HEALTHCARE INDUSTRY

WHITEPAPER

WanAware

THE EDGE-SITE BLIND SPOT

What telehealth and remote-care expansion did to the healthcare asset inventory, and why telecom already solved it



TABLE OF CONTENTS

01: EXECUTIVE SUMMARY	3
02: THE SHAPE OF THE NEW FOOTPRINT	3
03: A PATTERN TELECOM ALREADY LIVED THROUGH	4
04: WHY THE SITE-VISIT MODEL BREAKS DOWN AT SCALE	4
05: WHY THE STAKES ARE HIGHER IN HEALTHCARE THAN IN TELECOM	5
06: WHY SCANNING AND AGENTS ARE NOT THE ANSWER HERE EITHER	6
07: WHAT WANAWARE DOES DIFFERENTLY	6
08: THE TAKEAWAY	7

01. EXECUTIVE SUMMARY

Since 2020, health systems have expanded outward: telehealth kiosks in pharmacies and retail locations, urgent care suites in leased strip-mall space, remote clinics an hour or more from the nearest campus. Each of these sites is small. Together, they add up to a physical footprint most health systems never had to manage before, and were never built to inventory.

That footprint problem is not new. It is the same problem telecom carriers solved when they built out unmanned cell sites and remote network infrastructure across a service area: how do you know what equipment is at a site, and whether it still matches the record, when sending someone to check does not scale. This paper walks through why healthcare's edge-site sprawl creates the same operational and security exposure telecom already lived through, and what closing that gap actually requires.

02. THE STRUCTURAL FLAW OF LEGACY ASSET MANAGEMENT

Before telehealth's expansion, a health system's asset inventory problem was largely a campus problem. A hospital is large and complex, but it is one place, generally with dedicated IT and biomedical engineering staff walking the halls every day. Telehealth kiosks, urgent care sites, and remote clinics broke that model. Each site carries its own small stack: a router or switch, a handful of clinical devices, sometimes a workstation or tablet handling patient data, and a network connection back to the health system. None of it is large enough to justify a dedicated IT presence on-site, and none of it is small enough to ignore.

- **Many sites, not one.** A health system that operated from a handful of campuses now operates from dozens of small locations, each one a discrete point where equipment can drift out of sync with the record that describes it

- **Thin or no staffing.** A telehealth kiosk or after-hours urgent care site is typically staffed by clinical personnel, not IT or biomedical engineering. No one on-site is tasked with confirming what hardware is present or whether it changed.

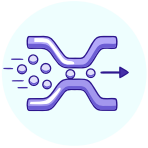
- **Mixed asset types on one footprint.** Network equipment, clinical devices, and PHI-handling systems, all **connected assets** sitting on the same small site, which means one inventory gap can touch operations, patient care, and data security at the same time.

03. A PATTERN TELECOM ALREADY LIVED THROUGH

Carriers faced this exact shape of problem decades before healthcare did. Building out coverage meant building out unmanned cell sites and remote network nodes across wide service areas, each one holding real, valuable equipment, none of them staffed, and most of them far enough apart that a routine physical visit was never going to be a routine event. The lesson telecom learned, expensively, is that an inventory strategy built around periodically visiting every site does not scale past a certain footprint size. It gets slower and more expensive precisely as the network it is supposed to protect gets bigger.



Distance turns a check into a trip. A site an hour or more from the nearest technician turns a five-minute question into a half-day commitment, and the math gets worse, not better, as more sites get added.



No one on-site to ask. An unmanned cell site has no staff to describe what changed since the last visit. A remote clinic is functionally the same: whoever is there was hired for a different job entirely.



Equipment changes without the record changing. A card gets swapped, a router gets replaced, a connection gets rerouted, and the change ships to production long before it ships to whatever spreadsheet or ticketing system is supposed to track it.

04. WHY THE SITE-VISIT MODEL BREAKS DOWN AT SCALE

The default response to a distributed footprint is almost always the same: schedule a site visit, send a technician, walk the space, and reconcile the record. That approach is not wrong, it is just structurally unable to keep pace with a footprint that keeps growing and keeps changing. A visit confirms the state of a site at one moment. It says nothing about the router that gets swapped the following week, or the device that gets added when a clinic extends its hours. The record is accurate for as long as it takes for the next unrecorded change to happen, which for a distributed clinical footprint is rarely very long.

	Site-visit model	Continuous discovery model
How current is the record	Accurate only as of the last visit, then decays until the next one.	Reflects what is actually connected, continuously, without waiting for a scheduled visit.
Cost as the footprint grows	Scales directly with site count and distance, so cost rises with every new clinic or kiosk added.	Scales with the network, not with headcount or travel time.
What a change looks like	Invisible until the next scheduled visit finds it, sometimes months later.	Visible as soon as it happens, because the network itself reports it.
Who has to be on-site	A technician, dispatched specifically to check the equipment.	No one. The site does not need a visitor to be counted.

Multiply that decay curve across dozens or hundreds of small sites and the arithmetic gets uncomfortable fast. The travel time and staff hours required to keep every site current do not shrink as the network grows. They grow with it, which means the inventory effort is on a collision course with the very expansion it is supposed to support.

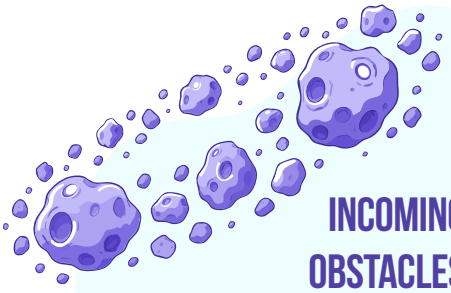
05. WHY THE STAKES ARE HIGHER IN HEALTHCARE THAN IN TELECOM

An unmanned cell site that drifts out of sync with its inventory is an operational and financial problem: a carrier loses track of capital equipment and pays more than it should to maintain it. A telehealth kiosk or remote clinic that drifts out of sync is that same problem, plus something telecom never had to weigh in the same way. These edge sites carry clinical devices and PHI-handling systems on the same small footprint, frequently with none of the physical security, network segmentation, or dedicated IT oversight a main hospital campus has built up over years.

- **Compliance exposure.** An inventory that cannot account for a device at a remote site is an inventory that cannot support a recall response or a survey request for that site, the same audit-readiness expectations that apply everywhere else in the health system.

- **Security exposure.** A device sitting unmanaged and unmonitored at a thinly staffed site is a quieter entry point than one on a monitored campus network, and lateral movement toward core systems does not care which building it started in.

- **Operational exposure.** A clinician at a remote site who cannot reach a patient monitoring system because of an undocumented network change loses far more than uptime.



INCOMING OBSTACLES

A gap in a flagship hospital's inventory is a known gap, sitting inside a facility with people and process built around it. A gap at a site no one has physically visited in months is an unknown one, and unknown gaps are the ones that surface during a breach investigation or a compliance audit, not before one.

06. WHY SCANNING AND AGENTS ARE NOT THE ANSWER HERE EITHER

It is tempting to treat this as a discovery problem that any network scanning tool can solve: point a scanner at each remote site and let it report what it finds. That runs into the same limitation healthcare already knows from its clinical networks generally. Active, credentialed scanning sends traffic that fragile embedded medical devices were never built to absorb, and a telehealth kiosk or remote clinic is exactly the kind of site where no one is standing by to notice, or fix, a device that locks up mid-scan. Installing an agent runs into the same FDA-clearance and warranty concerns that rule it out on a hospital floor, and it adds an ongoing maintenance burden at sites that, by definition, have no dedicated IT staff to maintain it.

The fix has to work the way telecom's did: observe what is already there from the signals a network produces, rather than asking every device at every remote site to run something new or absorb unexpected traffic.

07. WHAT WANAWARE DOES DIFFERENTLY

WanAware treats a telehealth kiosk, a leased urgent care suite, and a hospital wing as the same kind of problem: a set of connected assets that can be understood from what the network already shows, not a site that has to be physically visited to be known. **Asset Discovery** observes every connected asset agentlessly and without active, credentialed scanning, which means a remote clinic an hour from the nearest technician gets discovered on the same continuous basis as a device down the hall from the network operations center, with no truck roll required for either one.

Asset Inventory ties each discovered device to its identity: make, model, serial number, and software version, the same fields a recall bulletin or a compliance survey asks for, regardless of which site the device happens to sit at.

Layered on top, the **Relationship Graph** maps what every device connects to and where it physically sits, so a change at a kiosk in a pharmacy shows up the moment it happens rather than the next time someone happens to drive out to check.

	Without visibility	With WanAware
Edge-site inventory	Accurate only as of the last scheduled site visit, then decays.	Continuously current, discovered agentlessly at every site without a technician on-site.
Cost to scale	Rises directly with every new clinic, kiosk, or remote site added.	Stays flat as the network grows, because no site requires an incremental visit to be counted.
Compliance readiness	A recall or survey request for a remote site starts as a research project.	The same query answers the question at a flagship campus or a single-room kiosk alike.
Security exposure	Unmonitored devices at thinly staffed sites are a quiet lateral-movement path.	Every connected asset, at every site, is mapped into the same Relationship Graph used to contain risk campus-wide.

08. THE TAKEAWAY

Telehealth and remote-care expansion did exactly what it was supposed to do: it put care closer to patients. It also handed healthcare IT and security teams a distributed, thinly staffed footprint that a site-visit inventory model was never built to keep up with, the same footprint telecom has been managing at scale for years. The answer is not more site visits. It is the same shift telecom already made: know what is at every site, continuously, without needing to go there to find out.

Stop Traveling to Every Clinic to Keep It Secure.

Read our solution overview



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WanAware delivers Actionable Observability and Asset Inventory Management for modern, connected enterprise environments. By combining real-time asset discovery with an intelligent, live dependency relationship graph, WanAware helps infrastructure, network operations, and finance teams eliminate blind spots, defer avoidable capital spend, and verify what a network is actually doing, not just what a record says it should be doing.