance and Life Science Domain | Verizon Business Group

The same research, however, highlights a path forward that healthcare leaders are increasingly embracing. Nearly two in three healthcare leaders believe neutral host networks (NHNs) are well suited for their organizations, representing growing market acceptance for a solution that may address their pressing infrastructure challenges. NHNs, also known as neutral host small cells, are proving to be a highly effective solution for organizations, garnering increased market acceptance due to their ability to directly address critical infrastructure challenges. Unlike neutral host distributed antenna systems (DAS), NHNs specifically involve a shared wireless infrastructure that supports multiple carriers through a single network deployment, making them the preferred choice for their focused and efficient approach to shared wireless connectivity.

## Outdated network infrastructure's financial burden

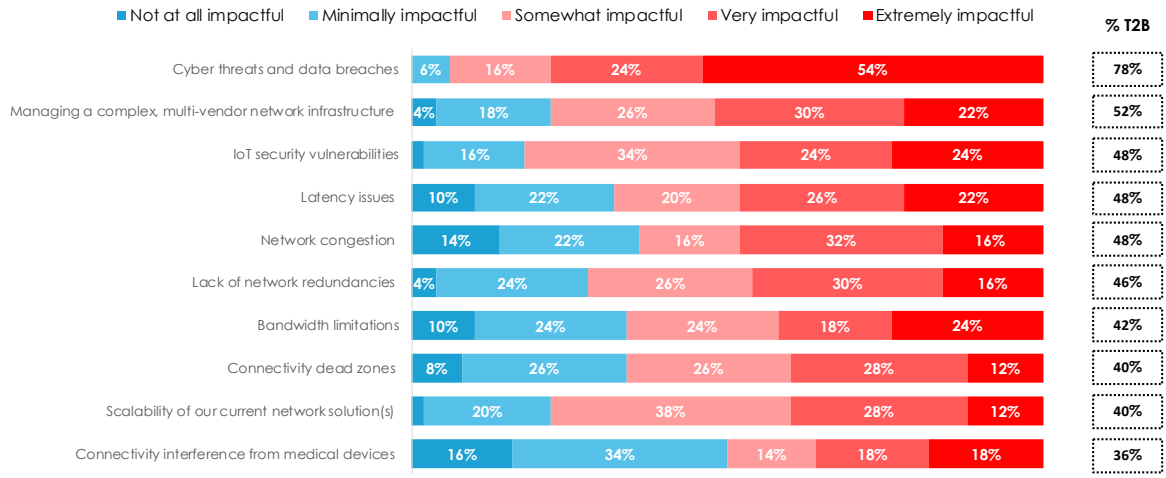
The HIMSS Market Insights study, conducted in March and April 2025, shows that, while cybersecurity threats pose the most prominent obstacle to patient care, managing complex multi-vendor network infrastructure and addressing IoT security vulnerabilities also rank highly (Figure 1).

"One of the drivers for folks to build in redundancy for their connectivity infrastructure is because of the impact to patient care," said Robin Goldsmith, Practice Leader, Healthcare, Insurance and Life Science Domain for Verizon Business Group. During an outage, triaged patients are often sent to other facilities and, in some cases, providers must work off paper instead of electronic records. "That slows down the mechanics of how they're treating patients and can lead to really bad outcomes," he said.

Healthcare leaders overwhelmingly recognize that outdated network infrastructure adds to cybersecurity risks, but executives also see network and device failures as a top concern, alongside increased costs due to inefficiencies. Such results demonstrate cascading operational challenges from aging network infrastructure and underscore how network reliability directly correlates with patient safety and care quality. With 84% of leaders worried about unreliable connectivity for telemedicine and remote monitoring and 82%

**Figure 1.** Network infrastructure vulnerabilities across security, performance and connectivity present patient care risks for most healthcare organizations.

*To what extent do each of the following network reliability and performance challenges impact patient care for your organization?*




Data labels <3% not shown
Base: Total Respondents; n = 50

# 84% of healthcare leaders are worried about unreliable connectivity for telemedicine and remote monitoring and 82% about slow network performance affecting clinical workflows.

about slow network performance affecting clinical workflows, a robust, modern network infrastructure is now essential for healthcare operations (Figure 2).

In dense urban environments — where the HIMSS Market Insights study generally showed more connectivity difficulties than their rural counterparts — NHNs are among solutions that can provide a resilient, scalable alternative to traditional distributed antenna systems (DAS). A NHN is a shared wireless infrastructure that allows multiple wireless carriers to provide coverage using the same physical network equipment.

While the advent of neutral host DAS addressed the challenge of managing disparate carrier-specific networks by creating a unified platform, NHNs were recently introduced and now offer an even better solution for hospitals. This network unification enhances care team mobility and responsiveness, serving as both a modernization strategy and a catalyst for improved operational agility, patient satisfaction and clinical outcomes in complex hospital campuses.

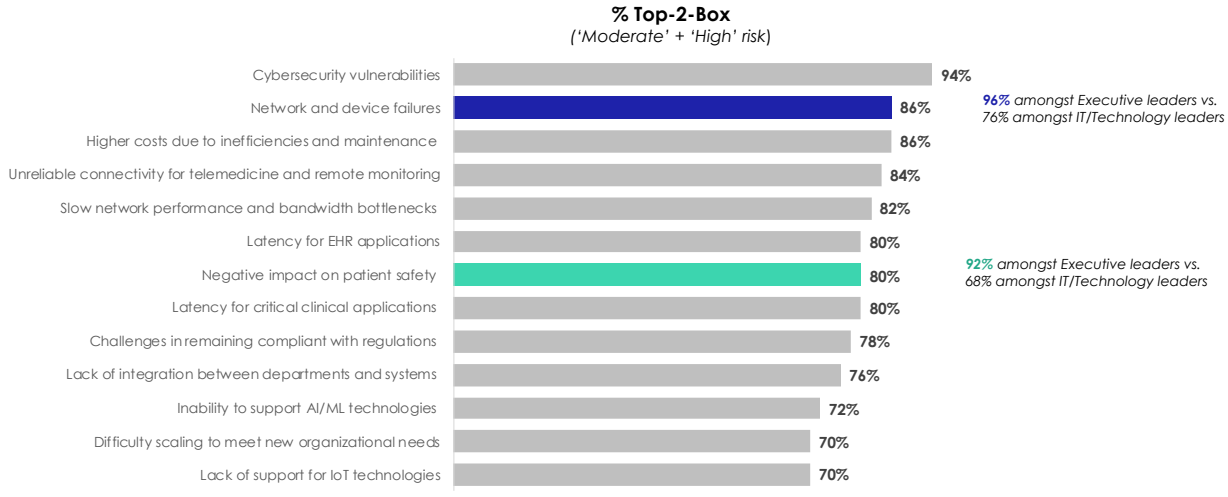
## The financial toll of outdated network infrastructure

Connectivity problems translate to financial strain from current network infrastructure, with 92% of healthcare leaders reporting that IT system maintenance costs have risen substantially compared to previous years. This cost escalation is driving increased investment in innovation, as 78% of organizations are now spending much more on IT advancement than they did just a few years ago. The data reveals a clear pattern where rising maintenance costs for aging systems are forcing healthcare organizations to accelerate their technology modernization efforts (Figure 3).

Long-term network contracts are causing considerable operational constraints, with 62% of leaders identifying high renewal costs as primary cost drivers for maintaining IT infrastructure. Additionally, 58% report that these contracts limit their organization's ability to cost-effectively upgrade technology infrastructure. The investment required to

**Figure 2.** Nine out of 10 healthcare executives cited network and device failures as a top concern for using outdated networks.

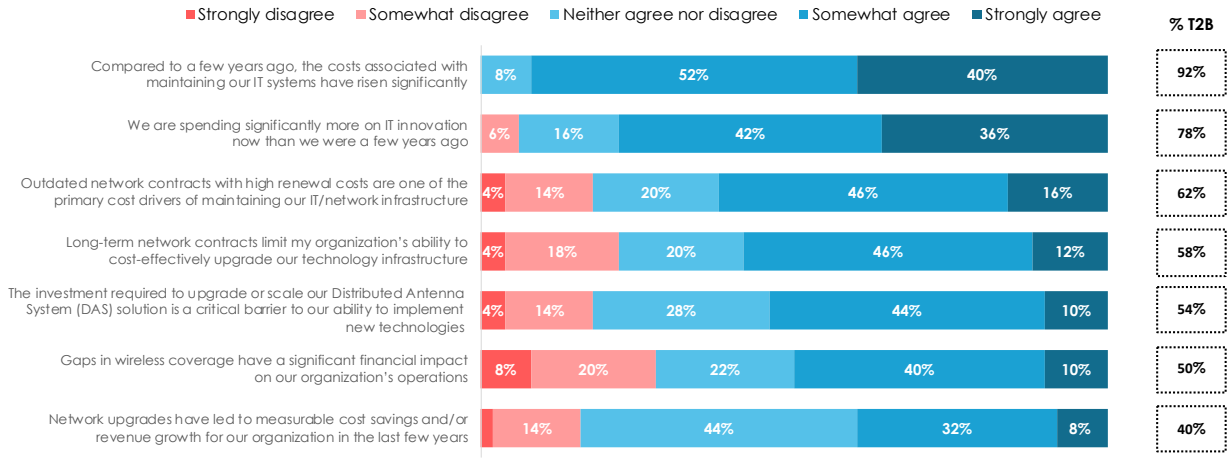
*To what extent do you believe each of the following are risks of healthcare organizations using outdated networks?*




Base: Total Respondents; n = 50

**Figure 3.** Three in five healthcare leaders face financial strain from outdated network contracts, with rising IT costs and expensive upgrades intensifying budget pressures across organizations.

*Please indicate the extent to which you agree or disagree with each of the following.*




Data labels <3% not shown
Base: Total Respondents; n = 50

upgrade DAS solutions presents a critical barrier for 54% of organizations seeking to implement new technologies, while wireless coverage gaps create significant financial impacts for half of all healthcare facilities.

While quantifiable ROI data for NHNs is still emerging, the qualitative benefits are increasingly evident in addressing these very obstacles. In environments where mobility, communication and continuity are essential, NHNs can support faster clinical response times, fewer workflow disruptions and greater satisfaction among clinicians and patients alike. With seamless coverage across buildings and devices — including for bring-your-own-device (BYOD) staff — NHNs help eliminate the friction of dropped calls, dead zones and unreliable Wi-Fi that plague legacy systems, enabling more coordinated care delivery.

Patients notice the difference too, experiencing smoother transitions, quicker service and staff who appear better equipped. While hard-dollar cost savings may be difficult to identify today, NHNs can contribute to intangible returns in clinical efficiency, staff retention, patient trust and risk mitigation — all of which are increasingly valued in outcome-driven healthcare environments.

## The role of NHNs in today's healthcare settings

A NHN approach is valuable in environments such as hospitals, where deploying separate networks for each carrier would be costly and could potentially introduce coverage gaps or interference issues. NHNs offer a significant leap beyond legacy DAS by providing capabilities similar to a traditional DAS but with greater efficiency in terms of cost, space and energy. "People rely on their personal devices, and not everybody uses the same carrier," explained David J. Grady, Verizon Business Group's Senior Manager of Product Marketing. "Neutral host addresses that challenge by providing universal access to commercial telecommunications connectivity." In addition, unlike traditional DAS, NHNs allow for the optional integration of a private wireless network, future-proofing the design and extending investment value by supporting evolving 5G device ecosystems and use cases.

This innovative approach eliminates the need for third-party legacy DAS cabling and components, freeing up valuable real estate. Furthermore, a new NHN delivers end-to-end connectivity and advanced monitoring capabilities currently unavailable in the traditional DAS ecosystem. This reduces potential failure points and consolidates the solution into a single platform managed by the same team overseeing the Verizon wireless public macro network.

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## "Neutral host addresses that challenge by providing universal access to commercial telecommunications connectivity."

**DAVID J. GRADY** | Senior Manager of Product Marketing | Verizon Business Group

A NHN, deployed in conjunction with a private wireless network, can enhance operational resiliency and security. A private wireless network allows an organization to move large volumes of data off the core network and/or WiFi infrastructure, enabling more reliable connectivity for critical applications and devices. A private wireless network provides more direct control over who can and cannot gain access to the network. This direct control becomes crucial for healthcare BYOD policies, allowing organizations to support visiting clinicians and contractors without exposing enterprise networks or requiring complex VPN setups.

"If you think back on some of the big healthcare breaches in 2024, many hospital enterprise networks were totally shut down and none of the devices could get connectivity and access. This has significant financial implications, not to mention poses a significant risk to patient safety, experience and outcomes," said Karen Finger, Global Lead, Connected Health Strategy & Innovation, Healthcare, Insurance & Life Sciences for Verizon Business Group.

Beyond access control, NHNs strengthen business continuity during network outages that can negatively affect patient safety. When connectivity failures force clinical teams to revert to paper charting, medication administration and diagnostics face dangerous delays. NHNs provide carrier-diverse cellular connectivity. When activated on a macro plan or architected to fail over to cellular, they help ensure clinicians maintain access to EHR systems and patient workflows, reducing the risk of medical errors from manual workarounds.

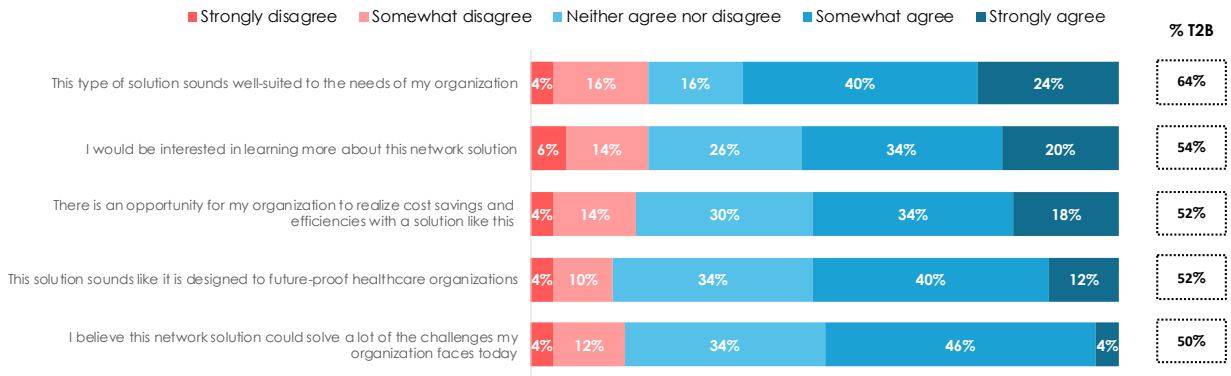
## Healthcare leaders are ready to act once they know more about NHNs

Healthcare leaders taking part in the HIMSS Market Insights study showed strong enthusiasm for NHN solutions, with 64% believing the technology is well-suited to their organizations' requirements and 54% expressing interest in learning more. The financial appeal is particularly compelling, as 52% see opportunities to reduce costs and improve efficiencies through NHNs (Figure 4).

**Figure 4.** Healthcare leaders see NHN solutions as a promising opportunity to reduce costs, improve efficiency and address current network challenges.

*Please indicate the extent to which you agree or disagree with each of the following.*

*XYZ Neutral Host Network provides health systems' clinicians, patients, and staff with high-quality wireless network coverage across multiple mobile carriers. It is a flexible, scalable solution built on a shared wireless foundation, offering licensed spectrum and the option to add a Private Wireless Network – ensuring healthcare organizations can easily support their growing digital needs.




*Respondents were shown this concept for a NHN solution and then presented with the series of statements to gauge interest/need
Base: Total Respondents; n = 50

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This interest reflects the pain points healthcare organizations are experiencing with their current network infrastructure, where rising maintenance costs and complex multi-vendor environments are straining budgets and operational capabilities.

Additionally, 52% view NHNs as designed to future-proof healthcare organizations, suggesting that leaders recognize the benefits of scalable, adaptable solutions that can evolve with rapidly changing technology demands. Half of respondents believe these networks could solve many difficulties their organizations face today, indicating widespread recognition that current approaches to wireless infrastructure are insufficient.

## Building networks for next-generation healthcare demands

As healthcare organizations grapple with the dual mandate of delivering excellent patient outcomes while managing escalating costs and security threats, NHNs are emerging as more than a mere technological upgrade.

By consolidating multiple wireless services onto a single, shared infrastructure platform, NHNs eliminate the need to manage separate networks from different carriers. This approach reduces capital expenditures, simplifies network management and provides consistent coverage. Accommodating multiple service providers and evolving technology standards means NHNs can deliver scalability and cost-effectiveness that can support healthcare organizations' digital transformation without traditional multi-vendor complexity.

"As healthcare organizations move things like [electronic health record] applications onto handheld devices, the role of mobile devices in hospitals is becoming more critical," Goldsmith said. "They know there's going to be the rise of AI, and that's going to put more demand on that infrastructure, so they need to bolster it. And one way to accommodate these next-generation technologies is using neutral hosts and private wireless networks."

Grady agrees. "WiFi wasn't built to do AI. WiFi wasn't built to do Internet of Medical Things at scale," he noted. "By offloading bandwidth-intensive AI and IoT tasks to other networks, WiFi can more effectively perform its intended function, preventing network bottlenecks and helping to ensure reliable performance for all connected devices. It lets WiFi be WiFi."

**Explore how NHNs can modernize your infrastructure and prepare for next-generation healthcare technologies at verizon.com/healthcare.**


**Reference**

1. HIMSS Market Insights. April 2025. *Network Infrastructure* [research report]. This research was conducted among 50 executives and IT/technology leaders (managers and above) in healthcare in the United States. Verizon Business was not identified as a research sponsor.


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